

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
21 February 2008 (21.02.2008)

PCT

(10) International Publication Number  
WO 2008/020844 A1

(51) International Patent Classification:  
B65D 25/02 (2006.01) B65D 25/10 (2006.01)

(74) Agents: TILLMAN, Chad, D. et al.; TILLMAN WRIGHT, PLLC, P.O. Box 471581, Charlotte, NC 28247 (US).

(21) International Application Number:  
PCT/US2006/031970

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(22) International Filing Date: 14 August 2006 (14.08.2006)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): BOUNCING BRAIN PRODUCTIONS SUBSIDIARY 9, LLC [US/US]; 520 Elliot Street, Suite 200, Charlotte, NC 28202 (US).

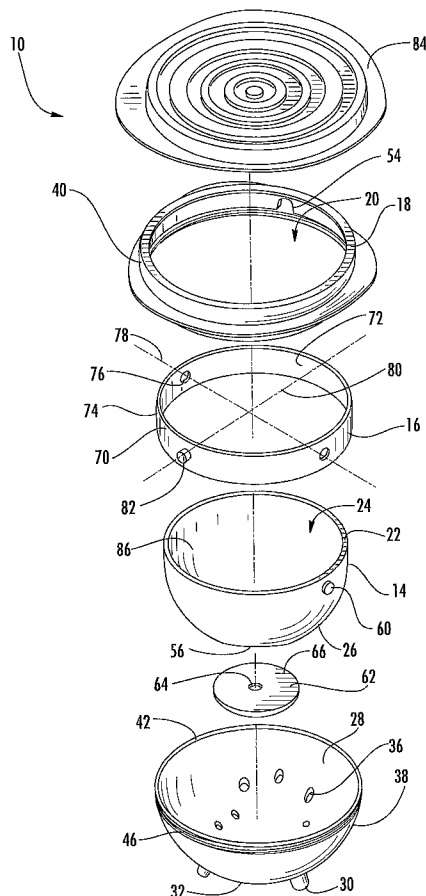
(72) Inventors; and

(75) Inventors/Applicants (for US only): BIZZELL, Daniel, Lee [US/US]; P.O.Box 2409, Davidson, NC 28036 (US). DAHLQUIST, Kevin [US/US]; 700 Fugate Avenue, Charlotte, NC 28205 (US). KOVACEVICH, Ian [US/US]; 235 Meadowbrook Road, Charlotte, NC 28211 (US).

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT,

[Continued on next page]

(54) Title: SPILL PROOF CONTAINER HAVING GIMBAL



(57) Abstract: A container assembly comprises a first member defining an interior containment space and having an access opening thereto, a second member dimensioned to encompass said first member, and a third member that interconnects said first member and said second member. The first and third members are connected along a first axis such that the first member is rotatable about the first axis relative to the third member. The second and third members are connected along a second axis such that the third member is rotatable about the second axis relative to the second member. The first axis is generally orthogonal to the second axis.

WO 2008/020844 A1



---

RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA,  
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**  
— *with international search report*

## SPILL PROOF CONTAINER HAVING GIMBAL

### I. COPYRIGHT STATEMENT

All of the material in this patent document is subject to copyright protection under the copyright laws of the United States and other countries. The copyright owner has no objection  
5 to the facsimile reproduction by anyone of the patent document or the patent disclosure, as it appears in official governmental records but, otherwise, all other copyright rights whatsoever are reserved.

### II. BACKGROUND OF THE INVENTION

The present invention generally relates to a container and, more particularly, to a  
10 "spill-proof" container.

Spill-proof containers marketed primarily for use by children are generally known. Such containers are typically designed for use with liquids such as milk and juice. Examples include U.S. Patent No. 1,509,734 to Langley and U.S. Patent No. 2,414,697 to Pettersson. The Langley patent discloses a drinking cup having an outer and an inner cup body, wherein  
15 the inner cup body is much more shallow than the outer cup body and fits in snug, sliding relation within the outer cup body. The inner cup body has holes in a peripheral wall thereof near a base thereof. When the drinking cup is tipped, liquid held in the outer cup body is able to flow into the inner cup body through one of the holes, wherein the liquid is accessible to a child using the drinking cup.

20 The Pettersson patent discloses a drinking cup having a generally cylindrical body and a threaded, removable lid having a central depending cavity that terminates at a point above a bottom of the cup and an arcuate opening adjacent a periphery thereof. Liquid may be poured into the drinking cup through the central depending cavity. A user may access the liquid in the drinking cup through the opening in the lid.

Spill-proof containers are also needed for solid snack-type food items such as crackers, cereal and the like. Containers for such snack-type food items are generally known. Examples include U.S. Patent No. 4,714,174 to Williams and U.S. Patent No. 6,656,514 to Tubbs. The Williams patent discloses a container having a first lid that covers a substantial  
5 portion of an interior of the container and that includes a tubular member that extends through downwardly into the interior of the container without reaching a bottom of the container and extends slightly upward above the first lid. The tubular member serves as a conduit allowing a user to access the interior of the container when the first lid is fitted onto the container. A second lid fits over the tubular member. A user may remove the second lid and access  
10 foodstuff located in the interior of the container via the tubular member.

The Tubbs patent discloses a container having a spill-proof lid comprising generally triangular, flexible, resilient flaps that extend in a generally radial direction inwardly from a rim of the lid. The flaps are configured to meet or overlap one another. When a user presses a hand through the flaps, the flaps bend toward an interior of the container to allow a user's  
15 hand to pass there through but return to their original position when the user's hand is removed there from. The lid further comprises a channel having openings there through adjacent the rim. Food crumbs dropped on the lid thereby may be returned to the interior of the container through the openings of the channel.

U.S. Patent Application Publication No. US 2005/0242100 A1 to Shepard, which is  
20 incorporated herein by reference in its entirety, discloses a spill-proof container for snack-type food items. The spill-proof container includes a bowl and a support member that receives and supports the bowl. The bowl includes a counterweight attached thereto that acts to self-right the bowl regardless of the orientation of the support member. The container allows a user complete access to an interior of the bowl, i.e., a lid does not completely or  
25 partially obstruct the user's access or visibility to the interior of the bowl. Moreover, the

container of Shepard does not utilize a lid to enable the spill-proof characteristic of the container.

While the container of Shepard is fit for its intended purpose, the container does have a drawback. The motion of the container is not fluid because of a frictional, sliding contact  
5 between the walls of the bowl and the support member. At least one aspect of the present invention overcomes this drawback of the Shepard container by eliminating the frictional, sliding contact between the walls of a bowl and a support member of a spill-proof container assembly, thereby providing smooth, fluid movement.

### **III. SUMMARY OF THE INVENTION**

10 The present invention includes many aspects and features.

In an aspect of the invention, a container assembly comprises a first member defining an interior containment space and having an access opening thereto, a second member dimensioned to encompass the first member, and a third member that interconnects the first member and the second member. The first and third members are connected along a first axis  
15 such that the first member is rotatable about the first axis relative to the third member. The second and third members are connected along a second axis such that the third member is rotatable about the second axis relative to the second member. The first axis is generally orthogonal to the second axis.

In a feature of this aspect, the second member is dimensioned to surround or  
20 encompass the first member without obstructing the access opening of the first member when the first and second members are disposed in a particular orientation relative to one another. In another feature of this aspect, the first member is weighted for biasing of the first member to a particular gravitational origination and, preferably, the first member includes a weight for maintaining the first member in a generally fixed orientation relative to the force of gravity  
25 when an orientation of the second member is changed. In an additional feature, the container

assembly further comprises articles of food contained within the interior containment space of the first member. In yet another feature, the first member comprises a bowl. In another additional feature, the second member comprises a bowl-shaped member.

In another aspect of the invention, a container assembly comprises a bowl; a support  
5 member at least encompassing the bowl; and a gimbal disposed between and interconnecting the support member and the bowl. The gimbal is configured to suspend the bowl in an upright orientation regardless of the orientation of the support member.

In a feature of this aspect, the support member comprises a base and coupling secured together in threaded engagement. In another feature of this aspect, the coupling defines  
10 opposed recesses and pins of the gimbal that are concentric to a first axis extend within the opposed recesses of the coupling. In accordance with this feature, a rim of the base bridges each opposed recess of the coupling to retain the pins of the gimbal within the coupling. It is preferred that the gimbal defines opposed openings concentric to a second axis. The bowl includes pins extending along the second axis within the opposed openings of the gimbal. It  
15 is further preferred that the first axis and the second axis are generally orthogonally disposed relative to one another.

In an additional feature, the assembly further comprises a weight attached to a bottom of the bowl. In another additional feature, the support member comprises a base having a plurality of openings extending completely there through from an interior surface to an  
20 exterior surface. In a further feature, the support member comprises a plurality of feet extending from an exterior surface thereof for support of the support member on a surface. In yet another feature, the container assembly may be disassembled and reassembled by a user.

In still yet another feature, the container assembly is fabricated from dishwasher safe materials. In an additional feature, the assembly further comprises a lid that is removably  
25 attachable to the support member. In another additional feature, the support member

comprises a bowl-shaped base and a coupling for attaching the gimbal to the base, and further comprises a lid that is removably attached to the coupling for covering of the bowl. In a further feature, the lid inhibits movement of the bowl relative to the support member when the lid is attached to the coupling.

5           In another aspect of the invention, a container assembly comprises a first member defining an interior containment chamber and an access opening to the chamber; a second member dimensioned to substantially, but not completely, encompass the first member; and means for suspending the first member within the second member in a particular gravitational orientation independent of changes in gravitational orientation of the second member.

10           In addition to the aforementioned aspects and features of the present invention, it should be noted that the present invention further includes the various possible combinations of such aspects and features.

#### **IV. BRIEF DESCRIPTION OF THE DRAWINGS**

15           Further aspects, features, embodiments, and advantages of the present invention will become apparent from the following detailed description with reference to the drawings, wherein:

FIG. 1 is a perspective view of a container assembly (without a lid) in accordance with a preferred embodiment of the present invention;

FIG. 2 is a bisectonal view of the container assembly of FIG. 1 that includes a lid;

20           FIG. 3 is an exploded perspective view of the container assembly of FIG. 2;

FIG. 4 is a perspective view of the container assembly of FIG. 1 in a tilted position.

#### **V. DETAILED DESCRIPTION**

As a preliminary matter, it will readily be understood by one having ordinary skill in the relevant art (“Ordinary Artisan”) that the present invention has broad utility and  
25           application. Furthermore, any embodiment discussed and identified as being “preferred” is

considered to be part of a best mode contemplated for carrying out the present invention. Other embodiments also may be discussed for additional illustrative purposes in providing a full and enabling disclosure of the present invention. Moreover, many embodiments, such as adaptations, variations, modifications, and equivalent arrangements, will be implicitly  
5 disclosed by the embodiments described herein and fall within the scope of the present invention.

Accordingly, while the present invention is described herein in detail in relation to one or more embodiments, it is to be understood that this disclosure is illustrative and exemplary of the present invention, and is made merely for the purposes of providing a full  
10 and enabling disclosure of the present invention. The detailed disclosure herein of one or more embodiments is not intended, nor is to be construed, to limit the scope of patent protection afforded the present invention, which scope is to be defined by the claims and the equivalents thereof. It is not intended that the scope of patent protection afforded the present invention be defined by reading into any claim a limitation found herein that does not  
15 explicitly appear in the claim itself.

Thus, for example, any sequence(s) and/or temporal order of steps of various processes or methods that are described herein are illustrative and not restrictive. Accordingly, it should be understood that, although steps of various processes or methods may be shown and described as being in a sequence or temporal order, the steps of any such  
20 processes or methods are not limited to being carried out in any particular sequence or order, absent an indication otherwise. Indeed, the steps in such processes or methods generally may be carried out in various different sequences and orders while still falling within the scope of the present invention. Accordingly, it is intended that the scope of patent protection afforded the present invention is to be defined by the appended claims rather than the description set  
25 forth herein.



Additionally, it is important to note that each term used herein refers to that which the Ordinary Artisan would understand such term to mean based on the contextual use of such term herein. To the extent that the meaning of a term used herein—as understood by the Ordinary Artisan based on the contextual use of such term—differs in any way from any particular dictionary definition of such term, it is intended that the meaning of the term as understood by the Ordinary Artisan should prevail.

Furthermore, it is important to note that, as used herein, “a” and “an” each generally denotes “at least one,” but does not exclude a plurality unless the contextual use dictates otherwise. Thus, reference to “a picnic basket having an apple” describes “a picnic basket having at least one apple” as well as “a picnic basket having apples.” In contrast, reference to “a picnic basket having a single apple” describes “a picnic basket having only one apple.”

When used herein to join a list of items, “or” denotes “at least one of the items,” but does not exclude a plurality of items of the list. Thus, reference to “a picnic basket having cheese or crackers” describes “a picnic basket having cheese without crackers”, “a picnic basket having crackers without cheese”, and “a picnic basket having both cheese and crackers.” Finally, when used herein to join a list of items, “and” denotes “all of the items of the list.” Thus, reference to “a picnic basket having cheese and crackers” describes “a picnic basket having cheese, wherein the picnic basket further has crackers,” as well as describes “a picnic basket having crackers, wherein the picnic basket further has cheese.”

Additionally, as used herein, a “spill-proof” container or container assembly is generally intended to mean a container in which the contents will be substantially retained when the container is tilted, knocked over or otherwise rolled onto a side thereof or turned upside down. In contrast, a “spill-proof” container is not necessarily a container that retains its contents when in free fall or when dropped.

Finally, as used herein, an “upright orientation” of a bowl is intended to refer to a disposition of a bowl wherein a plane containing a rim of an opening of the bowl is generally oriented orthogonal to the direction of the force of gravity.

Referring now to the drawings, one or more preferred embodiments of the present invention are next described. The following description of preferred embodiment(s) is merely  
5 exemplary in nature and is in no way intended to limit the invention, its application, or uses.

FIGS. 1-3 provide multiple views of a spill-proof container assembly **10** in accordance with a preferred embodiment of the present invention. In this regard, FIG. 1 is a perspective view of the container assembly **10**; FIG. 2 is a bisectonal view of the container  
10 assembly **10** of FIG. 1, including a lid **84**; and FIG. 3 is an exploded perspective view of the container assembly **10** of FIG. 2. The container assembly **10** includes a support member **12**, a bowl **14**, and a gimbal **16** disposed between and operatively interconnecting the support member **12** and the bowl **14**. With reference particularly to FIGS. 1-3, each of these three components are now described in detail below.

15

#### *The Support Member*

The support member **12** itself generally includes two components comprising a bowl-shaped base **38** and an annular coupling **40**. The base **38** defines a rim **42** surrounding access to an interior space in which the gimbal **16** and bowl **14** are at least partially disposed. The base **38** as illustrated is substantially bowl-shaped; however, the base **38** alternatively could  
20 be a simple framework or other structure that at least partially encompasses the exterior of bowl **14** and serves to support the bowl **14** via the gimbal **16**.

The coupling **40** removably attaches to the top of the base **38** generally adjacent the rim **42** of the base **38**. More particularly, an exterior surface **46** of the base **38** and an interior surface **44** of the coupling **40** include respective mating threads such that a detachable,  
25 threaded connection is enabled between the base **38** and the coupling **40**.

The coupling **40** includes an upper section **48** and a lower section **50**. The upper section **48** has a slightly smaller inner diameter than that of the lower section **50**, and an annular ledge **52** extends between the upper section **48** and the lower section **50**. The ledge **52** defines a pair of generally arch-shaped recesses **54**, discussed in further detail below. As described previously, the interior surface **44** of the lower section **50** includes the threads for connection with the base **38**. When the coupling **40** is tightly screwed onto the base **38**, the ledge **52** of the coupling **40** generally comes into abutting relation with, and is supported by, the rim **42** of the base **38**. The upper section **48** further defines a rim **18** that surrounds an opening **20** through which the gimbal **16** and the bowl **14** are generally free to move, as described below, when the coupling **40** is connected to the base **38**.

The two recesses **54** formed in the upper section **48** are arranged in opposite facing relation to one another. When the coupling **40** is tightly screwed onto the base **38** and the ledge **52** of the coupling **40** generally abuts the rim **42** of the base **38**, the rim **42** bridges the recesses **54** defined by the ledge **52** and secures a pair of pins **82** of the gimbal **16** to the base **38**, as discussed in greater detail below. The pair of recesses **54** of the coupling **40** thereby facilitate connection of the gimbal **16** to the support member **12**.

On the bottom of the support member **12** are disposed a plurality of feet **30**, which aid in maintaining the support member **12** in a stable, upright orientation when it is placed on a surface, such as a tabletop. The plurality of feet **30** include three rounded feet that are evenly spaced from one another and that extend from an exterior surface **34** of the support member. Although three rounded feet **30** are used in the illustrated embodiment, it is contemplated that any number of feet may be used, as desired, so long as the support member **12** is maintained in a stable, upright orientation when placed, for example, on a tabletop.

A plurality of openings 36 extend through the bottom 32 of the base 38. The openings 36 provide passages by which may be removed food debris that has fallen between the support member 12 and the bowl 14.

#### *The Gimbal*

5 The gimbal 16 comprises a ring-shaped member having a peripheral wall 70. The peripheral wall 70 has an interior surface 72 and an exterior surface 74. The gimbal 16 also includes a pair of gimbal openings 76 that extend through the peripheral wall 70 thereof and are disposed in opposite facing relation with one another and generally lie along a first gimbal axis 78. The gimbal 16 further includes a pair of pins 82 that protrude outwardly in a radial  
10 direction from the exterior surface 74 of the peripheral wall 70. The pair of pins 82 generally are coaxially disposed relative to one another and are concentric with a second gimbal axis 80, which is generally orthogonal to the first gimbal axis 78, i.e., the first and second gimbal axes 78,80 are substantially at a 90 degree angle with respect to each other.

#### *The Bowl*

15 The bowl 14 is semi-spherically shaped and includes a rim 22 that surrounds an opening or "mouth" 24 of the bowl 14. The bowl 14 is received within the interior space of the base 38 of the support member 12, with an exterior surface 26 of the bowl 14 extending preferably substantially adjacent—but out of contact with—an interior surface 28 of the base 38 when the bowl 14 is disposed therein. The bowl 14 and the support member 12 are  
20 configured such that the rim 18 of the coupling 40 of the support member 12 may be aligned with the rim 22 of the bowl 14 when the bowl 14 is disposed within the base 38. As such, the opening 20 of the support member 12 and the mouth 24 of the bowl 14 may be aligned and disposed in concentric relation to each other.

The bowl 14 preferably includes a substantially planar bottom 56. Furthermore, a  
25 cylindrical connection member 58 extends from the exterior surface 26 of a center of the

bottom **56** of the bowl **14**. A counterweight **62** that is generally disk-like in shape is detachably connected to the bottom **56** of the bowl **14**. The counterweight **62** includes an aperture **64** extending through a center thereof, and the cylindrical connection member **58** of the bowl **14** extends through the aperture **64** for attachment of the counterweight **62** to the  
5 bottom of the bowl **14**. One side **66** of the counterweight is substantially planar and an opposite side **68** is curved. The substantially planar side **66** of the counterweight **62** abuts the planar bottom **56** of the bowl **14** when the counterweight **62** is connected to the bowl **14**. The curvature of the other side **68** of the counterweight **62** matches that of the bowl **14** such that when the counterweight **62** is connected to the bowl **14**, the counterweight **62** continues the  
10 spherical curvature of the exterior surface **26** of the bowl **14** without interruption. By use of the counterweight **62**, the bowl **14** is weighted and biased toward a particular gravitational orientation regardless of the gravitational orientation of the support member **12**, as further described below.

The bowl **14** includes a pair of pins **60**, disposed proximate the rim **22** of the bowl **14**,  
15 that protrude radially a small distance outwardly from the exterior surface **26** of the bowl **14**. The pair of pins **60** generally are coaxially disposed relative to one another.

When the container assembly **10** is assembled, the gimbal **16** is disposed between and interconnects the bowl **14** and the support member **12**. Specifically, the pair of pins **60** of the bowl **14** are positioned to extend into the pair of openings **76** in the gimbal **16** such that the  
20 pins **60** are concentric with the first gimbal axis **78**. This secures the bowl **14** to the gimbal **16**. This connection also enables the bowl **14** to freely rotate about the first gimbal axis **78**.

Similarly, the pair of pins **82** of the gimbal **16** are positioned to extend into the pair of recesses **54** of the coupling **40** and retained therein by the rim **42** bridging the recesses **54**. This secures the gimbal **16**, and indirectly the bowl **14**, to the support member **12**. This

connection to the support member **12** also enables the gimbal **16**, and thus the bowl **14**, to freely rotate about the second gimbal axis **80**.

Furthermore, the interior space of the base **38** is dimensioned such that the bowl **14** is not inhibited in its movement about either of the first or second gimbal axes **78,80** when the support member **12** and bowl **14** are interconnected by the gimbal **16**. The gimbal **16** thereby suspends the bowl **14** within the base **38** of the support member **12** so that the bowl **14** may remain in an upright orientation regardless of the orientation of the support member **12**. If the support member **12** is tilted (whether because it has been knocked over or because a user holding the container assembly **10** has tilted the support member **12**), the bowl **14** nevertheless will remain in an upright orientation due to the force of gravity acting upon the counterweight **62** and the uninhibited movement of the bowl **14** about the first and second gimbal axes **78,80**. For example, FIG. 4 illustrates a scenario in which the support member **12** is placed in a tilted disposition with the bowl **14** self-righting itself to remain in an upright orientation. In this illustrated example, the bowl **14** is shown rotated about the first gimbal axis **78**.

As shown in FIGS. 2 and 3, the container assembly **10** also preferably includes a lid **84** that is generally planar and that fits onto the rim **18** for covering of the interior space of the base **38** when the coupling **40** is connected to the base **38**. As is conventional, the lid includes an undercut feature (not shown) that catches on the rim **18** when it is placed thereon. The undercut feature secures the lid to the rim until it is removed by a user desiring to access the interior space of the bowl. If it is desired to retain the bowl **14** in fixed disposition relative to the base **38**, the lid **84** may be placed onto the coupling **40**. The lid **84** will prevent the bowl **14** from rotating about either of the gimbal axes **78,80**.

*Use of the Container Assembly*

In use, the container assembly **10** is believed to provide a “spill-proof” container. In this respect, items that are placed within an interior **86** of the bowl **14** will not escape if the container assembly **10** is tilted, knocked over, or turned upside down. Accordingly, it will be appreciated that solid snack-type food items may be safely placed and retained within the bowl **14** of the container assembly **10**. Ready access to the food items may then be had through the opening **20** and mouth **24**. The container assembly **10** may be conveniently placed on a support surface such as the ground or a tabletop, or the container assembly **10** may be held in a user’s hand. Furthermore, it is preferred that the components of the container assembly **10** be sized to accommodate a hand of a child. However, the container assembly **10** may be sized for adult use as well.

The container assembly **10** may be conveniently used during travel or other times when an adult and child are away from the home. The lid **84** of the container assembly **10** may be placed thereon to insure that food items do not fall out of the bowl in transit. The container assembly **10** may then be placed in a travel bag of some sort, for example, a diaper bag or purse, for use at a later time by the child or the adult. The adult simply removes the container assembly **10** from the bag or purse and removes the lid **84** to ready the container assembly **10** for use for snacking. Even with the lid **84** removed, the container assembly **10** is spill-proof. Such functionality allows the adults to be less concerned about their children spilling food and making a mess while at home and away from home.

Additionally, the container assembly **10** may be used for holding snack-type food items such as crackers, cereal and the like, and the overall appearance of the container assembly may resemble that of a toy spaceship.

In view of the foregoing, it will further will be appreciated that the container assembly **10** provides a spill-proof container for snack-type food items that allows a user complete access and visibility to an interior of the container. In this respect, a lid does not

completely or partially obstruct a user's access or visibility to the interior of the container. Moreover, the container assembly **10** provides a spill-proof container that does not utilize a lid to enable the spill-proof characteristic of the container. Rather, the dual-axis gimbal **16** of the container assembly **10** enables the bowl **14** to be self-righting and, furthermore, enables  
5 smooth motion of the bowl **14** relative to the support member **12** when performing the spill-proof action.

In conclusion, it will be readily understood by those persons skilled in the art that the present invention is susceptible of broad utility and application. Many embodiments and adaptations of the present invention other than those specifically described herein, as well as  
10 many variations, modifications, and equivalent arrangements, will be apparent from or reasonably suggested by the present invention and the foregoing descriptions thereof, without departing from the substance or scope of the present invention.

Accordingly, while the present invention has been described herein in detail in relation to one or more preferred embodiments, it is to be understood that this disclosure is  
15 only illustrative and exemplary of the present invention and is made merely for the purpose of providing a full and enabling disclosure of the invention. The foregoing disclosure is not intended to be construed to limit the present invention or otherwise exclude any such other embodiments, adaptations, variations, modifications or equivalent arrangements, the present invention being limited only by the claims appended hereto and the equivalents thereof.

20 For instance, in an alternative embodiment (not shown), the gimbal is semi-spherical and is dimensioned to at least partially surround the bowl **12**. Similar to the base **38**, the semi-spherical gimbal also includes openings that register with the openings **36** in the base **38** for escape of any food debris that may fall between the gimbal and the bowl **14**. In yet other alternative embodiments, the gimbal and base each comprises a framework in which the area  
25 of the openings in the framework far exceeds the surface area of the framework itself.



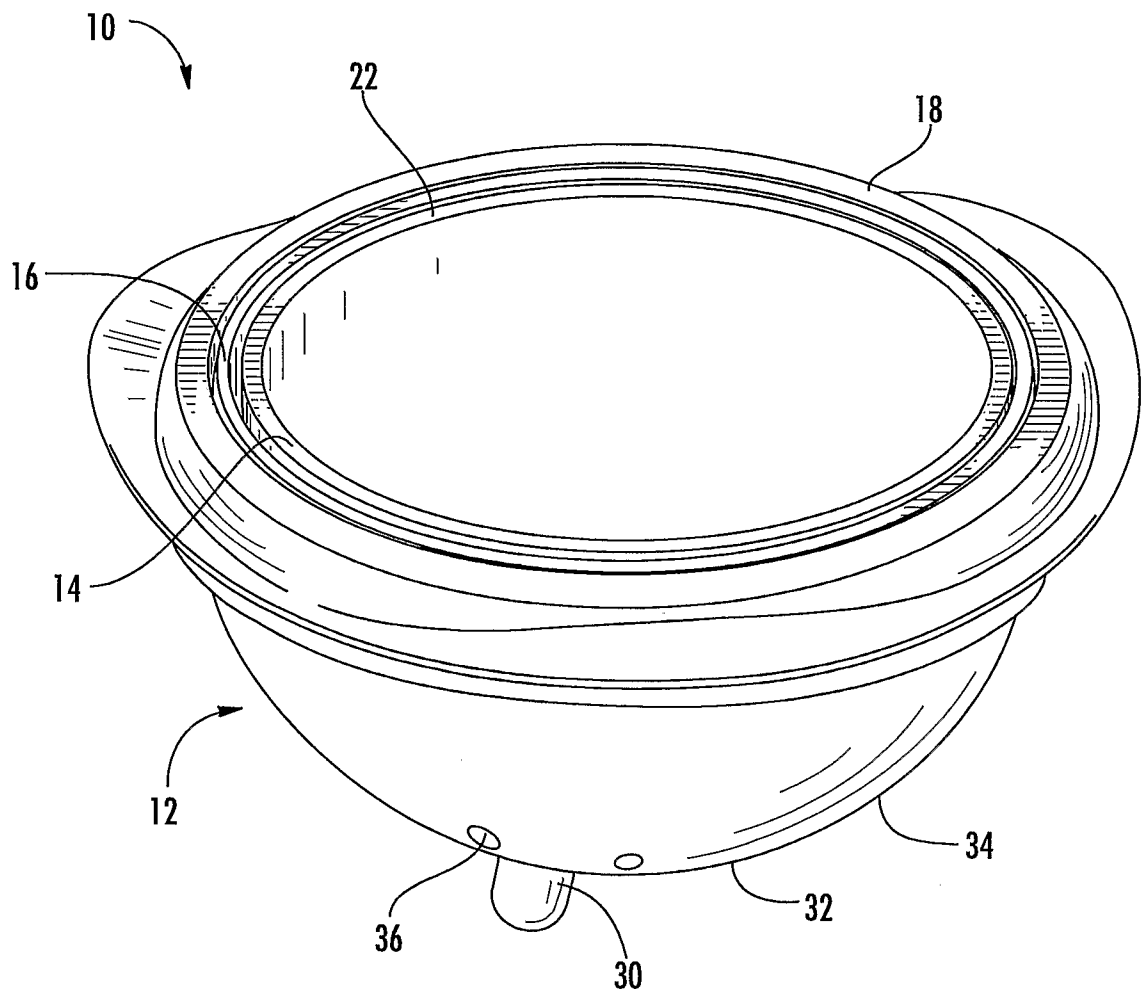
What is claimed is:

1. A container assembly, comprising:
  - (a) a first member defining an interior containment space and having an access opening thereto;
  - 5 (b) a second member dimensioned to encompass said first member; and
  - (c) a third member that interconnects said first member and said second member;
  - (d) wherein said first and third members are connected along a first axis such that said first member is rotatable about said first axis relative to said third member;
  - 10 (e) wherein said second and third members are connected along a second axis such that said third member is rotatable about said second axis relative to said second member; and
  - (f) wherein said first axis is generally orthogonal to said second axis.
2. The container assembly of claim 1, wherein said second member is dimensioned to  
15 encompass said first member without obstructing said access opening of said first member when said first and second members are disposed in a particular orientation relative to one another.
3. The container assembly of claim 1, wherein said first member is weighted for biasing the first member in a generally fixed orientation relative to the force of gravity when  
20 an orientation of the second member is changed.
4. The container assembly of claim 1, further comprising articles of food contained within the interior containment space of said first member.
5. The container assembly of claim 1, wherein said first member comprises a bowl.
6. The container assembly of claim 1, wherein said second member comprises a bowl-  
25 shaped member.

7. A container assembly comprising:
- (a) a bowl;
  - (b) a support member at least encompassing said bowl; and
  - (c) a gimbal disposed between and interconnecting said support member and said bowl, said gimbal configured to suspend said bowl in an upright orientation regardless of the orientation of the support member.
- 5
8. The container assembly of claim 7, wherein said support member comprises a base and coupling secured together in threaded engagement.
9. The container assembly of claim 8, wherein said coupling defines opposed recesses and wherein pins of said gimbal concentric to a first axis extend within said opposed recesses of said coupling.
- 10
10. The container assembly of claim 9, wherein a rim of said base bridges each said opposed recess of said coupling to retain said pins of said gimbal within said coupling.
- 15
11. The container assembly of claim 10, wherein said gimbal defines opposed openings concentric to a second axis and wherein said bowl includes pins extending along said second axis within said opposed openings of said gimbal.
12. The container assembly of claim 11, wherein said first axis and said second axis are generally orthogonally disposed relative to one another.
- 20
13. The container assembly of claim 7, wherein said bowl is weighted for biasing said bowl in a generally fixed orientation relative to the force of gravity when an orientation of said support member changes.
14. The container assembly of claim 7, wherein said support member comprises a base having a plurality of openings extending completely therethrough from an interior to an exterior thereof.
- 25

15. The container assembly of claim 7, wherein said support member comprises a plurality of feet extending from an exterior surface thereof for support of said support member on a surface.
16. The container assembly of claim 7, wherein said container assembly may be  
5 disassembled and reassembled by a user.
17. The container assembly of claim 7, wherein said container assembly is fabricated from dishwasher safe materials.
18. The container assembly of claim 7, further comprising a lid that is removably attachable to said support member.
- 10 19. The container assembly of claim 7, wherein said support member comprises a bowl-shaped base and a coupling for attaching said gimbal to said base, and further comprising a lid that is removably attached to said coupling for covering of said bowl.
20. The container assembly of claim 18, wherein said lid inhibits movement of said bowl  
15 relative to said support member when said lid is attached to said coupling.
21. A container assembly, comprising:
- (a) a first member defining an interior containment chamber and an access opening to said chamber;
  - (b) a second member dimensioned to substantially, but not completely,  
20 encompass said first member; and
  - (c) means for suspending said first member within said second member in a particular gravitational orientation independent of changes in gravitational orientation of said second member.

1/4



**FIG. 1**

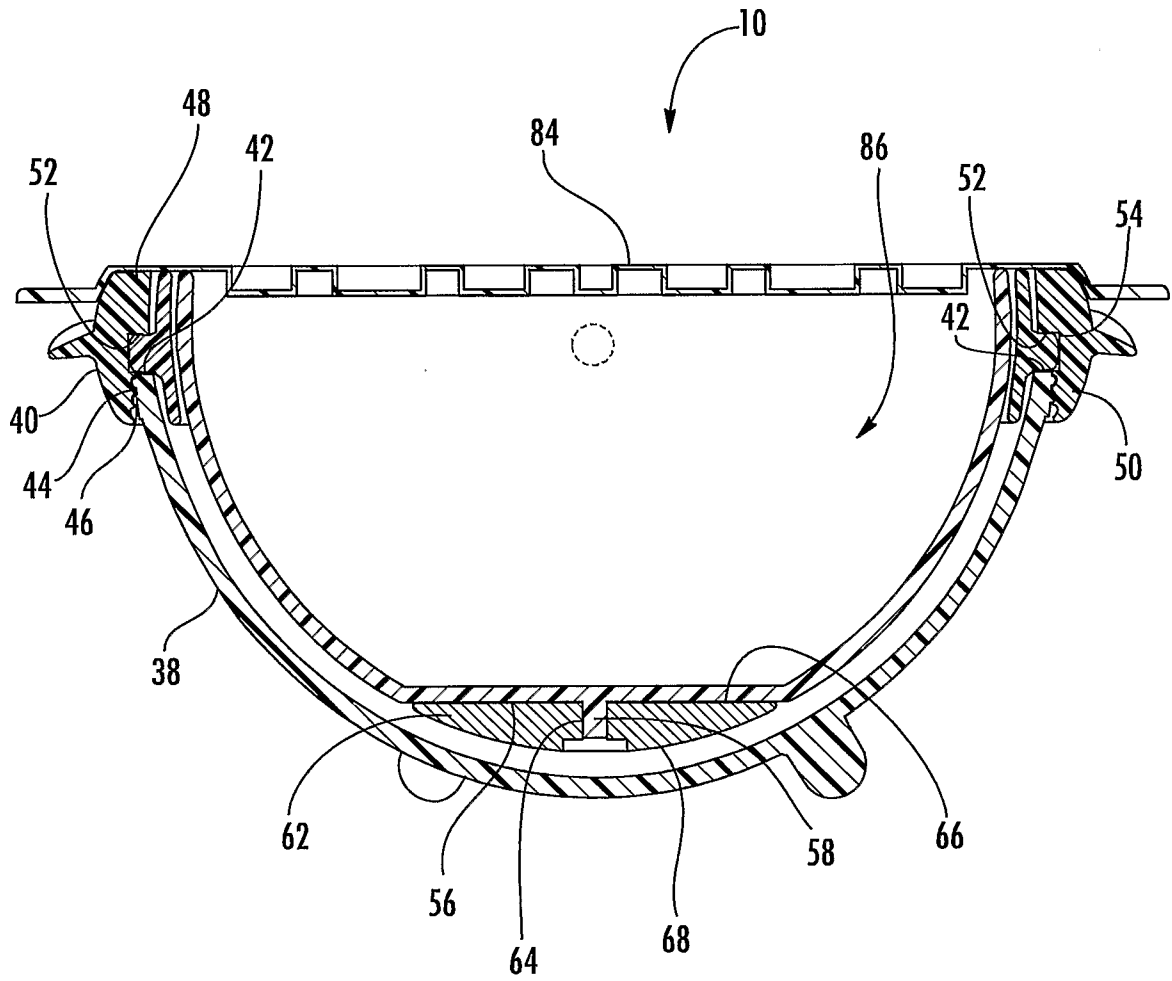
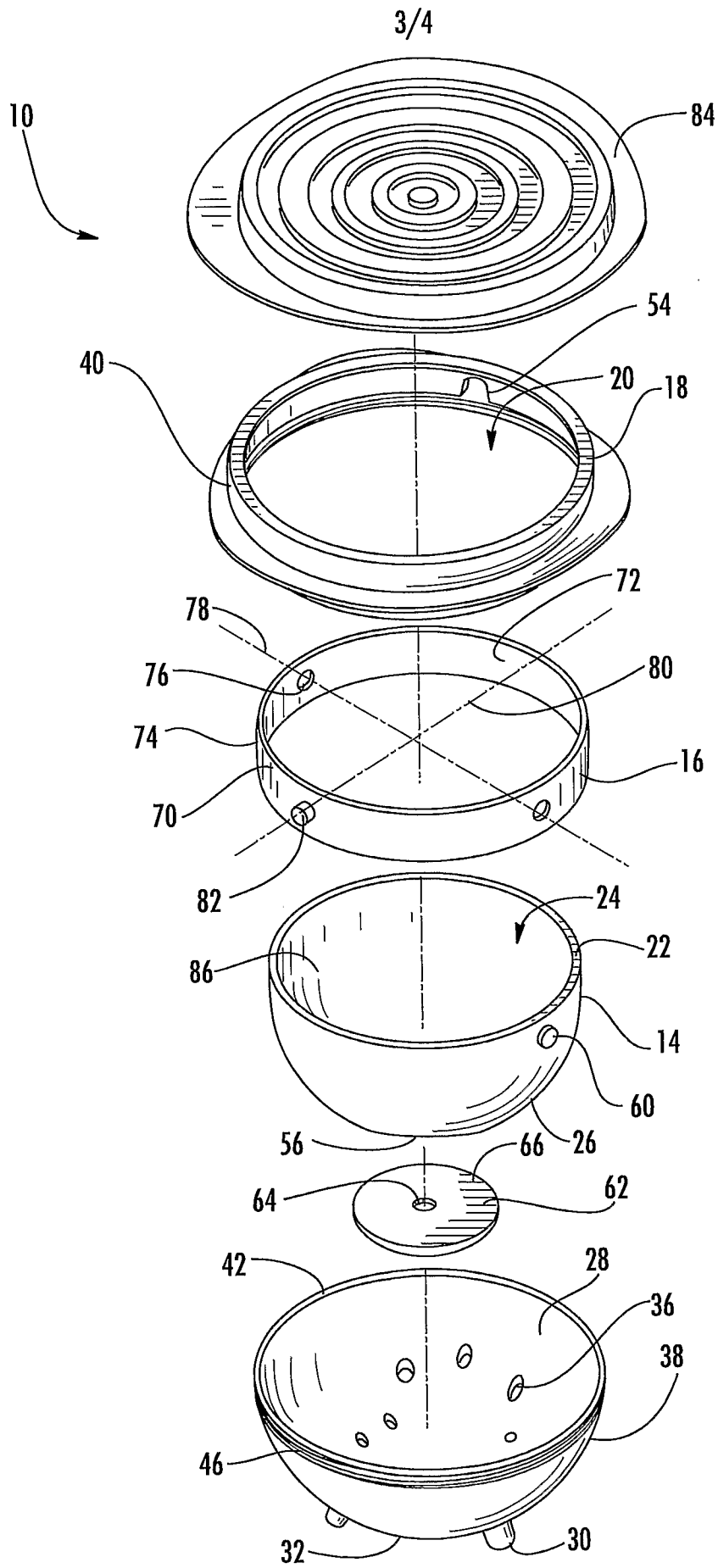


FIG. 2



**FIG. 3**

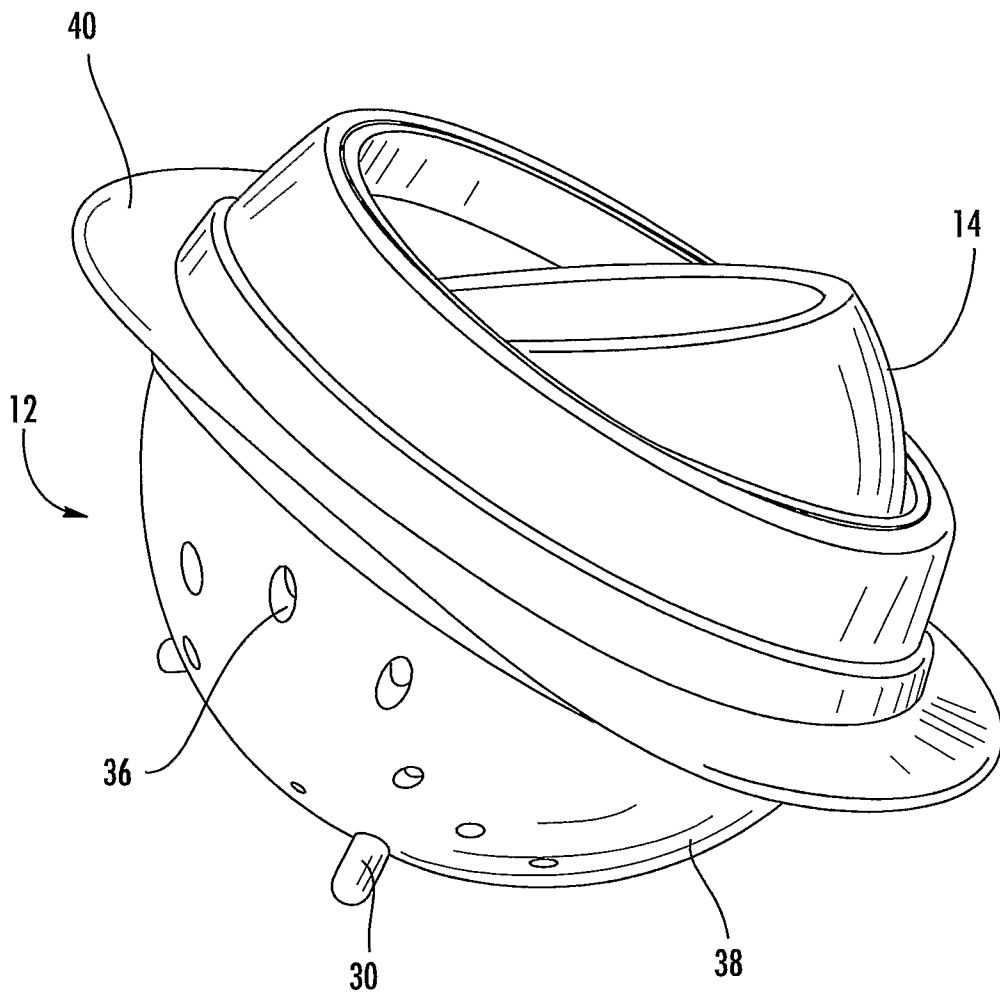


FIG. 4

**A. CLASSIFICATION OF SUBJECT MATTER*****B65D 25/02(2006.01)i, B65D 25/10(2006.01)i***

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC8 B65D 25/02

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean Utility models and applications for Utility models since 1975

Japanese Utility models and applications for Utility models since 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKIPASS (KIPO internal) &amp; Keywords: container, dual, rotation, gravitation and similar terms

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2005-0242100 A1 (BRADLEY K. SHEPARD et al.) 03 November 2005 See page 2, paragraphs 26-30.	1, 7, 21
A	US 6656514 B1 (VENITA TUBBS) 02 December 2003 See column 2, line 34 - line 55.	1, 7, 21
A	US 2006-0016817 A1 (MICHELL E. SHEPPARD JR et al.) 26 January 2006 See page 4, paragraphs 86-90.	1, 7, 21

 Further documents are listed in the continuation of Box C. See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&amp;" document member of the same patent family

Date of the actual completion of the international search

10 MAY 2007 (10.05.2007)

Date of mailing of the international search report

**11 MAY 2007 (11.05.2007)**

Name and mailing address of the ISA/KR

Korean Intellectual Property Office  
920 Dunsan-dong, Seo-gu, Daejeon 302-701,  
Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

HAN, JU CHULL

Telephone No. 82-42-481-5464





**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/US2006/031970**

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2005-0242100 A1	03.11.2005	None	
US 6656514 B1	02.12.2003	None	
US 2006-0016817 A1	26.01.2006	None	