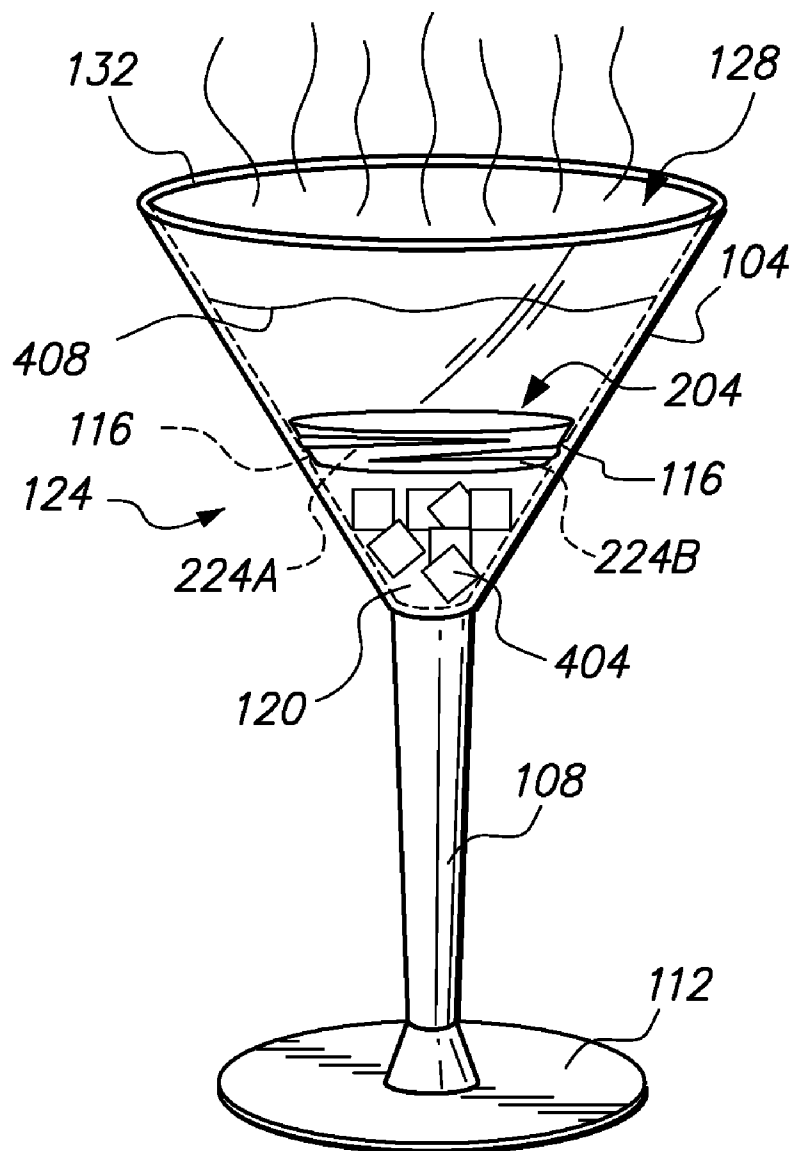




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(19) **United States**(12) **Patent Application Publication**
Moore(10) **Pub. No.: US 2012/0223089 A1**(43) **Pub. Date: Sep. 6, 2012**(54) **DRINKING VESSEL WITH DRY ICE FILTER**(57) **ABSTRACT**(76) Inventor: **Leejon Moore**, Las Vegas, NV (US)(21) Appl. No.: **13/040,212**(22) Filed: **Mar. 3, 2011****Publication Classification**(51) **Int. Cl.**
A47G 19/22 (2006.01)(52) **U.S. Cl.** **220/703**

A drinking vessel configured to enclose an amount of dry ice produces smoke while chilling a beverage. The drinking vessel may comprise a watertight container for holding the beverage and a filter to enclose the dry ice within a section of the watertight container. The filter will typically be permeable such that the beverage may contact the dry ice within the section of the watertight container but also flow out of the section so that the beverage may be consumed. The filter may be attached to an interior of the watertight container to enclose the dry ice. The interior wall(s) of the watertight container may have one or more mounts to engage and secure the filter to the watertight container. The filter prevents dry ice particles from escaping thus allowing a user to drink directly from the drinking vessel even as smoke is generated by the dry ice.



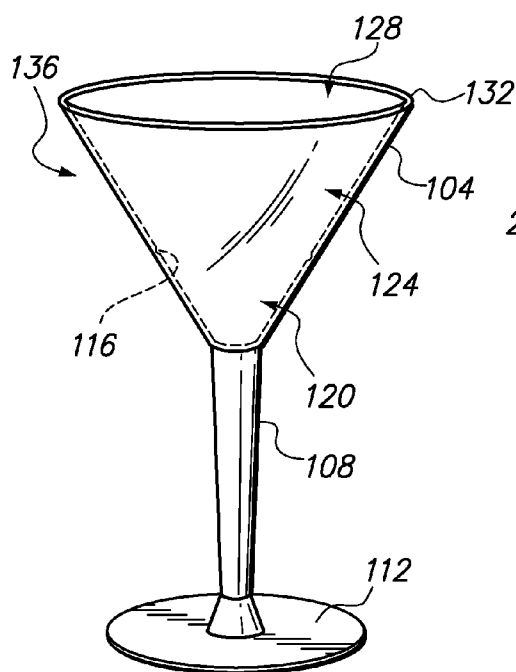


FIG. 1A

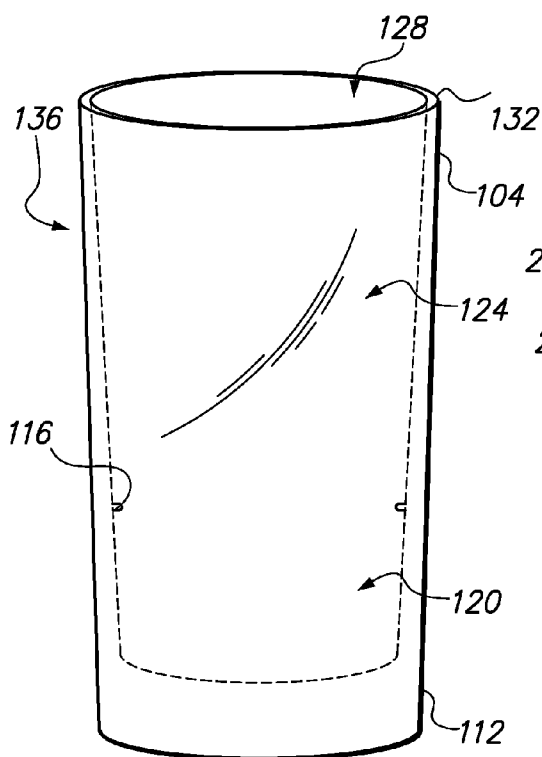


FIG. 1B

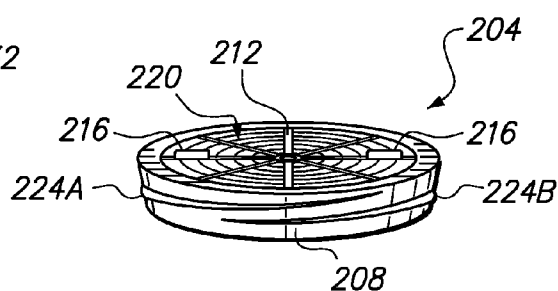


FIG. 2A

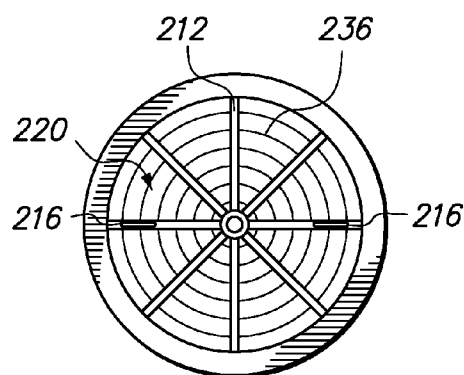


FIG. 2B

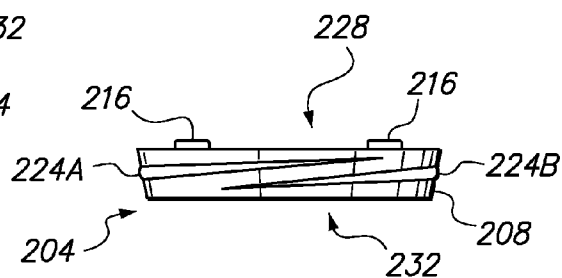


FIG. 2C

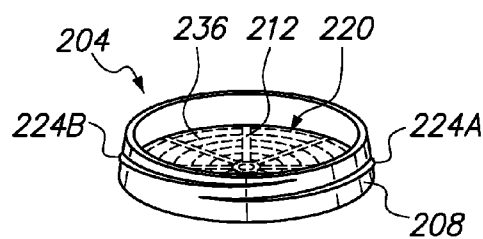
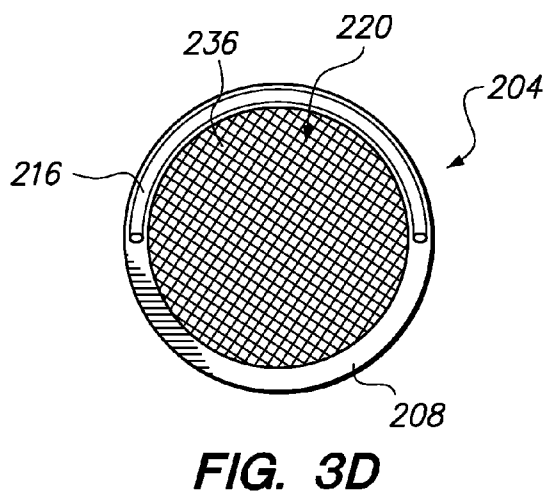
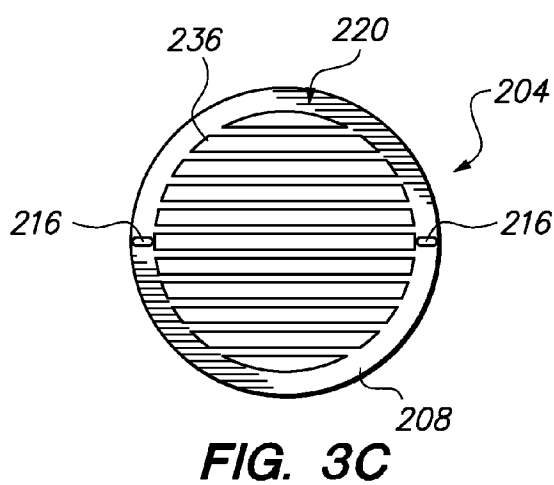
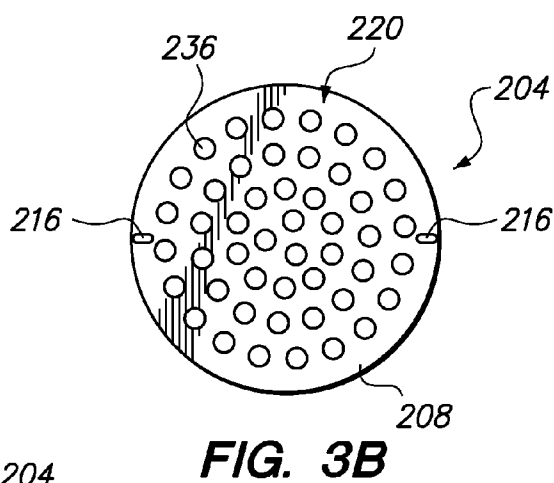
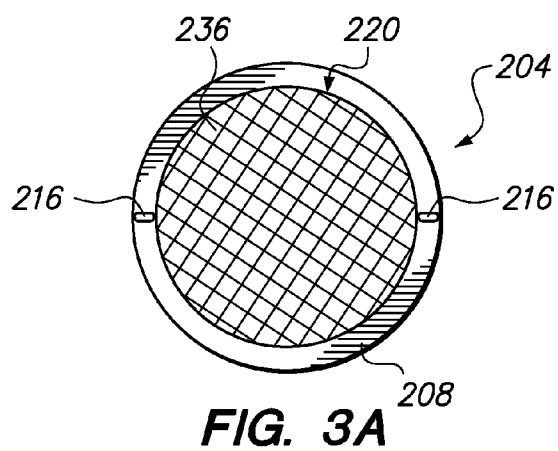
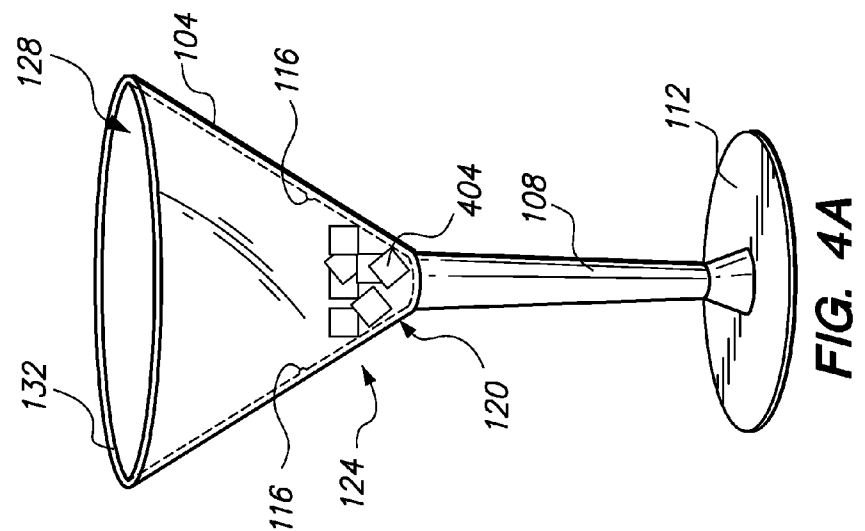
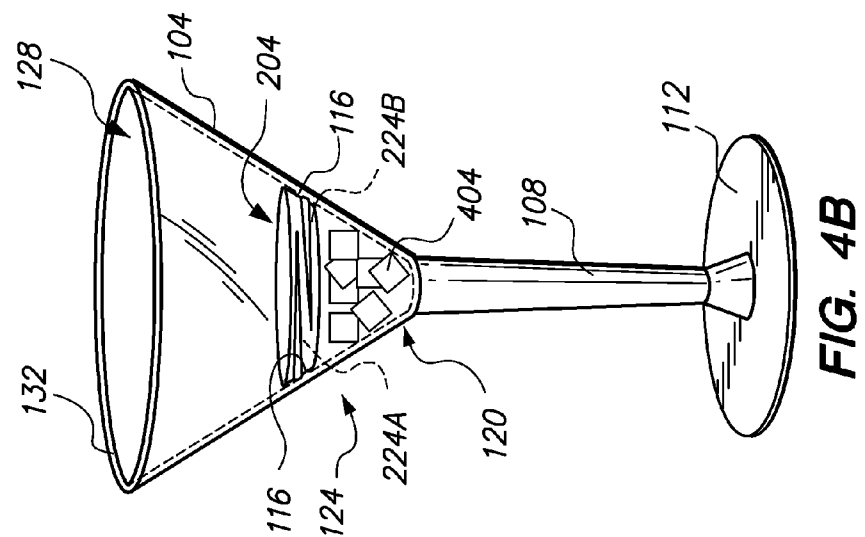
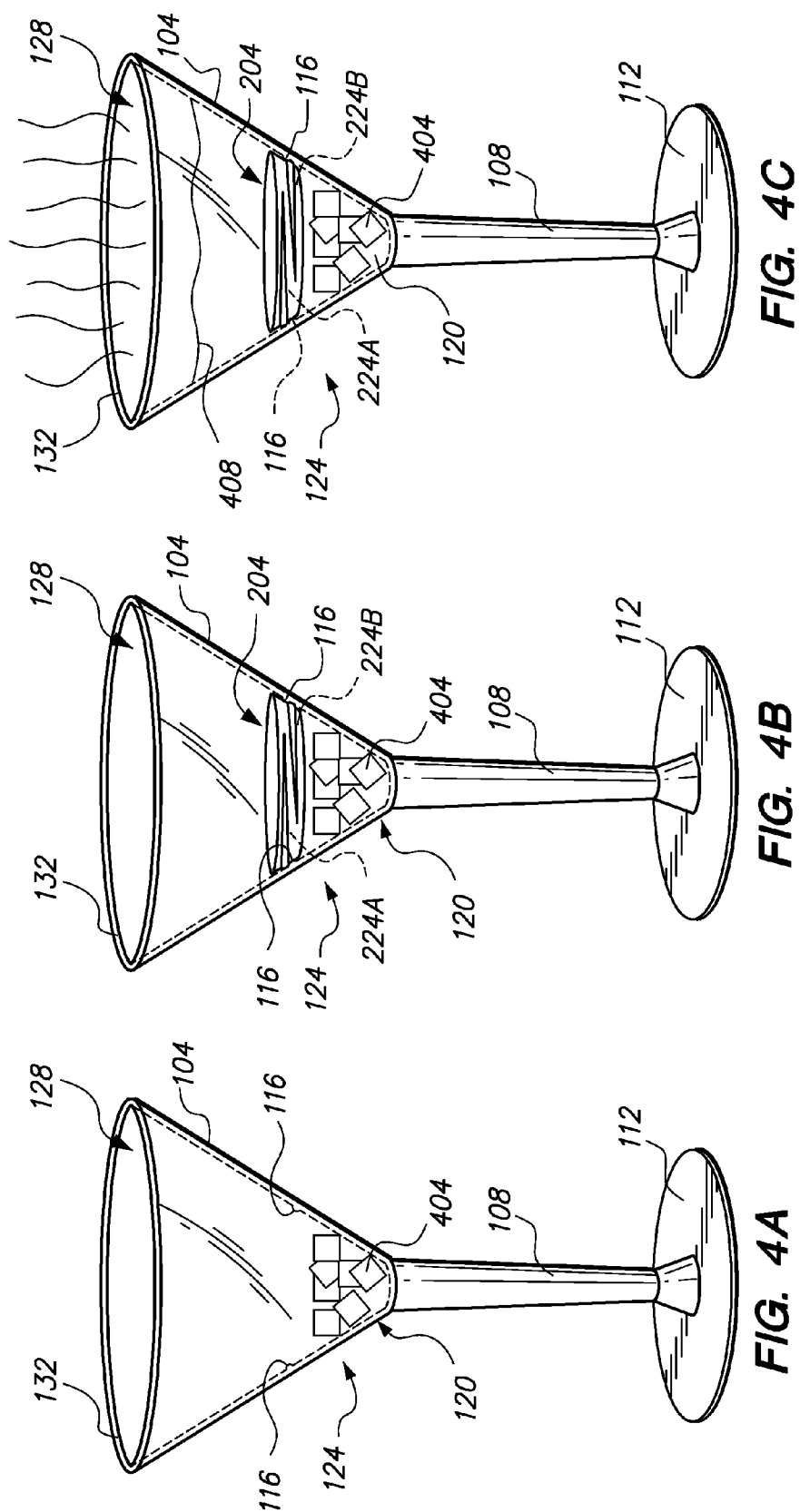


FIG. 2D





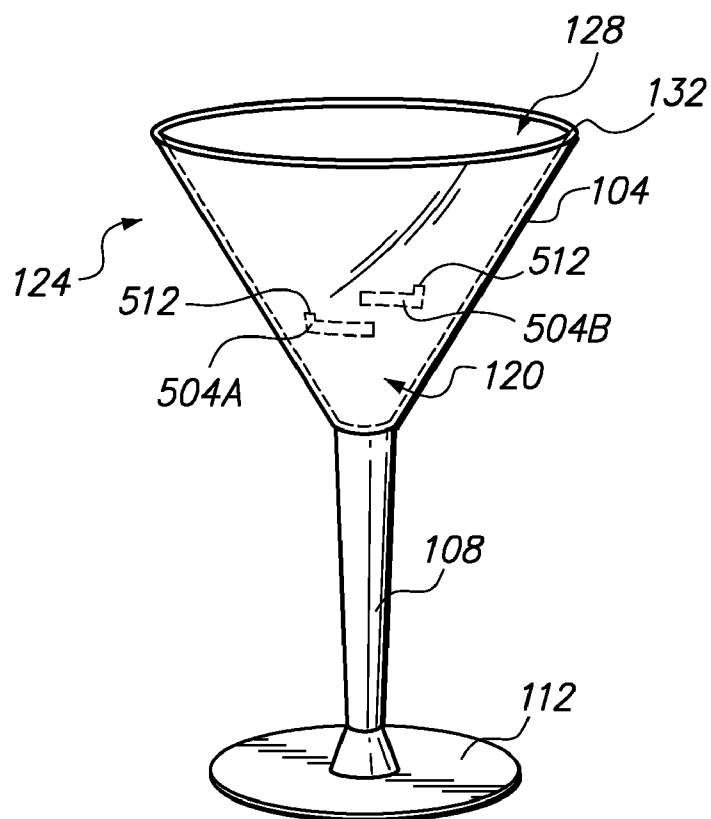


FIG. 5A

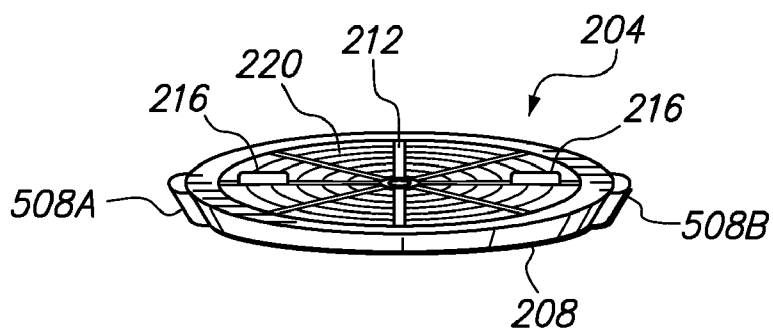


FIG. 5B

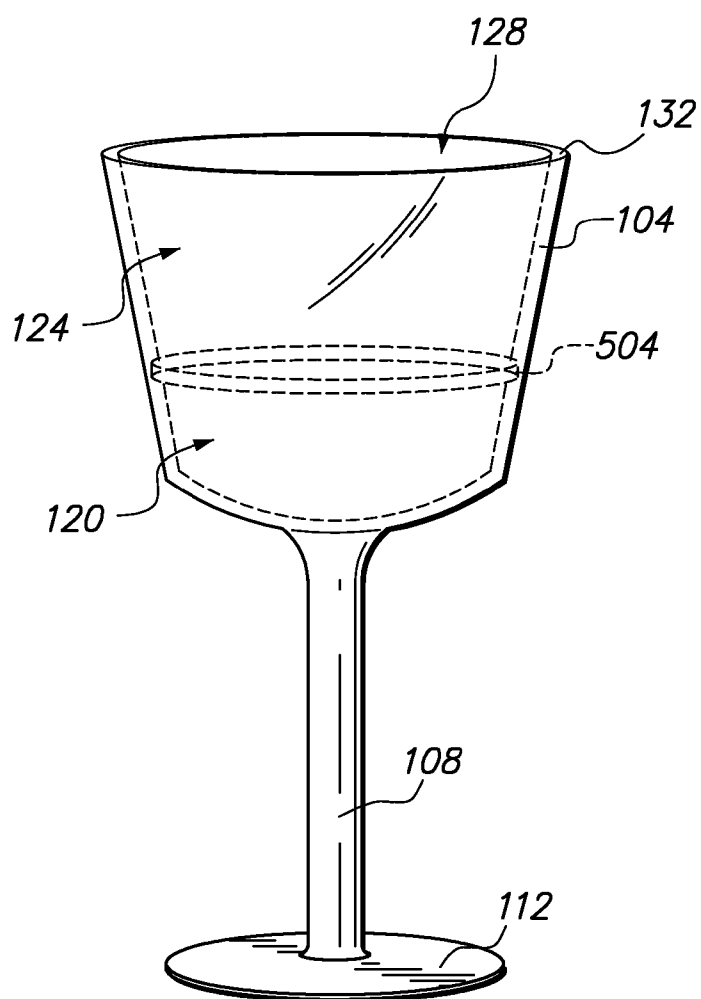


FIG. 6A

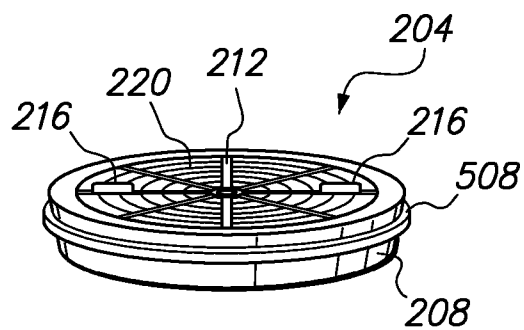


FIG. 6B

DRINKING VESSEL WITH DRY ICE FILTER**BACKGROUND OF THE INVENTION**

[0001] 1. Field of the Invention

[0002] The invention relates drinking vessels, and particularly a drinking vessel with a dry ice filter.

[0003] 2. Related Art

[0004] Many drinks are best enjoyed cold. These cold drinks are typically consumed from a glass, cup, or the like. The liquid forming a cold drink may itself be chilled, but oftentimes ice made from frozen water is used chill the liquid produce a cold drink. A user may then consume the cold drink from the glass or cup. Ice from water effectively chills a drink, however, there are undesirable qualities using ice chill drinks. For instance, as ice melts it adds water the drink which dilutes the drink and changes/reduces its flavor. In addition, ice is not very exciting, entertaining, or enticing by itself and thus adds only cooling a drink. Attempts have been made to liven up ice, such as by forming ice with molds in various shapes other than the standard icemaker "cube" shapes. However, these shapes are difficult to see when in a glass or cup, and rapidly lose their shape and novelty as the ice melts.

[0005] From the discussion that follows, it will become apparent that the present invention addresses the deficiencies associated with the prior art while providing numerous additional advantages and benefits not contemplated or possible with prior art constructions.

SUMMARY OF THE INVENTION

[0006] A drinking vessel capable of enclosing an amount of dry ice is disclosed herein. The drinking vessel provides the benefit of allowing use of dry ice chill a drink or beverage while allowing a user drink directly from the drinking vessel. This is advantageous in that dry ice chills the beverage without adding water which would dilute the taste of the beverage. In addition, use of dry ice generates smoke which is highly entertaining and enticing, especially at social events. The drinking vessel includes a filter which safely encloses dry ice particles prevent them from coming in contact with a user. This prevents injury that could occur due to the very low temperature of dry ice.

[0007] As disclosed herein, the drinking vessel may have a variety of configurations. For example in one embodiment, the drinking vessel (from which one or more liquids may be directly consumed) may comprise a vessel configured hold the liquids therein, the vessel comprising an upper section and a lower section, an opening in the vessel through which the liquids may enter and exit the vessel, and a rim surrounding the opening. The rim may be configured engage a user's lips allow the user to consume the liquids.

[0008] One or more mounts may be at an interior wall of the vessel. The mounts may be located between the upper section and the lower section of the vessel and remote from the opening in the vessel. The mounts may protrude outward from the interior wall of the vessel. Alternatively, the mounts may be recesses in the interior wall of the vessel.

[0009] A filter may be configured enclose the lower section of the vessel by engaging the mounts. The filter may comprise one or more permeable areas configured facilitate a flow of the liquids and one or more gasses from the lower section at least the upper section, and prevent one or more non-liquid particles from escaping the lower section.

[0010] The filter may comprise one or more threads configured secure the filter to the vessel when the threads are rotated on the mounts. In addition, the filter may have one or more outwardly extending tabs at a top surface of the filter. It is noted the permeable areas of the filter may comprise a permeable material such as a paper, textile, sponge, or a perforated material.

[0011] The drinking vessel may also comprise a base and a stem. The stem may extend upward from the base and support the vessel at an elevated position above the base.

[0012] In another embodiment, the drinking vessel may be configured as a smoke generating drinking vessel configured chill a beverage with dry ice. In such an embodiment, the drinking vessel may comprise a watertight compartment having an upper section and a lower section and configured hold the beverage therein, an opening in the watertight compartment through which the beverage may enter and exit the watertight compartment, and a filter configured enclose the lower section of the watertight compartment prevent one or more dry ice particles from escaping the lower section. The filter may comprise one or more permeable areas to facilitate a flow of the beverage from the lower section to at least the upper section while preventing the dry ice particles from escaping the lower section. It is noted that a rim configured to engage a user's lips to allow the user to consume the beverage may be around the opening of the watertight compartment.

[0013] One or more mounts may be at an interior surface of the watertight compartment. The mounts may be located between the lower section and upper section of the watertight compartment, and the filter may be configured to engage the mounts to enclose the lower section.

[0014] The filter may have an exterior peripheral shape and size corresponding to that of the interior peripheral shape and size of the watertight compartment. Alternatively or in addition, the filter may be formed from a flexible material. It is noted that the permeable areas may comprise one or more permeable structures and that the filter may have one or more support members configured to secure the permeable structures to the filter.

[0015] It is contemplated that the fluid capacity of the watertight vessel may be less than or equal to 16 ounces to allow a user to manipulate, hold, and drink directly from the watertight drinking vessel.

[0016] Various methods of chilling a beverage and generating smoke from the beverage with the drinking vessel are also disclosed herein. For instance, in one embodiment a method for chilling a beverage and generating smoke therefrom with a drinking vessel may comprise placing an amount of dry ice into a waterproof compartment of the drinking vessel, enclosing the amount of dry ice within a section of the waterproof container by attaching a permeable filter to one or more interior walls of the waterproof compartment, and generating smoke from the dry ice by moving a beverage into the waterproof compartment of the drinking vessel. The smoke may be generated and the beverage may be chilled as the beverage comes into contact with the dry ice via the permeable filter. One or more particles of dry ice may be prevented from escaping the section of the waterproof container with the permeable filter. This prevents the dry ice particles from coming into contact with a user. A permeable structure may be installed into a body of the filter to accomplish this.

[0017] It is noted that attaching the permeable filter to the interior walls of the waterproof compartment may include twisting the filter to engage one or more threads of the filter

onto one or more mounts at the interior walls of the waterproof container. One or more tabs of the permeable filter may be engaged to twist the filter. Alternatively or in addition, attaching the permeable filter to the interior walls of the waterproof compartment may comprise bending the filter to engage one or more mounts at the interior walls of the waterproof container.

[0018] Once the dry ice is secured or enclosed, least a portion of the beverage may then be consumed by drinking from the waterproof container as the smoke is being generated from the dry ice.

[0019] Other systems, methods, features and advantages of the invention will be or will become apparent to one with skill in the art upon examination of the following figures and detailed description. It is intended that all such additional systems, methods, features and advantages be included within this description, be within the scope of the invention, and be protected by the accompanying claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0020] The components in the figures are not necessarily to scale, emphasis instead being placed upon illustrating the principles of the invention. In the figures, like reference numerals designate corresponding parts throughout the different views.

[0021] FIG. 1A is a front perspective view of an exemplary drinking vessel;

[0022] FIG. 1B is a front perspective view of an exemplary drinking vessel;

[0023] FIG. 2A is a perspective view of an exemplary filter for a drinking vessel;

[0024] FIG. 2B is a top view of an exemplary filter for a drinking vessel;

[0025] FIG. 2C is a side view of an exemplary filter for a drinking vessel;

[0026] FIG. 2D is a bottom view of an exemplary filter for a drinking vessel;

[0027] FIG. 3A is a top view of an exemplary filter;

[0028] FIG. 3B is a top view of an exemplary filter;

[0029] FIG. 3C is a top view of an exemplary filter;

[0030] FIG. 3D is a top view of an exemplary filter;

[0031] FIG. 4A is a front perspective view illustrating an exemplary drinking vessel holding dry ice;

[0032] FIG. 4B is a front perspective view illustrating an exemplary drinking vessel holding dry ice enclosed by an exemplary filter;

[0033] FIG. 4A is a front perspective view illustrating an exemplary drinking vessel holding a beverage and dry ice enclosed by an exemplary filter;

[0034] FIG. 5A is a front perspective view of an exemplary drinking vessel;

[0035] FIG. 5B is a perspective view of an exemplary filter;

[0036] FIG. 6A is a front perspective view of an exemplary drinking vessel; and

[0037] FIG. 6B is a perspective view of an exemplary filter.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0038] In the following description, numerous specific details are set forth in order to provide a more thorough description of the present invention. It will be apparent, however, to one skilled in the art, that the present invention may be

practiced without these specific details. In other instances, well-known features have not been described in detail so as not to obscure the invention.

[0039] In general, the drinking vessel disclosed herein allows traditional ice to be replaced with dry ice. The drinking vessel allows dry ice to be used in chilling a drink that may be consumed directly from the drinking vessel. As will be disclosed further below, the drinking vessel includes one or more compartments that secure the dry ice to protect the user from direct contact with the dry ice. This prevents the user from being injured by the very cold temperature of the dry ice.

[0040] In this manner, the dry ice may be used to cool a drink or keep a drink cool without introducing water into the drink, like ice made from water would. In addition, the use of dry ice produces a highly engaging and entertaining effect in that it causes the drinking vessel to produce smoke as the dry ice "melts". A user may drink from the drinking vessel even while smoke billows from the drinking vessel.

[0041] The drinking vessel 136 will now be described with regard to FIGS. 1A-1B. As can be seen, the drinking vessel 136 may comprise a vessel 104 for holding a drink. Typically, a drink will comprise one or more liquid ingredients that may range in viscosity. In addition, some drinks may comprise one or more solid ingredients. The drinking vessel 136 would be able to accept a wide variety of drinks, chill such drinks with dry ice, and produce smoke, even for drinks of various compositions.

[0042] The drinking vessel 136 may have a variety of configurations. For example, as shown in FIG. 1A, the drinking vessel 136 comprises a conical vessel 104 that is supported by an elongated stem 108 and a base 112. In FIG. 1B, the drinking vessel 136 comprises a cylindrical vessel 104 that itself forms a base 112. Other configurations are possible as well. For example, the drinking vessel 136 may have one or more handles and/or lids in some embodiments. The drinking vessel 136 may also include a straw or spout in some embodiments.

[0043] The vessel 104 may be a water-tight container in one or more embodiments. This allows the vessel 104 to hold liquids without leaking. The vessel 104 may have an opening 128 to allow it to be filled and to allow a user to drink from the vessel 104. For instance, as shown, the vessel 104 comprises a rim 132 which defines an opening through 128 which the vessel 104 may be filled and through which a user may drink from the vessel. As shown, in FIGS. 1A-1B, the opening 128 is defined by a rim 132 of the vessel 104. It is contemplated that the opening 128 could be a spout or the like in some embodiments. It is also contemplated that multiple openings 128 could be provided. For example, a first opening 128 may be configured to allow a user to drink from the vessel 104 while a second opening may be configured to allow smoke to escape from the vessel. In one embodiment, a lid that covers an opening 128 may be included, such as to prevent accidental spills. Such lid may include one or more of its own openings configured to allow smoke to escape from the vessel and/or to allow a user to drink from the vessel.

[0044] The vessel 104 may have multiple compartments or sections in one or more embodiments. For instance, the vessel 104 may have an upper section 124 and a lower section 120. The sections 124, 120 may be delineated by one or more filter mounts 116 of the vessel 104. As will be disclosed further below, the filter mounts 116 may be configured to secure a filter in the vessel 104 to prevent dry ice from coming into contact with a user. In one or more embodiments, the filter

may seal or enclose the dry ice within the lower section **120** of the vessel **104** and away from contact with the user, even where a user drinks out of the vessel. As can be seen, the filter mounts **116** may be configured as protrusions that engage a portion of a filter to secure the filter in position.

[0045] FIGS. 2A-2D illustrate various views of an exemplary filter **204**. In general, the filter **204** is configured to secure dry ice within a section or compartment of the vessel while allowing the dry ice to cool or chill a drink. In one or more embodiments, the filter **204** may comprise a body **208** that provides a frame or structure which may support the other elements of the filter. As can be seen, the body **208** may have a top **228** and a bottom **232**. The body **208** may be shaped to conform to the shape of a vessel. Referring to FIG. 1A for example, the body **208** may share a taper, from its top **228** to its bottom **232**, of a similar or the same angle as that of the vessel **104**. In this manner, the body **208** may form a seal with the vessel at the body's periphery. This helps ensure that dry ice contained by the filter does not escape and come into contact with a user.

[0046] In general, the body **208** will have a peripheral shape and size that corresponds to the shape and size of the vessel **104** within which it will be installed. In one or more embodiments, the body **208** may have a peripheral shape and size defined by the section or portion of the vessel **104** at which the filter **204** will be installed. For example, referring to FIG. 1A, the filter body **208** may have a circular shape and a diameter matching that of the section of the vessel **104** where the filter mounts **116** are located.

[0047] The top **228** of the body **208** may support one or more tabs **216** or the like which allow a user to more easily manipulate the filter **204**, such as to install or remove the filter into or from a vessel. The tabs **216** may extend from the top **228** of the body **208** in one or more embodiments. In this manner, the tabs **216** provide a structure which a user may grasp, push, pull, or otherwise engage to install and remove the filter into or from a vessel. The tabs **216** may have various shapes and sizes. Smaller sizes would generally be less visible (for aesthetic purposes) while larger sizes may provide a larger surface for a user to engage. It is contemplated that tabs **216** may not be included in all embodiments since the user may engage the body **208** of the filter to install and remove the filter though this may be more difficult. It is also contemplated that the tabs **216** could be replaced with indentations in the body **208** or other depressions in the body. Alternatively, at least a portion of the top **228** may be textured to allow a user to engage and manipulate the filter **204**. The texture would provide increased friction between the user and the filter **204** to make such manipulation easier.

[0048] The body **208** may include elements which engage the filter mounts of a vessel and thus secure the filter **204** to the vessel. As can be seen from FIGS. 2A, 2C, and 2D for example, the body **208** may comprise one or more protruding threads **224A, 224B** that allow the filter **204** to be secured to a vessel by twisting the filter onto one or more filter mounts. The threads **224A, 224B** may protrude from the periphery of the body **208** such as shown. In one or more embodiments and as will be described further below, the protruding threads **224A, 224B** may be angled such that rotating the filter causes the filter **204** to be pulled into contact with the vessel wall. As the filter **204** is rotated further, the body **208** may press against the vessel wall thus securing the filter to the vessel.

[0049] In addition, as can be seen, the protruding threads **224A, 224B** may be tapered in some embodiments. This

allows a mount to more easily enter between two threads **224A, 224B**. In this manner, the filter **204** is more easily installed and secured.

[0050] The filter **204** may comprise one or more permeable areas **220**. In general, the permeable areas **220** are configured to allow liquids to pass through while generally preventing non-liquids (such as particles) from passing through. The permeable areas **220** may be adjusted to allow small particles to pass through but not larger particles, such as by changing the size of one or more openings in the permeable areas **220**.

[0051] The permeable areas **220** themselves may have various configurations. For example, in FIGS. 2A-2C, the permeable areas **220** may comprise a one or more permeable elements **236**, such as a cloth, sponge, mesh, fabric, textile, or other permeable element. A permeable element **236** may have a planar configuration having a small height, or may be more block-like by having an increased height as will be discussed further below.

[0052] As can be seen, a permeable element **236**, may be supported by the support members **212**, in one or more embodiments. This is especially beneficial in embodiments where the permeable element **236** is flexible since it prevents excessive sagging, flexing, or bending at the permeable areas **220** which would be unsightly, unappetizing, and potentially damaging to the permeable element **236**.

[0053] FIGS. 2A-2B show the top **228** of an exemplary filter **204** while FIG. 2D shows a perspective view of the bottom **232** of the filter. In some embodiments, the bottom of the filter **204** may be open and not have any support members **212**, such as shown in FIG. 2D. This would allow, for example, a permeable element **236** to be installed and removed from the bottom of the filter **204**. For instance, a permeable element **236** could be inserted into the bottom of the filter **204** and held in place by a friction fit or by one or more fasteners. The permeable element **236** may be inserted such that it is adjacent or in contact with the bottom surface or side of one or more support members **212**. This is illustrated in the embodiment of FIG. 2D.

[0054] The permeable element **236** of the filter **204** may only extend a portion of the distance between the top **228** and bottom **232** of the filter in some embodiments. For example, the permeable element **236** could be a planar structure at the top half or top portion of the filter **204**, such as shown in FIG. 2D. It is noted that though illustrated in FIG. 2D as being at the top portion of the filter **204**, the permeable element **236** may be at a middle portion or at the bottom **232** of the filter in some embodiments.

[0055] Alternatively, the permeable element **236** of the filter **204** may extend from the top **228** to the bottom of the filter **204** in some embodiments. This is like the block-like embodiment disclosed above. The bottom of the filter **204** may have one or more separate support members **212** to support one or more permeable elements **236** at the bottom **232** of the filter. Alternatively or in addition, one or more support members **212** may extend from the top **228** of the filter **204** to the bottom **232** of the filter. In the case of the filter shown, this would create pie shaped permeable areas **220** where similarly shaped permeable elements **236** may be held or secured.

[0056] FIGS. 3A-3D illustrate various embodiments of filters **204**. As can be seen, the permeable area **220** or areas of a filter **204** may have various configurations. For instance, FIG. 3A shows an embodiment where the body **208** of the filter **204** supports a permeable element **236** comprising a mesh. FIG. 3B shows an embodiment where the permeable area **220** is

formed into the body **208**. Namely, the permeable element of FIG. 3B comprises a plurality of openings formed into the body **208**. Similarly, the embodiment of FIG. 3C has a permeable element **236** comprising a plurality of openings. In FIG. 3C, the openings are elongated slots formed into the body **208** of the filter **204**. FIG. 3D illustrates a permeable element **236** comprising a fabric, textile, paper or other fibrous filter.

[0057] It is noted that FIG. 3D also illustrates an alternate tab **216** configuration. As can be seen, the tab **216** in FIG. 3D forms a semi-circular handle. In such embodiments, the tab **216** may be mounted to hinges or pivots such that it may be raised when installing or removing the filter **204** from a vessel. The tab **216** may then be lowered such that it is flat on the body **208** of the filter **204**, such as shown in FIG. 3D.

[0058] FIG. 4A-4C illustrate operation of the drinking vessel and filter. Referring to FIG. 4A, it can be seen that dry ice **404** may be placed within the vessel **104** of the drinking vessel through the opening **128** of the vessel **104**. The dry ice **404** may rest at a lower section **120** of the vessel **104**.

[0059] A filter **204** may then be used to enclose or secure the dry ice **404** in the lower section **120** of the vessel **104**. For instance, as can be seen in FIG. 4B, the filter **204** may be placed over the dry ice **404** and enclose the dry ice in a lower section **120** of the vessel **104**. This may occur in a variety of ways. For example, in the threaded embodiment of the filter **204** shown, a filter mount **116** may engage one or more threads **224A, 224B** of the filter **204**. The filter **204** may then be rotated. As this rotation occurs, the mount **116** may enter between the threads **224A, 224B**. The angle of the threads **224A, 224B** may pull the filter **204** downward as the filter is rotated. In tapered embodiments (where either the filter **204** or the vessel, or both are tapered), the downward motion pulls the filter **204** against the vessel wall thus allowing the filter to be tightened against the vessel **104** and secured to the vessel. It is noted that the space between threads **224A, 224B** may narrow to cause the mount **116** to become lodged between the thread, thus securing the filter **204** to the vessel **104**.

[0060] In some embodiments, it is contemplated that the one or more threads **224A, 224B** may be recessed channels rather than protrusions extending from the filter body **208**. In such embodiments, the mount **116** may enter a thread **224A, 224B** (rather than being positioned between threads). The filter **204** may then be secured or tightened to the vessel **104** by twisting or rotating the filter, such as discussed above. Recessed threads **224A, 224B** may be tapered in some embodiments so as to provide a narrowing channel which causes a mount **116** to become lodged therein as the filter **204** is rotated, thus securing the filter.

[0061] It is contemplated that a stop may be provided to prevent further rotation once the filter **204** is secured to the vessel **104**. For example, a protrusion between the threads **224A, 224B** may be provided to stop the mount **116** from rotating out from between the threads in embodiments where protruding threads are provided. In embodiments where the threads **224A, 224B** are recessed channels, the stop may be the end of the channel which forms the thread since this would prevent further rotation of the thread once the mount came into contact with the end of the channel.

[0062] Once the filter **204** is attached to the vessel wall, such as shown in FIG. 4B, the dry ice **404** is enclosed by the filter within the lower section **120** of the vessel **104**. Friction between the filter mount **116** and the threads **224A, 224B** may also help secure the filter **204** in place. It is noted that in some

embodiments, the threads **224A, 224B** and filter mounts **116** may themselves create enough friction to secure the filter **204** in place. In such embodiments, the filter body **208** may but need not contact the vessel wall when the filter **204** is installed. Once the filter **204** is secured, the dry ice **404** is held enclosed within the lower section **120** of the vessel **104**. In one or more embodiments, the filter **204** may be removed by rotating the filter in a direction opposite that used to install or secure the filter to the vessel **104**.

[0063] A drink may then be introduced into the vessel **104**. To illustrate, as shown in FIG. 4C, a liquid **408**, such as a drink, has been poured into the vessel **104**. As can be seen the liquid **408** may flow into the lower section **120** of the vessel **104**, where the dry ice **404** is held. This is beneficial in that it allows the liquid **408** to come into contact with the dry ice **404** and thus be chilled by the dry ice. The one or more permeable elements of the filter **204** allow the liquid **408** to flow into the lower section **120** of the vessel **104**.

[0064] The filter **204** also provides a barrier that secures the dry ice **404** within the lower section **120** of the vessel **104**. The one or more permeable elements of the filter **204** may have such small openings such that dry ice particles cannot pass through the permeable elements, even as the dry ice becomes smaller as it melts. This prevents the dry ice **404** from coming into contact with a user. As stated above, dry ice **404** has a very low temperature and will cause injury if in direct contact with a user's skin. With the filter **204** installed in the vessel **104** a user may safely drink a chilled drink from the drinking vessel. The filter **204** secures the dry ice **404** in the lower section **120** of the vessel **104** even if the drinking vessel is tipped, such as when a user drinks from the drinking vessel. Even if the drinking vessel is knocked over, the filter **204** will contain the dry ice **404** within the lower section **120** of the vessel **104**. In this manner, there is little, if any, risk that someone will come into direct contact with the dry ice **404**.

[0065] Referring now to FIG. 4C, it can be seen that the drinking vessel and filter **204** produce a highly engaging and enticing drink. More specifically, as the liquid **408** comes into contact with the dry ice **404** and the dry ice begins to melt, smoke may begin to billow out of the opening **128** of the vessel **104**. Smoke may also "spill" or flow over the rim **132** of the vessel **104**. While this is occurring, users may continue to drink out of the vessel **104** while the filter **204** prevents the dry ice **404** generating the smoke from coming into contact with the user.

[0066] It is contemplated that a filter may be mounted in a vessel in various ways. For example, a vessel may be configured with various filter mounts and a filter may comprise various shapes or elements that engage such filter mounts to secure the filter in the vessel to form a compartment at the lower section of the vessel which holds dry ice. FIGS. 5A-5B illustrate filter mounts **504** comprising indentations or channels in the vessel **104** wall. These filter mounts **504** accept a mounting tab **508** of a filter **204**, such as that shown in FIG. 5B. The mounting tabs **508A, 508B** may be aligned with the filter mounts **504A, 504B** and then rotated to secure the tabs within the filter mounts, thus securing the filter **204** to the vessel **104**. In the embodiment shown, the filter mounts **504A, 504B** have an entry point **512** where the mounting tabs **508A, 508B** may first enter the mounts.

[0067] In the embodiment shown, the filter mounts **504A, 504B** are "L" shaped. In this manner, the entry points **512** are located at least slightly above the remainder of the filter mounts **504A, 504B**. In a tapered vessel this causes the entry

points **512** to be spaced further apart from one another thus allowing the mounting tabs **508A, 508B** to be more easily inserted into the filter mounts. It is noted that the filter mounts **504A, 504B** need not be “L” shaped. For example, the filter mounts **504A, 504B** may be linear. In such embodiments, an entry point **512** may comprise a portion or section of a filter mount **504A, 504B** that is enlarged or otherwise shaped to allow a mounting tab **508A, 508B** to enter the filter mount.

[0068] In the embodiment of FIGS. 5A-5B, the filter **204** may be installed by inserting the mounting tabs **508A, 508B** into the entry points **512** and then rotating the filter such that the mounting tabs move away from the entry points within the filter mounts **504A, 504B**, thus securing the mounting tabs and filter to the vessel **104**. To remove the filter **204**, the mounting tabs **508A, 508B** may be rotated back toward the entry points **512** and then removed from the filter mounts **504A, 504B**, releasing the filter **204** from the vessel **104**. It is noted that the filter mounts **504A, 504B** may extend various lengths around the vessel **104**. In some embodiments, the filter mounts **504A, 504B** may be angled downward to pull the filter **204** downward as the filter's mounting tabs **508A, 508B** are moved within the filter mounts. In tapered vessels **104**, this allows the filter **204** to be pulled into a narrow section of a vessel thus securing the filter by friction between the filter body and the vessel wall. It is contemplated that the filter mounts **504A, 504B** may also taper. In such embodiments, as the mounting tabs **508A, 508B** move into narrower sections of the filter mounts **508A, 508B**, the filter mounts clamp the mounting tabs in position, thus securing the filter **204** in place.

[0069] FIGS. 6A-6B illustrate another exemplary embodiment of the drinking vessel. As can be seen, the filter mount **504** in this embodiment comprises a channel extending around the vessel **104**. The filter mount **504** may extend all the way around the vessel **104** in one or more embodiments. The filter **204** may have a mounting tab **508** configured to fit within the filter mount **504**. As can be seen, the mounting tab **508** may also extend all the way around the filter **204**. This allows a barrier to be formed around the body of the filter **204** when the mounting tab **508** is inserted into the filter mount **504**. It is contemplated that the mounting tab **508** need not extend fully around the filter **204** to properly secure the filter to the vessel **104**. The body **208** of the filter may be shaped and sized to form a seal with the vessel **104** to seal dry ice within a lower section **120** of the vessel **104**.

[0070] It is contemplated that a mounting tab **508** may be flexible in some embodiments to allow the mounting tab to be more easily inserted into a filter mount **504**. For example, the mounting tab **508** may comprise an elastic, flexible, or resilient material, such as rubber or the like. The mounting tab **508** may then bend, flex, and/or compress to allow it to be inserted into the filter mount **504**. Once in the filter mount **504**, the mounting tab **508** may return to its original state.

[0071] A flexible mounting tab **508** is useful in installing and removing a filter **204** especially where the filter and drinking vessel **104** are rigid and inflexible. It is contemplated that the filter **204** may itself be flexible in some embodiments. For example, the filter **204** may comprise a body **208** made from an elastic, flexible or resilient material. Permeable element(s) **136** of the filter could also be made from flexible materials, such as textiles, fibers, sponge, or the like. In such embodiments, the filter body **208** may be bent, flexed, compressed, or otherwise manipulated to allow its mounting tab **508** to be inserted into the filter mount **504**. The body **208** may then return to its original shape.

[0072] While various embodiments of the invention have been described, it will be apparent to those of ordinary skill in the art that many more embodiments and implementations are possible that are within the scope of this invention. In addition, the various features, elements, and embodiments described herein may be claimed or combined in any combination or arrangement.

What is claimed is:

1. A drinking vessel from which one or more liquids may be directly consumed comprising:

- a vessel configured to hold the one or more liquids therein, the vessel comprising an upper section and a lower section;
- an opening in the vessel through which the one or more liquids may enter and exit the vessel;
- a rim surrounding the opening, the rim configured to engage a user's lips to allow the user to consume the one or more liquids;
- one or more mounts at an interior wall of the vessel, the one or more mounts located between the upper section and the lower section of the vessel and remote from the opening in the vessel; and
- a filter configured to enclose the lower section of the vessel by engaging the one or more mounts, the filter comprising one or more permeable areas configured to:
 - facilitate a flow of the one or more liquids and one or more gasses from the lower section to at least the upper section; and
 - prevent one or more non-liquid particles from escaping the lower section.

2. The drinking vessel of claim 1, wherein the one or more mounts protrude outward from the interior wall of the vessel.

3. The drinking vessel of claim 1, wherein the one or more mounts are recesses in the interior wall of the vessel.

4. The drinking vessel of claim 1, wherein the filter comprises one or more threads configured to secure the filter to the vessel when the one or more threads are rotated onto the one or more mounts.

5. The drinking vessel of claim 1, wherein the filter comprises one or more outwardly extending tabs at a top surface of the filter.

6. The drinking vessel of claim 1, wherein at least one of the one or more permeable areas comprise a permeable material selected from the group consisting of paper, textile, sponge, and perforated materials.

7. The drinking vessel of claim 1 further comprising a base and a stem, wherein the stem extends upward from the base and the stem supports the vessel at an elevated position above the base.

8. A smoke generating drinking vessel configured to chill a beverage with dry ice comprising:

- a watertight compartment configured to hold the beverage therein, the watertight compartment having an upper section and a lower section;
- an opening in the watertight compartment through which the beverage may enter and exit the watertight compartment;
- a filter configured to enclose the lower section of the watertight compartment to prevent one or more dry ice particles from escaping the lower section, wherein the filter comprises one or more permeable areas to facilitate a flow of the beverage from the lower section to at least the upper section while preventing the one or more dry ice particles from escaping the lower section.

9. The drinking vessel of claim 8 further comprising a rim around the opening of the watertight compartment, the rim configured to engage a user's lips to allow the user to consume the beverage.

10. The drinking vessel of claim 8 further comprising one or more mounts at an interior surface of the watertight compartment, the one or more mounts located between the lower section and upper section of the watertight compartment, wherein the filter is configured to engage the one or more mounts to enclose the lower section.

11. The drinking vessel of claim 8, wherein the filter has a exterior peripheral shape and size corresponding to that of the interior peripheral shape and size of the watertight compartment.

12. The drinking vessel of claim 8, wherein the filter is formed from a flexible material.

13. The drinking vessel of claim 8, wherein the one or more permeable areas comprise one or more permeable structures and the filter comprises one or more support members configured to secure the one or more permeable structures to the filter.

14. The drinking vessel of claim 8, wherein the fluid capacity of the watertight vessel is less than or equal to 16 ounces to allow a user to manipulate, hold, and drink directly from the watertight drinking vessel.

15. A method of chilling a beverage and generating smoke from the beverage with a drinking vessel comprising:

placing an amount of dry ice into a waterproof compartment of the drinking vessel;

enclosing the amount of dry ice within a section of the waterproof container by attaching a permeable filter to one or more interior walls of the waterproof compartment;

generating smoke from the dry ice by moving a beverage into the waterproof compartment of the drinking vessel, wherein the smoke is generated and the beverage is chilled as the beverage comes into contact with the dry ice via the permeable filter; and

preventing one or more particles of dry ice from escaping the section of the waterproof container with the permeable filter to prevent the one or more dry ice particles from coming into contact with a user.

16. The method of claim 15, wherein attaching the permeable filter to the one or more interior walls of the waterproof compartment comprises twisting the filter to engage one or more threads of the filter onto one or more mounts at the one or more interior walls of the waterproof container.

17. The method of claim 16 further comprising engaging one or more tabs of the permeable filter to twist the filter.

18. The method of claim 15, wherein attaching the permeable filter to the one or more interior walls of the waterproof compartment comprises bending the filter to engage one or more mounts at the one or more interior walls of the waterproof container.

19. The method of claim 15 further comprising installing a permeable structure into a body of the filter.

20. The method of claim 15 further comprising consuming at least a portion of the beverage as the smoke is generated by drinking from the waterproof container.

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