A beverage dispenser and method of bottling the same having a plurality of individual dispensers that are each releasably connected to a connection system to provide a single unit such that the single unit has a quantity that is equal to a predefined quantity mandated via governmental regulation.
BEVERAGE DISPENSER SYSTEM AND METHOD

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority pursuant to 35 U.S.C. 119(e) to co-pending U.S. Provisional Patent Application Ser. No. 61/140,809, filed Dec. 24, 2008, the entire disclosure of which is incorporated herein by reference.

FIELD OF THE INVENTION

[0002] The present general inventive concept relates to a beverage dispenser system and method, and more particularly, to a beverage dispenser having a plurality of individual dispensers that are each releasably connected to a connection system to provide a single unit such that the single unit has a quantity that is equal to a predefined quantity mandated via governmental regulation.

BACKGROUND OF THE INVENTION

[0003] A distilled beverage, liquor, or spirit is a drinkable liquid containing ethanol that is produced by means of distilling fermented grain, fruit, or vegetables. Distilled spirits must be bottled and packaged in conformity with specific regulatory requirements. For instance, the U.S. Bureau of Alcohol, Tobacco, Firearms, and Explosives ("ATF") specifies the precise quantity of alcohol that may be contained within single units of distilled spirits. Specifically, a unit of a distilled spirit must be one of the following quantities, which are referred to as "standards of fill":

[0004] 1.75 liters
[0005] 1.00 liter
[0006] 750 milliliters
[0007] 375 milliliters
[0008] 200 milliliters
[0009] 100 milliliters
[0010] 50 milliliters

[011] In view of this regulation, alcohol-bottling companies utilize bottles that are sized to correspond with the permitted standards of fill, which are inconvenient for a number of reasons.

[0012] The bottles provided are typically large, which is not ideal for consumption by a single consumer at any one time. Likewise, these larger bottles are not adapted to allow consumption directly therefrom.

[0013] Consequently, contents contained within the relatively large bottles are typically dispensed into one of a plurality of serving containers to accommodate a plurality of consumers. Such individual serving containers typically include glasses, shot glasses, or the like.

[0014] Further, the shape and size of a standard bottle can be awkward and transportation thereof may be inconvenient.

[0015] The use of smaller sized bottles would enable the dispensing of uniform "single shot" servings of alcohol and would also enable the distilling and bottling of alcohol at higher levels of proof, such as 151 proof alcohol, thereby providing greater efficiencies and uniformity. Such smaller sized bottles, however, do not comply with state and federal regulations.

[0016] Accordingly, there is a demand for a system of dispensing a beverage that complies with state and federal regulations, is dispensable in smaller quantities such as single-serving sizes, enables the use of higher proof alcohol, and is easier to transport and use.

[0017] Furthermore, alcoholic beverages are often delivered, dispensed, and consumed in nightclubs, parties, and the like where fashion and aesthetics are important and influence purchasing decisions. Accordingly, there is also a demand for a system of dispensing a beverage that has an aesthetically pleasing appearance.

SUMMARY OF THE INVENTION

[0018] A principal object of the present general inventive concept is to provide a plurality of single-serving beverage containers that are each independently connected to a connection system.

[0019] Another object of the present general inventive concept is to provide a plurality of single-serving beverage containers that are sold as a single unit.

[0020] Another object of the present general inventive concept is to provide a plurality of single-use serving beverage containers that will comply with applicable laws and regulations including Federal standards of fill regulations.

[0021] Another object of the present general inventive concept is to provide a plurality of single-use serving beverage containers having a quantity that collectively sums 1.75 liters, 1.00 liter, 750 milliliters, 375 milliliters, 200 milliliters, 100 milliliters, 50 milliliters, and/or the like.

[0022] Another object of the present general inventive concept is to provide a plurality of single-use serving beverage containers having a minimum quantity of fill that collectively sums at least 50 milliliters.

[0023] Another object of the present general inventive concept is to provide a plurality of single-use serving beverage containers having a quantity of fill that collectively sums between two of the following volumes: 1.75 liters, 1.00 liter, 750 milliliters, 375 milliliters, 200 milliliters, 100 milliliters, 50 milliliters. For example, the plurality of single-use serving beverage containers may have a quantity of fill that collectively sums 125 milliliters.

[0024] Another object of the present general inventive concept is to provide a plurality of single-use serving beverage containers that are each sized to provide a consumer with a quantity of ethanol that equals or is approximate to recommended daily ethanol consumption guidelines.

[0025] Another object of the present general inventive concept is to provide a plurality of single-serving alcoholic beverage containers that are each sized to provide a consumer with a quantity having an alcoholic content that equal to or approximate to a standard drink of alcohol. Experts define a "standard drink" as 12 ounces of beer, 1.5 ounces of 72-proof distilled spirits, or 5 ounces of wine, all of which contain approximately 0.54 ounces of alcohol.

[0026] Another object of the present general inventive concept is to provide a plurality of single-use serving beverage containers containing a liquid therein, the containers provided in increments, such as five or ten increments, and having a quantity that equals a government-mandated standard of fill if the liquid contained in each of the single-use serving containers were combined together into a single container.

[0027] Another object of the present general inventive concept is to provide a plurality of individual dispensing units that combine to form a single sales unit.

[0028] Another object of the present general inventive concept is to provide a single unit having a plurality of individual
dispensers such that one of the individual dispensers can be consumed without compromising the shelf life and usefulness of the remaining individual dispensers.

[0029] Another object of the present general inventive concept is to provide a plurality of single-serving alcoholic beverage containers that can be opened independently such that in an instance where one of the plurality of single-serving alcoholic beverage containers is opened and exposed to air and light, the remaining unopened plurality of single-serving alcoholic beverage containers remain unexposed to air and light such that the freshness, usefulness, and shelf life of the unopened plurality of single-serving alcoholic beverage containers is preserved.

[0030] Another object of the present general inventive concept is to provide a connection system such as a connector for the plurality of single-serving beverage containers to connect the plurality of single-serving beverage containers such that the connection system enables the combination of such containers in a single unit such that the unit complies with regulatory standards and also provides easy transportation of the single-serving beverage containers.

[0031] Another object of the present general inventive concept is to provide a plurality of connection systems for the plurality of single-serving beverage containers that enables the combination of such containers for regulatory purposes and the easy transportation of the single-serving beverage containers.

[0032] Another object of the present general inventive concept is to provide a plurality of single-serving beverage containers wherein each single-serving beverage container may have a different colored exterior container surface and/or internal fluid to form a unit having a plurality of colors. For instance, the plurality of single-serving beverage containers may be colored based on themes such as red, white, and blue for Independence Day, or red, green, and white for Christmas Day.

[0033] Another object of the present general inventive concept is to provide a plurality of single-serving beverage containers wherein each single-serving beverage container may have a different flavor to form a unit having a plurality of flavors, thereby providing a variety pack.

[0034] Another object of the present general inventive concept is to provide a connection system for the plurality of single-serving beverage containers wherein one or more of the plurality of single-serving beverage containers has a different colored exterior container surface and/or internal fluid to form a unit having a plurality of colors that may be based on themes such as red, white, and blue for Independence Day, or red, green, and white for Christmas Day.

[0035] Another object of the present general inventive concept is to provide a plurality of connection systems for the plurality of single-serving beverage containers that enable a user to select one of the plurality of connection systems based on intended use of the single-serving containers.

[0036] Another object of the present general inventive concept is to provide a connection system for the plurality of single-serving beverage containers that has an aesthetically pleasing appearance and is easy to use.

[0037] The above objects of the instant invention are accomplished through the use of a beverage dispenser system and method, and more particularly, through a beverage dispenser having a plurality of individual dispensers that are each releasably connected to one or more connection systems to provide a single unit.

BRIEF DESCRIPTION OF THE DRAWINGS

[0038] These and/or other aspects and utilities of the present general inventive concept will become apparent and more readily appreciated from the following description of the embodiments, taken in conjunction with the accompanying drawings of which:

[0039] FIG. 1 is a perspective view of the present general inventive concept illustrating a container with lid and base.

[0040] FIG. 2 is a front elevation view of the present general inventive concept shown in FIG. 1 (except for the lettering, the rear elevation view of the present general inventive concept is a mirror image of the view shown in FIG. 2).

[0041] FIG. 3 is a right side elevation view of the present general inventive concept shown in FIG. 1 (except for lettering, the left side elevation view of the present general inventive concept is a mirror image of the view shown in FIG. 3).

[0042] FIG. 4 is a top view of the present general inventive concept shown in FIG. 1.

[0043] FIG. 5 is an exploded front elevation view of the present general inventive concept shown in FIG. 1.

[0044] FIG. 6 is a front elevation view of the present general inventive concept in cross-section taken along line A-A of FIG. 2.

[0045] FIG. 7 is a perspective view of the present general inventive concept illustrating a connection means having arms that extend to a first degree.

[0046] FIG. 8 is a perspective view of the present general inventive concept illustrating a connection means having arms that extend to a second degree.

[0047] FIG. 9 is a perspective view of the present general inventive concept illustrating a connection means connected with a container.

[0048] FIG. 10 is a perspective view of the present general inventive concept illustrating a connection means having arms that extend to a first degree connected with ten containers that are secured together with a strap in addition to the connection means.

[0049] FIG. 11 is a perspective view of the present general inventive concept illustrating a connection means having arms that extend to a second degree connected with ten containers, the connection means having a handle.

DETAILED DESCRIPTION OF THE INVENTION

[0050] Reference will now be made in detail to the embodiments of the present general inventive concept, examples of which are illustrated in the accompanying drawings, wherein like reference numerals refer to like elements throughout. The embodiments are described below in order to explain the present general inventive concept by referring to the figures.

[0051] The present general inventive concept 1, as illustrated in FIG. 1, includes a container 10 to store and dispense a liquid. The container 10 has a main body 11 with a lid 20 adapted to engage a neck 13 to cover a mouth 14 on an upper portion of the main body 11. A base 30 on a lower portion of the main body 11 to support the container 10 in an upright position.

[0052] Although the lid 20 may assume various shapes, in the exemplary embodiment, the lid 20 is dome-shaped and has a solid interior, as depicted in FIG. 6. It is foreseen that the
lid 20 may be have hollow portions instead of a solid interior to decrease manufacturing costs via using less material thereby decreasing shipping costs.

[0053] The lid 20 has a cylindrical cavity 21 with an internal top wall 22 and a peripheral skirt 23 depending therefrom. The peripheral skirt 23 has inwardly-radiating helical threads 24 that are sized and shaped to sealingly engage correspondingly sized and shaped helical threads 12 that are oriented about an outer cylindrical surface of the neck 13 of the lid 20.

[0054] It is foreseen that the lid 20 may engage the neck 13 using other engagement means. For instance, the neck 13 may have one or more ribs (not illustrated) that correspond with one or more grooves (not illustrated) in the lid 20 to allow for a snap-fit of the lid 20 onto the neck 13.

[0055] The lid 20 may also be equipped with tamper-evident detection means to indicate that the container 10 has been opened. The tamper-evident detection means may provide indication means via a visual indicator, e.g., a missing, separated, and/or extended tab, and/or a mechanical indicator, e.g., no resistance to opening.

[0056] The lid 20 is constructed from glass, plastic, metal, or any other suitable material, the material having ideal properties to store a liquid over a wide range of temperatures and having sufficient durability to withstand impact from dropping the container 10. The lid 20 may be colored, e.g., silver or gold.

[0057] The container 10 is constructed from a transparent or semi-transparent material such as glass or plastic, the material having ideal properties to store a liquid over a wide range of temperatures and having sufficient durability to withstand impact from dropping the container 10.

[0058] The container 10 has an outer surface 42 that, in the exemplary embodiment, has raised lettering 50 that may be colored, e.g., silver or gold. It is foreseen that the outer surface 42 may be flat to accommodate labeling.

[0059] The container 10 has an internal bladder 40 with an internal surface 41 that has a different shape than an outer surface 42 of the container 10. The difference in shapes between the internal surface 41 and the outer surface 42 is apparent given the transparency of the material, and is especially apparent if the internal bladder 40 contains a colored liquid. The difference in shape between the internal surface 41 and the outer surface 42 provides an aesthetically pleasing appearance.

[0060] The base 30 is separated from the main body 11 of the container 10 by a groove 60. In the exemplary embodiment, the groove 60 has a concave “U” shaped surface, but it is foreseen that the groove 60 may have other shapes.

[0061] The groove 60 is sized and shaped to accommodate fastener 70 as illustrated in FIGS. 10-12. The fastener 70 may be used to connect a plurality of containers, e.g., 10. The fastener has two end surfaces 62 and 63 and a plurality of arms 65 on either side of a center portion 66.

[0062] The arms 65 are sized and shaped to snap around the groove 60 such that a plurality of container 10 may be connected via the connection means such as fastener 70. In the exemplary embodiment illustrated in FIG. 7, the arms 65 extend 180 degrees around the groove 60 of the container 10. In a secondary embodiment illustrated in FIG. 8, the arms 65 extend further around the groove 60, e.g., 270 degrees, or totally encompass the groove 60 to increase support of the container 10.

[0063] The fastener 70 may be constructed from a resilient material, e.g., rubber, plastic, metal, or the like, to allow the arms 65 to flex around the groove 60 and snap into place to secure the container 10. While the fastener 70 may be designed to hold any number of containers 10, the exemplary embodiment holds ten (10) containers 10.

[0064] As illustrated in FIG. 10, the fastener 70 may be supplemented by strap 80 that extends around a top of the main body 11 below the lid 20. The strap 80 is ideal if the arms 60 of the fastener 70 do not extend more than 180 degrees around the groove 60. In this application, the strap 80 biases the containers 10 inward toward the center portion 66 and against the arms 60 to further secure the containers 10.

[0065] It is foreseen that the fastener 70 may also include an option handle 90 to facilitate transportation thereof, such as illustrated in FIG. 11. The handle 90 extends from a central portion of the fastener 70 and may be contoured or fluted to heighten friction and facilitate transportation of the containers 10.

[0066] The fastener 70 permits each of the containers 10 to be packaged together as a single sales unit such that the quantity of each of the containers 10 equals a total quantity. The total quantity of the containers 10 is equal to one of a plurality of “standards of fill” as defined by the U.S. Bureau of Alcohol, Tobacco, Firearms, and Explosives (“ATF”).

[0067] The present general inventive concept provides ten (10) individual containers 10 having a volume of 20 milliliters each such that the ten individual containers 10 in combination yield a single-unit quantity of 200 milliliters, which is equal to one of the standards of fill defined by the ATF. It is foreseen, however, that size and/or number of the containers 10 can be increased and/or decreased to equal any one of the plurality of standards of fill. Likewise, it is foreseen that the fastener 70 can be designed to adapt to any increase and/or decrease in the size and/or numbers of the container 10 to accommodate the containers 10.

[0068] Volume and proof are related values. As such, volume and/or proof may be manipulated such that as volume is increased, proof is decreased, and vice-versa. The ability to manipulate volume is advantageous for at least the reason that proofs may be tailored to specific consumers because some proofs may be considered too strong by some consumers. Examples of volumes and proofs include 80 proof and approximately 35 milliliters, 100 proof and approximately 33 milliliters.

[0069] Although the foregoing detailed description of the present invention has been described by reference to an exemplary embodiment, and the best mode contemplated for carrying out the present invention has been shown and described, it will be understood that certain changes, modification or variations may be made in embodying the above invention, and in the construction thereof, other than those specifically set forth herein, may be achieved by those skilled in the art without departing from the spirit and scope of the invention, and that such changes, modification or variations are to be considered as being within the overall scope of the present invention. Therefore, it is contemplated to cover the present invention and any and all changes, modifications, variations, or equivalents that fall within the true spirit and scope of the underlying principles disclosed and claimed herein. Consequently, the scope of the present invention is intended to be limited only by the attached claims, all matter contained in the above description and shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

[0070] Having now described the features, discoveries and principles of the invention, the manner in which the invention
is constructed and used, the characteristics of the construction, and advantageous, new and useful results obtained; the new and useful structures, devices, elements, arrangements, parts and combinations, are set forth in the appended claims.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

What is claimed is:

1. A beverage dispenser system comprising:
   - a container including,
     - an upper neck portion that threadably engages a dome-shaped lid;
     - a main body portion having a cylindrical exterior surface; and
     - a base portion that is separated from the main body portion via a groove or slot;
   - a connection means including,
     - opposing arms that extend from a center portion; and
     - an interior cavity portion that spaces the opposing arms; wherein the groove or slot is sized and shaped to fit within the interior cavity portion of the connection means and between the opposing arms such that the container is secured therein.

2. The beverage dispenser system according to claim 1, wherein the groove or slot is a circumferential groove or slot extending about the main body portion.

3. The beverage dispenser system according to claim 1, wherein the connection means has a plurality of opposing arms on either side of a central portion to accommodate a plurality of containers on either side of the central portion.

4. The beverage dispenser system according to claim 1, wherein the connection means has a handle extending from the central portion to aid in transportation of the connection means.

5. A method of bottling a liquid comprising:
   - providing a plurality of single-use containers;
   - dispensing a predefined quantity of liquid into the plurality of single-use containers such that each of the plurality of single-use containers has a fraction of the predefined quantity on a combined basis; and
   - connecting each of the plurality of single-use containers together via a connector to yield a single unit such that the single unit has a quantity that is equal to the predefined quantity.

6. The method of bottling a liquid according to claim 5, wherein the predefined quantity is defined or required by law, regulation, or requirement of a governmental authority.

7. The method of bottling a liquid according to claim 5, wherein the connection means enables a seller or distributor to sell or distribute the plurality of single-use containers as a single-sales unit in compliance with law, regulation, or requirement of a governmental authority.

8. The method of bottling a liquid according to claim 7, wherein the single-sales unit is in compliance with the regulation that is a bottling or packaging requirement defined by the governmental authority.

9. The method of bottling a liquid according to claim 8, wherein the bottling or packaging requirement defined by the governmental authority is a standards of fill requirement.

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