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(72) Inventors:
• **COON, Robert C.**
Chicago, IL 60618 (US)
• **HURLEY, Paul D.**
Libertyville, IL 60048 (US)

(74) Representative: **Roberts, David**
Page White & Farrer
Bedford House
John Street
London WC1N 2BF (GB)

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(71) Applicant: **Ignite USA, LLC**
Chicago, Illinois 60601 (US)

(54) **PORTABLE BEVERAGE CONTAINER FOR SERVING AND ENTERTAINING CHILDREN**

(57) A portable beverage container includes a container base adapted to store a liquid, a lid removably coupled to the base, a design element support structure, and a design element. The design element support structure is removably coupled to the lid to allow an end user of the portable beverage container to drink the liquid stored in the container base. The design element support structure is arranged in a fluid aperture defined by the lid such that a first portion of the design element support structure is arranged in the container base and a second portion of the drinking element is arranged outside of the container base. The design element is adapted to movably travel on the first portion of the design element support structure and is configured to float on the liquid stored in the container base.

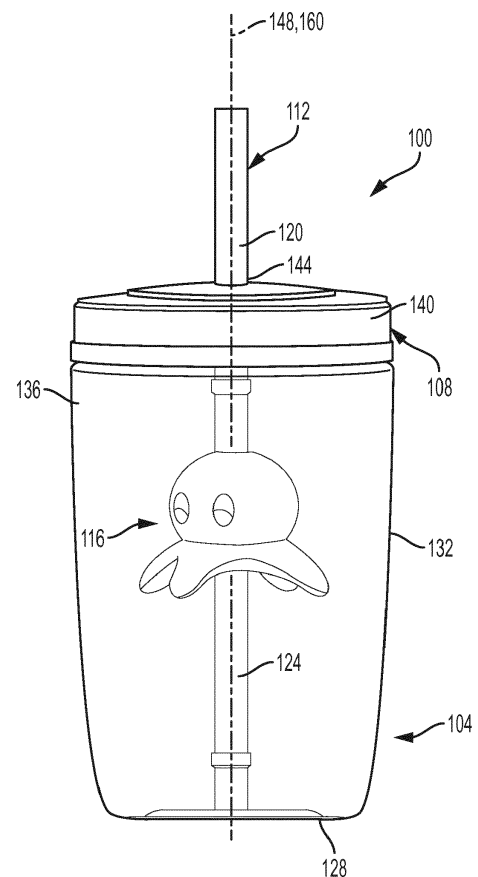


FIG. 1

Description

Field of the Disclosure

[0001] The present disclosure is directed to portable beverage containers and, more particularly, to a portable beverage container for serving and entertaining children.

Background

[0002] Portable beverage containers, such as tumblers, mugs, and the like, are commonly used by people who want to drink coffee, tea, or other liquids when walking, driving, or otherwise traveling between two different places. In some cases, portable beverage containers may be used by children (e.g., given to children by their parents while traveling between two different places). As such, portable beverage containers have been designed with various logos and designs that are aesthetically pleasing to children. As an example, portable beverage containers have been designed to include characters (e.g., cartoon characters) on the straw at a position outside of the portable beverage container. As another example, portable beverage containers have been designed to include visually ascertainable floating elements disposed between first and second walls of a dual-walled container base.

Summary

[0003] In accordance with one exemplary aspect of the present disclosure, a portable beverage container is provided. The portable beverage container includes a container base adapted to store a liquid, a lid removably coupled to the base, a design element support structure, and a design element. The design element support structure is removably coupled to the lid to allow an end user of the portable beverage container to drink the liquid stored in the container base. The design element support structure is arranged in a fluid aperture defined by the lid such that a first portion of the design element support structure is arranged in the container base and a second portion of the drinking element is arranged outside of the container base. The design element is adapted to movably travel on the first portion of the design element support structure and is configured to float on the liquid stored in the container base.

[0004] In some embodiments, the first portion of the design element support structure includes first and second retaining elements, and the design element is adapted to movably travel on the first portion of the design element support structure between the first and second retaining elements.

[0005] In some embodiments, the design element support structure further includes a cylindrical tube, and wherein the first and second retaining elements comprise first and second retention rings, respectively, overmolded on the cylindrical tube.

[0006] In some embodiments, the design element support structure further includes a cylindrical tube having an outer diameter that is less than an outer diameter of each of the first and second retaining elements.

[0007] In some embodiments, the design element comprises an annular ring, the annular ring having an inner diameter that is larger than an outer diameter of the cylindrical tube but smaller than the outer diameter of each of the first and second retaining elements.

[0008] In some embodiments, the fluid aperture extends along a centrally located longitudinal axis and the design element support structure extends along a first axis that is substantially co-axial with the centrally located longitudinal axis.

[0009] In some embodiments, the design element comprises an opening extending along a second axis that is co-axial with the centrally located longitudinal axis and the first axis, wherein the design element support structure extends through the opening of the design element.

[0010] In some embodiments, the design element comprises an annular ring arranged at a position proximate a bottom end of the opening, the annular ring having an inner diameter that is larger than an outer diameter of the cylindrical tube but smaller than an outer diameter of each of the first and second retaining elements.

[0011] In some embodiments, the design element comprises a first body portion and a second body portion coupled to the first body portion, the second body portion being at least one of a different color, a different material, and a different texture than the first body portion.

[0012] In accordance with another exemplary aspect of the present disclosure, a straw assembly is provided. The straw assembly is configured to be removably coupled to a lid of a portable beverage container, the portable beverage container including a container base adapted to store a liquid. The straw assembly includes a straw and a design element. The straw is configured to allow an end user of the portable beverage container to drink the liquid stored in the container base, and includes a first end, a second end, a first retaining ring arranged between the first and second ends, and a second retaining ring arranged between the first retaining ring and the second end. The design element is adapted to movably travel on the straw between the first and second retaining elements, the design element configured to float on the liquid stored in the container base.

[0013] In some embodiments, the straw further includes a cylindrical tube having an outer diameter that is less than an outer diameter of each of the first and second retaining rings.

[0014] In some embodiments, the first and second retaining rings are overmolded on the cylindrical tube.

[0015] In some embodiments, the design element comprises an annular ring having an inner diameter that is larger than the outer diameter of the cylindrical tube but smaller than the outer diameter of each of the first and second retaining rings, such that the design element

is retained on the straw between the first and second retaining elements.

[0016] In some embodiments, the outer diameter of the straw is equal to approximately 8 mm, the outer diameter of each of the first and second retaining rings is equal to approximately 10 mm, and the inner diameter of the annular ring is equal to approximately 9.5 mm.

[0017] In some embodiments, the straw extends along a first axis and the design element comprises an opening that extends along a second axis that is co-axial with the first axis, and wherein the straw extends through the opening of the design element.

[0018] In some embodiments, the design element comprises a first body portion and a second body portion coupled to the first body portion, the second body portion being at least one of a different color, a different material, and a different texture than the first body portion.

[0019] In accordance with another exemplary aspect of the present disclosure, a portable beverage container is provided. The portable beverage container includes a container base adapted to store a liquid, a lid removably coupled to the base, a design element support structure, and a design element. The design element support structure is removably coupled to the lid to allow an end user of the portable beverage container to drink the liquid stored in the container base, and includes a cylindrical tube and first and second retaining elements disposed on the cylindrical tube. The design element support structure is arranged in a fluid aperture of the lid such that the first and second retaining elements are arranged in the container base. The design element is adapted to movably travel on the design element support structure between the first and second retaining elements, the design element configured to float on the liquid stored in the container base.

[0020] In some embodiments, the design element comprises an annular ring having an inner diameter that is larger than an outer diameter of the cylindrical tube but smaller than an outer diameter of each of the first and second retaining elements.

[0021] In some embodiments, the fluid aperture extends along a centrally located longitudinal axis, the design element support structure extends along a first axis that is substantially co-axial with the centrally located longitudinal axis, and the design element comprises an opening extending along a second axis that is co-axial with the centrally located longitudinal axis and the first axis, and wherein the design element support structure extends through the opening of the design element.

[0022] In some embodiments, the design element comprises a first body portion and a second body portion coupled to the first body portion, the second body portion being at least one of a different color, a different material, and a different texture than the first body portion.

Brief Description of the Drawings

[0023] The disclosure may be best understood by ref-

erence to the following description taken in conjunction with the accompanying drawings, in which like reference numerals identify like elements in the several FIGS., in which:

FIG. 1 is a perspective view of a first example of a portable beverage container constructed in accordance with the principles of the present disclosure;

FIG. 2 is a perspective view of a design element support structure of the portable beverage container of FIG. 1;

FIG. 3 is perspective view of a design element that can be coupled to the design element support structure of FIG. 2, with one body portion of the design element depicted transparently so as to show the other body portion of the design element coupled thereto;

FIG. 4 is a cross-sectional view of a portion of the design element of FIG. 3;

FIG. 5 is a cross-sectional view of the design element of FIG. 3;

FIG. 6 is a perspective view of the design element support structure of FIG. 2 and the design element of FIGS. 3-5 before the design element is coupled to the design element support structure;

FIG. 7 is a cross-sectional view of the design element of FIGS. 3-5 in the process of being secured on the design element support structure of FIG. 2;

FIG. 8 is similar to FIG. 7, but shows the design element secured on the design element support structure; and

FIG. 9 is a perspective view of the design element of FIGS. 3-5 secured on the design element support structure of FIG. 2.

Detailed Description

[0024] FIG. 1 depicts a first example of a portable and reusable beverage container 100 constructed in accordance with the principles of the present disclosure. The beverage container 100, which may be, for example, a mug, a tumbler, or the like, generally includes a container base 104 and a lid 108 removably coupled to the container base 104. The container base 104 is generally configured to store or contain a liquid, which may be hot or cold, for example, water, juice, soda, milk, tea, coffee, or any other beverage, for consumption by a user of the container 100. The beverage container 100 also generally includes a design element support structure 112 removably coupled to the lid 108 and a design element 116 removably coupled to the design element support structure 112. When the design element support structure 112, which in this example takes the form of a straw, is coupled to the lid 108 in the manner illustrated in FIG. 1, a first portion 120 of the design element support structure 112 is arranged outside of the container base 104, and a second portion 124 of the design element support structure 112 is arranged within the container base 104. The

second portion 124 is, in turn, in fluid communication with the liquid stored in the container base 104, thereby allowing the user of the container 100 to consume (e.g., drink) the liquid stored in the container base 104. The design element 116 is generally coupled to the design element support structure 112 in a manner that provides an aesthetically pleasing effect to the user of the container 100, particularly when that user is a child. The design element 116 is secured to the design element support structure 112 at a position within the container base 104, and, when the container 100 is in use (e.g., is storing liquid), the design element 116 can float on the liquid stored in the container base 104, as will be described in greater detail below. Such a configuration provides a more aesthetically pleasing effect that is interactive inasmuch as the effect can be changed during usage.

[0025] With reference still to FIG. 1, further details regarding the container base 104 and the lid 108 will now be described. The container base 104 is defined by a bottom wall 128 and a continuous sidewall 132 that extends upwardly from the bottom wall 128. While not visible in FIG. 1, it will be appreciated that the container base 104 includes a collar that extends outwardly (upwardly in FIG. 2) from the sidewall 132 for matingly engaging the lid 108. In the exemplified embodiment, the collar terminates at an upper, open end and has a threaded portion that is configured to mate with a corresponding threaded portion of the lid 108. The bottom wall 128, the sidewall 132, and the collar together define a volume or reservoir 136 for holding or storing the liquid. The lid 108 illustrated in FIG. 1 has an annular or circular base 140 and a flow aperture 144 defined in the annular base 140 and extending along a centrally located longitudinal axis 148. In the exemplified embodiment, the annular base 112 includes the above-mentioned threaded portion (not shown) that is configured to mate with the threaded portion of the collar so as to removably couple the lid 108 to the container base 104. Of course, other connections such as snap-fit connections may be used to secure the lid 108 to the container base 104. The flow aperture 144 is generally sized to receive the design element support structure 112 such that the second portion of the 124 of the design element support structure 112 is in fluid communication with the liquid stored in the container base 104, thereby allowing the user to drink the liquid stored therein.

[0026] With reference now to FIG. 2, further details regarding the design element support structure 112 will now be described. The design element support structure 112 generally includes a cylindrical tube 150 and first and second retaining elements 154, 158 formed or disposed on an exterior of the cylindrical tube 150. The cylindrical tube 150 in this example is typically extruded and made of polypropylene or some other suitable polymer or material and extends along an axis 160 that is substantially parallel to the axis 148 described above. The tube 150 has a first end 162, a second end 166 opposite the first end 162, and a length 170 defined by and extending be-

tween the first and second ends 162, 166. In one example, the length 170 is equal to approximately 175 mm, but in other examples the length 170 can vary (e.g., be greater than 175 mm, be less than 175 mm). The tube 150 also has an outer diameter 172. In the exemplified embodiment, the outer diameter 172 is equal to approximately 8 mm. In other examples, the outer diameter 172 can vary, i.e., can be greater than or less than approximately 8 mm. While not required, the first end 162 of the design element support structure 112 is generally part of the first portion 120 that is arranged outside of the container base 104 when the design element support structure 112 is coupled to the lid 108 as illustrated in FIG. 1. Conversely, while again not required, the second end 166 of the design element support structure 112 is generally part of the second portion 124 that is arranged within the container base 104 when the design element support structure 112 is coupled to the lid 108.

[0027] The first retaining element 154 illustrated in FIG. 2 takes the form of a first retention ring overmolded on the cylindrical tube 150 at a position between the first and second ends 162, 166. The first retaining element 154 thus has an outer diameter 174 that is greater than the outer diameter 172 of the tube 150. In the exemplified embodiment, the outer diameter 174 is equal to approximately 10 mm. In other examples, the outer diameter 174 can vary, i.e., can be greater than or less than approximately 10 mm. Likewise, the second retaining element 158 illustrated in FIG. 2 takes the form of a second retention ring, identical in structure to the first retention ring, but overmolded on the cylindrical tube 150 at a position between the first retaining element 154 and the second end 166 of the design element support structure 112 (i.e., closer to the second end 166 than the first retaining element 154). The second retaining element 158 thus has an outer diameter 178 that is greater than the outer diameter 172 of the tube 150. In the exemplified embodiment, the outer diameter 178 is equal to approximately 10 mm, and, as such, is equal to the outer diameter 174 of the first retaining element 154. In other examples, the outer diameter 178 can be different than the outer diameter 174 and/or can be greater than or less than approximately 10 mm. In the example in which the length 170 is equal to approximately 175 mm, the first retaining element 154 can be arranged at a position that is between approximately 80 and 120 mm from the second end 166, and the second retaining element 158 can be arranged at a position that is between approximately 5 and 20 mm from the second end 166. In other examples, the first and/or the second retaining element 154, 158 can instead be an o-ring or other structural feature (e.g., one or more of a bump, a projection, etc.) arranged on the exterior of the cylindrical tube 150 such that the retaining element(s) 154, 158 is (are) capable of retaining the design element 116, for example, by preventing the design element from unintentionally traveling beyond the same. In addition, the position of the first retaining element 154 and/or the second retaining element 158 can

vary, as long as a continuous section of the cylindrical tube is provided without retaining elements so that the design element can travel between retaining elements 154, 158, as described in further detail below.

[0028] In any event, the first and second retaining elements 154, 158 are generally part of the second portion 124 of the design element support structure 112 that is arranged within the container base 104 when the design element support structure 112 is coupled to the lid 108 (though again, this is not required). The first and second retaining elements 154, 158 are thus arranged so as to retain the design element 116 on the design element support structure 112 within the container base 104 when the container 100 is in use. In some cases, the design element 116 can be retained therein when the container 100 is not in use, e.g., when the container 100 is being washed (e.g., is in the dishwasher), so as to prevent the design element 116 from being lost. The first and second retaining elements 154, 158 also help to prevent unintended removal of the drinking element 112 when the container 100 is being used.

[0029] FIGS. 3-5 illustrate the design element 116 in greater detail. Generally speaking, the design element 116 may be a novelty character or other graphical representation, design or other element that is aesthetically pleasing to children and may be made of a polymer such as polypropylene that has a density (e.g., a density less than 1) that allows the design element 116 to float on or within the liquid stored in the container base 104. As used herein, the term float refers to a level of the design element 116 that is supported by buoyancy forces above the second (lower) retaining element 158 when sufficient liquid is stored in the container base 104 such that the design element 116 is at a level above the second retaining element 158 that can adjust as the volume of liquid within the container 100 is displaced.

[0030] As illustrated in FIG. 3, the design element 116 in this example takes the form of an octopus character. In other examples, the design element 116 can be a different type of character (e.g., a character of a different animal, a character of a superhero) or some other element (e.g., toy, a flag, or a logo of a sport team) that is aesthetically pleasing to children.

[0031] As illustrated in FIGS. 4 and 5, the design element 116 in this example has first and second body portions 200, 204 that are made of different colors, textures, and/or materials and are insert molded, so as to achieve color separation and/or material/textural differentiation and to relieve thick wall sections. More specifically, the first body portion 200, which forms the bottom portion of the design element 116, is shot first, as illustrated in FIG. 4, and then the first body portion 200 is inserted into the tool for making the second body portion 204, at which time the second body portion 204, which forms the top portion of the design element 116, can be shot with a different color, different material, or different texture, as illustrated in FIG. 5. Once molded in this manner, the first and second body portions 200, 204 define an opening

208 that extends through the design element 116 along an axis 212 that is substantially parallel to the axes 148, 160 described above, when the design element 116 is disposed on the cylindrical tube 150 within the container base 104. The opening 208 is sized to receive a portion of the design element support structure 112, as will be described in greater detail below. The design element 116 also includes an annular ring 206 that is integrally formed with the first body portion 200 at a position proximate to a bottom end of the opening 208. The annular ring 206 has an inner diameter 210 that is larger than the outer diameter 172 of the tube 150 but is smaller than the outer diameters 174, 178 of the first and second retaining elements 154, 158, respectively. In the exemplified embodiment, the inner diameter 210 is equal to approximately 9.5 mm; in other examples, the inner diameter 210 can be greater than or less than 9.5 mm. The annular ring 206 is generally configured to secure the design element 116 to the design element support structure 112, as will be described in greater detail below.

[0032] In other examples, the first and second body portions 200, 204 can be shaped/sized differently and/or can be manufactured in a different manner. As an example, the first and second body portions 200, 204 can be molded separately and then mechanically coupled to one another. As another example, the first and second body portions 200, 204 can be integrally formed (e.g., molded) with one another, thereby producing a single or unitary piece design element.

[0033] FIGS. 6-9 illustrate how the design element 116 is coupled to the design element support structure 112, and once coupled thereto, can be movably disposed on the design element support structure 112 and, at the same time, securely retained thereon by the retaining elements 154, 158 such that the design element 116 can travel or float between the retaining elements 154, 158 as liquid is consumed. As illustrated in FIG. 6, the bottom end 166 of the design element support structure 112 can be inserted into the opening 208 of the design element 116. Because the diameter of the opening 208 is greater than the outer diameter 178 of the second retaining element 158, the design element 116 can be moved upward (at least when viewed in FIG. 7) along the design element support structure 112, as illustrated in FIG. 7, until the bottom portion of the design element 116 moves past the second retaining element 158, at which time the annular ring 206, located proximate to the bottom end of the opening 208, snaps past the second retaining element 158, as illustrated in FIG. 8. In turn, because the outer diameters 174, 178 of the first and second retaining elements 154, 158, respectively, are greater than the inner diameter 210 of the annular ring 206, as illustrated in FIG. 8, the design element 116 is secured on the design element support structure 112 between the first and second retaining elements 154, 158. The design element 116 is, however, permitted to freely move or float along the design element support structure 112 between the first and second retaining elements 154, 158, as illustrated in FIG.

9, which provides an interactive and aesthetic feature for the user, particularly as the design element 116 changes positions as liquid is being consumed from the beverage container 100.

[0034] Ultimately, when the design element support structure 112 and the design element 116 are employed in the container 100, as illustrated in FIG. 1, the design element 116 is movably disposed within the container base 104. The design element 116 will generally float, in the container, on the liquid stored in the container base 104, such that the position of the design element 116 will vary depending on the amount of liquid stored in the container base 104. At the same time, the design element 116 is securely retained on the design element support structure 112 by virtue of the first and second retaining elements 154, 158. Thus, the design element 116 stays connected to the design element support structure 112 when the container 100 is used. In this manner, the design element 116, and more generally the container 100, provides an aesthetically pleasing effect to the user of the container 100, particularly when that user is a child, at substantially all times.

[0035] While the container 100 illustrated herein includes the first and second retaining elements 154, 158, it will be appreciated that the container 100 need not do so. In such a case, the design element 116 would still be movably disposed along the design element 116 and would float, in the container, on the liquid stored in the container base 104, but would not be securely retained thereon should the drinking element 116 be removed.

[0036] In an alternative embodiment (not illustrated), the beverage container 100 can take the form of a sippy cup having a lid including a spout, the spout being in fluid communication with the beverage container liquid contents. In this instance, no portion of the design element support structure is disposed outside the container when the container lid is secured to the container base. The design element may still movably traverse along the design element support structure, however, thereby providing an aesthetically pleasing effect to the user of the container particularly when that user is a child, at substantially all times.

Claims

1. A portable beverage container, comprising:

a container base adapted to store a liquid; and
a lid removably coupled to the base, the lid defining a fluid aperture;

a design element support structure removably coupled to the lid to allow an end user of the portable beverage container to drink the liquid stored in the container base, the design element support structure arranged in the fluid aperture such that a first portion of the design element support structure is arranged in the container

base and a second portion of the design element support structure is arranged outside of the container base; and

a design element adapted to movably travel on the first portion of the design element support structure, the design element configured to float on the liquid stored in the container base.

2. The portable beverage container of claim 1, wherein the first portion of the design element support structure includes first and second retaining elements, and the design element is adapted to movably travel on the first portion of the design element support structure between the first and second retaining elements.

3. The portable beverage container of any preceding claim, wherein the design element support structure further includes a cylindrical tube, and wherein the first and second retaining elements comprise first and second retention rings, respectively, overmolded on the cylindrical tube.

4. The portable beverage container of claim 2, wherein the design element support structure further includes a cylindrical tube having an outer diameter that is less than an outer diameter of each of the first and second retaining elements.

5. The portable beverage container of any preceding claim, wherein the fluid aperture extends along a centrally located longitudinal axis and the design element support structure extends along a first axis that is substantially co-axial with the centrally located longitudinal axis.

6. The portable beverage container of any preceding claim, wherein the design element comprises a first body portion and a second body portion coupled to the first body portion, the second body portion being at least one of a different color, a different material, and a different texture than the first body portion.

7. A straw assembly configured to be removably coupled to a lid of a portable beverage container, the portable beverage container including a container base adapted to store a liquid, the straw assembly comprising:

a straw configured to allow an end user of the portable beverage container to drink the liquid stored in the container base, the straw including a first end, a second end, a first retaining ring arranged between the first and second ends, and a second retaining ring arranged between the first retaining ring and the second end; and
a design element adapted to movably travel on the straw between the first and second retaining

- elements, the design element configured to float on the liquid stored in the container base.
8. The straw assembly of claim 7, wherein the straw further includes a cylindrical tube having an outer diameter that is less than an outer diameter of each of the first and second retaining rings. 5
 9. The straw assembly of claim 8, wherein the design element comprises an annular ring having an inner diameter that is larger than the outer diameter of the cylindrical tube but smaller than the outer diameter of each of the first and second retaining rings, such that the design element is retained on the straw between the first and second retaining elements. 10
 10. The straw assembly of any one of claims 7 to 9, wherein the straw extends along a first axis and the design element comprises an opening that extends along a second axis that is co-axial with the first axis, and wherein the straw extends through the opening of the design element. 20
 11. The straw assembly of any one of claims 7 to 10, wherein the design element comprises a first body portion and a second body portion coupled to the first body portion, the second body portion being at least one of a different color, a different material, and a different texture than the first body portion. 25
 12. A portable beverage container, comprising: 30
 - a container base adapted to store a liquid; and
 - a lid removably coupled to the base, the lid defining a fluid aperture; 35
 - a design element support structure removably coupled to the lid to allow an end user of the portable beverage container to drink the liquid stored in the container base, the design element support structure comprising a cylindrical tube and first and second retaining elements disposed on the cylindrical tube, the design element support structure arranged in the fluid aperture such that the first and second retaining elements are arranged in the container base; 40
 - and 45
 - a design element adapted to movably travel on the design element support structure between the first and second retaining elements, the design element configured to float on the liquid stored in the container base. 50
 13. The portable beverage container of claim 12, wherein the design element comprises an annular ring having an inner diameter that is larger than an outer diameter of the cylindrical tube but smaller than an outer diameter of each of the first and second retaining elements. 55
 14. The portable beverage container of any one of claims 12 to 13, wherein the fluid aperture extends along a centrally located longitudinal axis, the design element support structure extends along a first axis that is substantially co-axial with the centrally located longitudinal axis, and the design element comprises an opening extending along a second axis that is co-axial with the centrally located longitudinal axis and the first axis, and wherein the design element support structure extends through the opening of the design element.
 15. The portable beverage container of any one of claims 12 to 14, wherein the design element comprises a first body portion and a second body portion coupled to the first body portion, the second body portion being at least one of a different color, a different material, and a different texture than the first body portion.

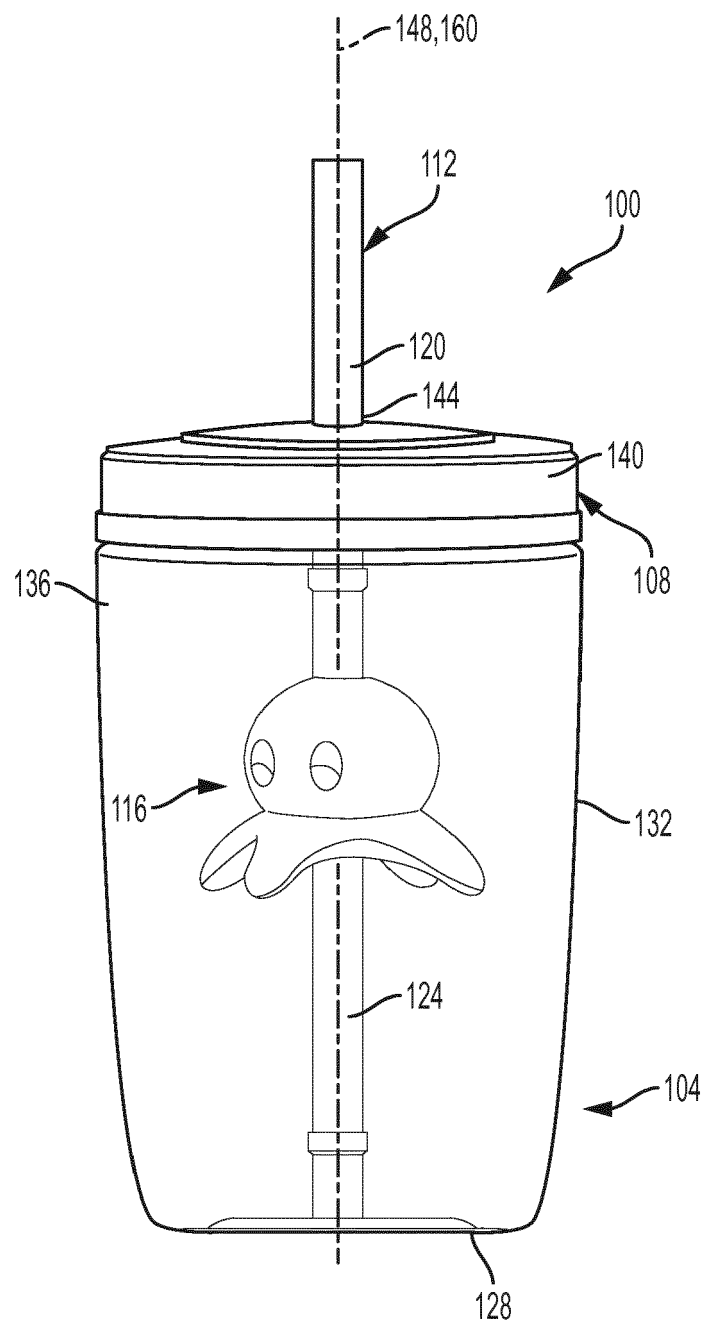


FIG. 1

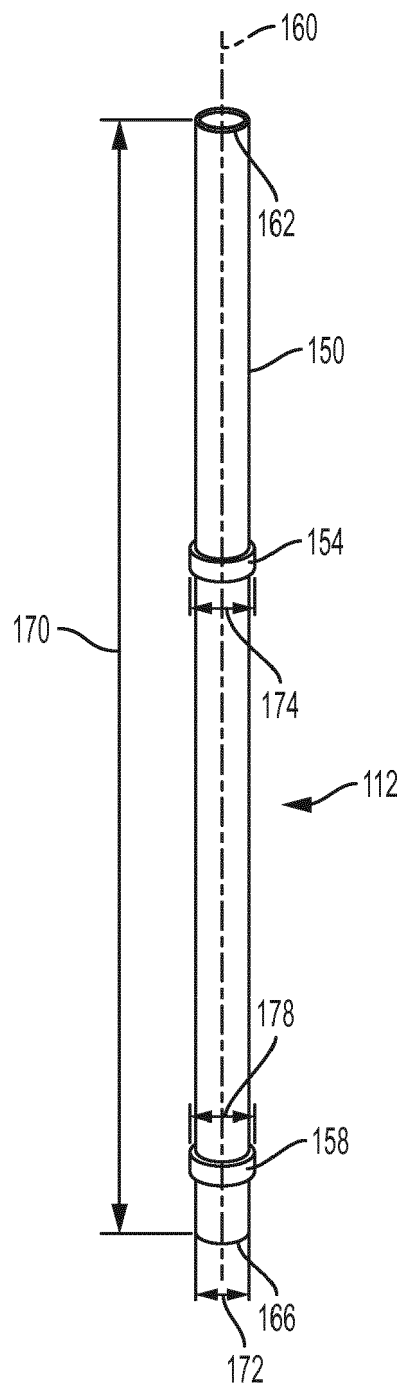


FIG. 2

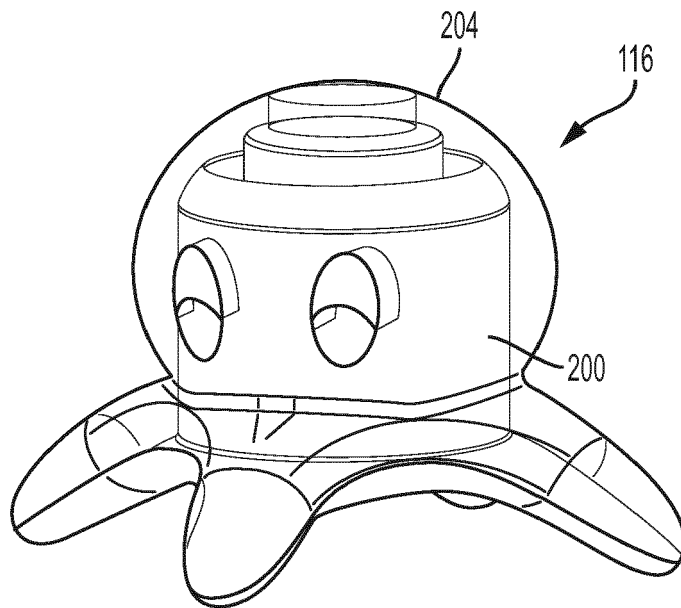


FIG. 3

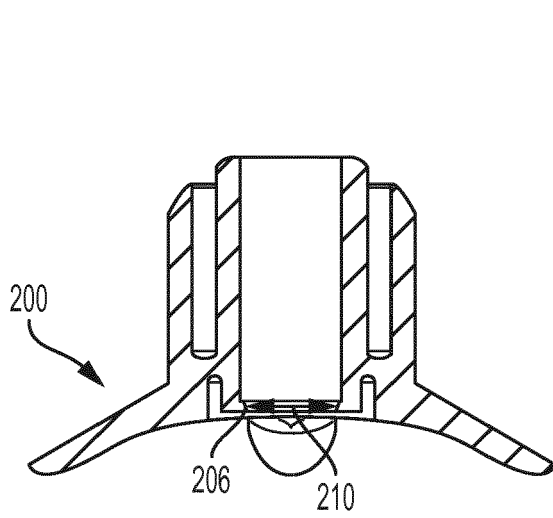


FIG. 4

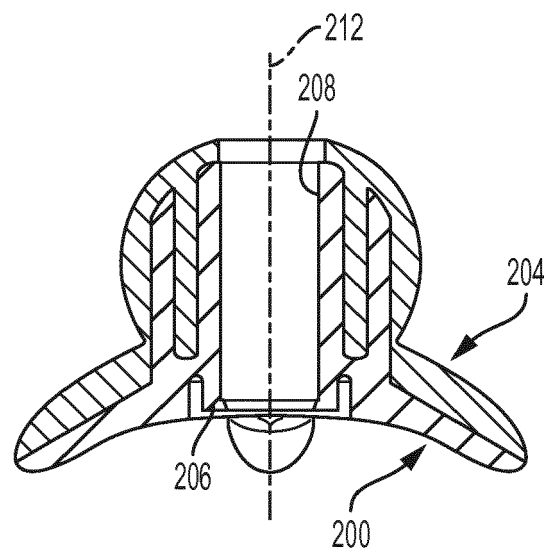


FIG. 5

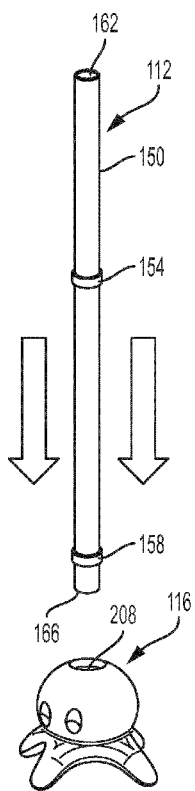


FIG. 6

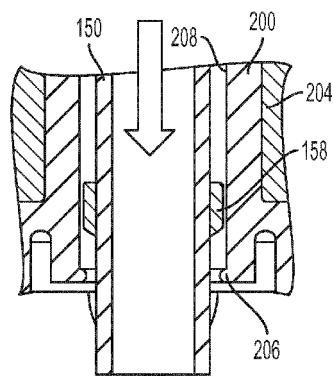


FIG. 7

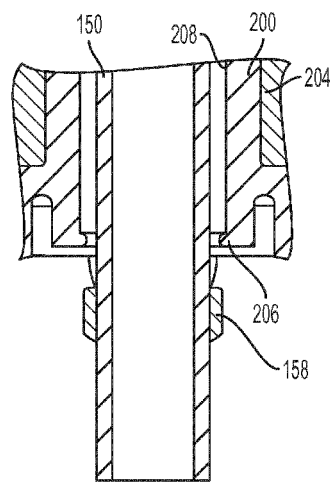


FIG. 8

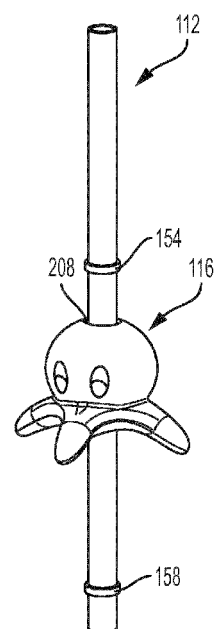


FIG. 9

**PARTIAL EUROPEAN SEARCH REPORT**

Application Number

under Rule 62a and/or 63 of the European Patent Convention.
This report shall be considered, for the purposes of
subsequent proceedings, as the European search report

EP 17 15 9185

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X A	US 1 916 646 A (SONIA TYCKO) 4 July 1933 (1933-07-04) * page 1, line 72 - page 2, line 28; figures *	7-10, 12-14 11,15	INV. A47G19/22 A47G21/18
X	JP S55 86583 U (UNKNOWN) 14 June 1980 (1980-06-14) * the whole document *	7-10, 12-14	
A	US 2015/265078 A1 (GOOSMAN KAREN E [US]) 24 September 2015 (2015-09-24) * paragraph [0010] - paragraph [0016]; figures *	12	
A	JP 2004 238024 A (SERA KENGO) 26 August 2004 (2004-08-26) * the whole document *	12	
			TECHNICAL FIELDS SEARCHED (IPC)
			A47G B65D

INCOMPLETE SEARCH

The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC so that only a partial search (R.62a, 63) has been carried out.

Claims searched completely :

Claims searched incompletely :

Claims not searched :

Reason for the limitation of the search:

see sheet C

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Place of search	Date of completion of the search	Examiner
The Hague	13 November 2017	Vistisen, Lars
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document		

EPO FORM 1503 03.82 (P04E07)

**INCOMPLETE SEARCH
SHEET C**

Application Number

EP 17 15 9185

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Claim(s) completely searchable:
7-15

Claim(s) not searched:
1-6

Reason for the limitation of the search:

Claims 1 and 12 have been drafted as separate independent claims. Under Article 84 in combination with Rule 43(2) EPC, an application may contain more than one independent claim in a particular category only if the subject-matter claimed falls within one or more of the exceptional situations set out in paragraph (a), (b) or (c) of Rule 43(2) EPC, which is not the case in the present application.

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 17 15 9185

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

13-11-2017

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 1916646	A	04-07-1933	NONE
JP S5586583	U	14-06-1980	NONE
US 2015265078	A1	24-09-2015	NONE
JP 2004238024	A	26-08-2004	NONE

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82