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(54) CUP-SHAPED CONTAINER

(57) A cup-shaped container is formed by a cup body (10, 50) in a cylindrical shape and having a first end (501) and a second end (502), a hollow chamber (11, 51) formed in the cup body (10, 50) and between the first and second ends, a cup opening (12, 52) with an upwardly opened opening formed at the chamber (51), a cup rim (15, 55) defined an inner periphery of the cup opening (12, 52). The cup body (10, 50) has an outwardly protruding flange (58) formed at an outer periphery of the cup opening (12, 52), and a flat attachment surface (59) formed at tops of the cup rim (15, 55) of the cup body (10, 50) and the flange (58), so that two adjacent cup bodies (10, 50) can be stacked with each other, and the container has the effects of simple structure, easy manufacture, and low cost.

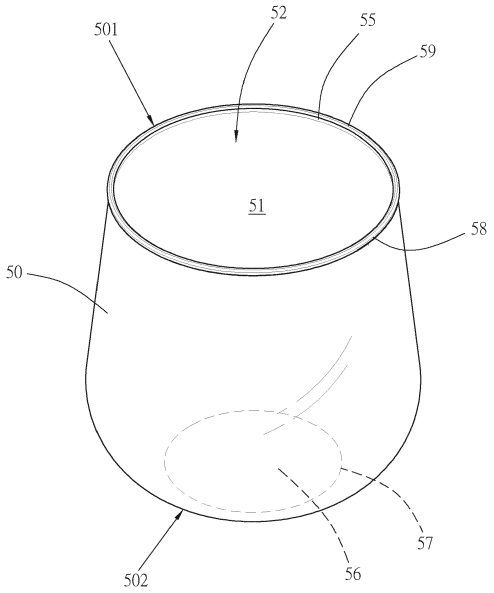

Fig. 6

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Description

FIELD OF THE INVENTION

[0001] The present invention relates generally to cups, and more particularly to a cup-shaped container that can be stacked on another cup-shape container by the top or bottom side of the cup-shaped container.

BACKGROUND OF THE INVENTION

1. Description of the Related Art

[0002] In general, a cup is composed of a cup body, and the cup body comprises a chamber for containing liquid, a cup opening with an upwardly opened opening formed at the chamber of the cup body, and a cup rim formed around the periphery of the cup opening and provided for a user's contact and drinking. To save storage and packaging spaces, the cup body of a conventional cup is designed with an oblique conical shape, and the chamber is also designed with the corresponding oblique conical shape, so that two corresponding cups can be stacked with each other. However, when the cup bodies of two cups are connected, the connected cup bodies are deformed to produce a compression force, and the material of the cup has the resilient and airtight effects, and thus the inner cup cannot be removed easily, and the storage arrangement of the cups will be affected adversely.

[0003] With reference to Figs. 1 and 2 for the conventional way of solving the aforementioned problem, a conventional cup generally includes a cup body (10), a hollow chamber (11) formed in the cup body (10) and having an upwardly opened cup opening (12), and a cup rim (15) formed around the periphery of the cup opening (12). To facilitate the storage and stacking of the cup body (10), the cup rim (15) of the cup body (10) is designed with a semi-spherical shape, so that both inner and outer parts of the cup rim (15) have a protruding arc convex edge (16) as shown in Fig3 and an arc concave slot (18) formed at an outer edge of the cup body (10) near the bottom and having a corresponding diameter (as shown in Fig4), so that two adjacent cup bodies (10) can be stacked with each other as shown in Fig5, wherein the arc convex edge (16) on an inner side of the cup rim (15) of the cup body (10) is embedded into the arc concave slot (18) of the outer periphery of the upper cup body (10), so that the two adjacent cup bodies (10) can be sheathed and stacked with each other stably.

[0004] However, the design of the arc convex edge (16) and the arc concave slot (18) formed on the cup body (10) increases the level of difficulty of the mold manufacture and injection molding of the cup body (10) and incurs a higher manufacturing cost of the cup body (10). In addition, the arc convex edge (16) and the arc concave slot (18) may affect the effectiveness of their embedment due to manufacturing precision or shrinkage. The cup-shaped containers cannot be stacked with each other, if the arc convex edge (16) and the arc concave slot (18) cannot be embedded with each other or they are incompletely embedded with each other.

[0005] In other words, the structural design for stacking the conventional cups incurs a high manufacturing cost and provides a poor stacking effect due to precision. Therefore, it is a main subject for related manufacturers as well as this invention to overcome the aforementioned problem.

[0006] In view of these drawbacks of the conventional cups, the inventor of the present invention based on years of experience in the related industry to conduct extensive research and experiment, and finally developed a cup-shaped container to overcome the drawbacks of the prior art.

2. Summary of the Invention

[0007] Therefore, it is a primary objective of the present invention to provide a cup-shaped container that can be stacked by means of a simple structure to improve the convenience of storage and packaging.

[0008] A secondary objective of the present invention is to provide a cup-shaped container capable of simplifying and reducing the level of difficulty of the manufacture, avoiding the high manufacturing cost and the poor stacking effect of the conventional cups, and improving the practicality of the cup-shaped container.

[0009] To achieve the aforementioned and other objectives, the present invention discloses a cup-shaped container comprising: a cup body substantially in a cylindrical shape and having a first end and a second end, a hollow chamber formed inside the cup body and between the first and second ends and having a cup opening with an upwardly opened opening and configured relative to the first end of the cup body, and a cup rim defined at an inner periphery of the cup opening, characterized in that the cup body has an outwardly protruding flange formed at an outer periphery of the cup opening, and a flat attachment surface formed at tops of the cup rim and the flange of the cup body, such that two adjacent cup bodies can be stacked with each other by means of the flat attachment surface of the first end to constitute a simple structured and stably stackable cup-shaped container.

[0010] Based on the aforementioned technical measure, the cup-shaped container of the present invention adopts the design with an externally expanded flange formed at a cup rim of a cup body, so that a planar flat surface formed at the periphery of the cup opening of the cup body allows two adjacent cup bodies to be stacked with each other with a better and more stable stacking effect, while achieving the effects of simple structure, easy manufacture, and low cost, and improving the practicality, added value, and economic benefit of the cup-shaped container.

[0011] The present invention achieves the aforemen-

tioned objectives and effects by the following technical measures.

[0012] The cup body has an outer edge with a diameter gradually increasing from the first end to the second end, and curving downwardly and being stopped at the second end.

[0013] The second end of the cup body has an inwardly concave portion formed at the middle thereof, and a circular abutting surface formed at the periphery of the inwardly concave portion of the second end and provided for erecting the cup body from a plane.

[0014] The circular abutting surface has a width of 0.1mm~0.5mm.

[0015] The flange of the cup rim of the cup body is protruded from an outer wall of the cup body by a distance of 0.05~0.3mm, and the flat attachment surface has a width of 0.1mm~0.5mm.

[0016] The cup body is made of polyethylene terephthalate (PET).

[0017] The technical characteristics of the present invention will become apparent in the following detailed description of the preferred embodiments with reference to the accompanying drawings, and people having ordinary skill in the art can implement the technical contents of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0018]

Fig. 1 is a perspective view of a conventional cup;

Fig. 2 is a side view of a conventional cup;

Fig. 3 is a partial blowup cross-sectional view of a cup rim of a conventional cup;

Fig. 4 is a partial cross-sectional blowup view of an arc concave slot of a conventional cup;

Fig. 5 is a cross-sectional side view of conventional cups stacked with each other;

Fig. 6 is a perspective view of a cup-shaped container of the present invention showing the detailed assemblies and their relative relation;

Fig. 7 is a partial cross-sectional blowup view of a cup-shaped container of the present invention showing the assembly of a cup rim;

Fig. 8 is a cross-sectional view of the cup-shaped containers stacked with each other in accordance with the present invention; and

Fig. 9 is a partial cross-sectional blowup view of Section A of Fig8 showing the status of the cup bodies being stacked with respect to each other by using the cup rim.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0019] The above and other objects, features and advantages of this disclosure will become apparent from the following detailed description taken with the accompanying drawings. It is noteworthy that the drawings are intended for illustrating the present invention only, but not for limiting the scope of the invention, and the drawings are not necessarily drawn according to the actual shape, size or proportion of the device.

[0020] The present invention is directed to a cup-shaped container. In an embodiment used for describing the present invention and related components of the invention and the accompanying drawings used for illustrating the specific embodiment, the terms "front", "rear", "left", "right", "top", "bottom", "up", "down", "horizontal", and "vertical" are used for the facilitating the description of the present invention only, but not intended for limiting the present invention or limiting the position or spatial direction of the components. The size specified in the drawings and the specification can be changed or modified according the design and requirement of the specific embodiment of the present invention without departing from the scope of the present invention.

[0021] With reference to Figs.6 and 7 for the detailed assembly of a cup-shaped container of the present invention, the cup-shaped container comprises a cup body (50), and the cup body (50) of this embodiment is made of polyethylene terephthalate (PET) and substantially in a cylindrical shape, and the cup body (50) has a first end (501) and a second end (502) , and a hollow chamber (51) is formed in the interior between the first and second ends (501, 502) of the cup body (50), and when the cup body (50) is standing, the chamber (51) has a cup opening (52) with an upwardly opened opening and configured to be relative to the first end (501) of the cup body (50), a cup rim (55) defined at an inner periphery of the cup opening (52), and the cup body (50) has an outer diameter increasing gradually from the first end (501) to the second end (502) and curving downwardly and stopped at the second end (502), and an inwardly concave portion (56) at the middle of the second end (502) of the cup body (50), and the second end (502) has a circular abutting surface (57) formed at the periphery of the inwardly concave portion (56) periphery and provided for erecting the cup body (50) from a plane, and the circular abutting surface (57) has a width of 0.1mm~0.5mm, so that two adjacent cup bodies (50) can be stacked with respect to each other by the circular abutting surface (57) of the second end (502).

[0022] The cup body (50) has an outwardly protruding flange (58) formed at an outer periphery of the cup opening (52), and the flange (58) is protruded from an outer wall of the cup body (50) by a distance of 0.05~0.3mm in this embodiment. In addition, the cup body (50) has a flat attachment surface (59) formed at tops of the cup rim

(55) and the flange (58), and the flat attachment surface (59) has a width of 0.1mm~0.5mm in this embodiment to allow two adjacent cup bodies (50) to be stacked with each other by using the flat attachment surface (59) of the first end (501) as shown in Figs. 8 and 9, so that two adjacent cup bodies (50) can be stably stacked with each other.

[0023] The aforementioned components are assembled into a simple-structured and stably stackable cup-shaped container.

[0024] In a practical application of the present invention as shown in Figs. 6, 7 and 8, the cup body (50) can be put on any plane such as a tabletop by using the circular abutting surface (57) of the second end (502), so that the cup body (50) can be placed stably without the risk of being dumped arbitrarily. When there is a need to stack the cups for storage, the cup openings (52) at the first end (501) of each cup body (50) of two adjacent cups are aligned, and the cup rim (55) of the cup opening (52) and the flat attachment surface (59) of the flange (58) are aligned and attached as shown in Figs. 8 and 9, so that two cup bodies (50) can be stacked with each other without causing any slipping, dumping or tilting.

[0025] In the structural design described above, the present invention utilizes the externally expanded flange (58) formed by an outer periphery of the cup opening (52), so that the cup body (50) forms a substantially planar flat attachment surface (59) at a top periphery of the cup opening (52), and two adjacent cup bodies (50) can be stacked with each other. When the cup body (50) of the present invention is stored, the cup body (50) has a better and more stable stacking effect. Compared with the prior art, the invention achieves the effects of lowering the manufacturing cost effectively and improving the practicality of the cup-shaped container significantly.

[0026] In summation of the description above, it is understood that the present invention is an innovative creation capable of overcoming the drawbacks of the prior art and improving the effect significantly, and the invention complies with patent application requirements, and thus is duly filed for patent application.

Claims

1. A cup-shaped container, comprising a cup body substantially in a cylindrical shape and having a first end and a second end, a hollow chamber formed inside the cup body and between the first and second ends and having a cup opening with an upwardly opened opening and configured relative to the first end of the cup body, and a cup rim defined at an inner periphery of the cup opening, **characterized in that** the cup body has an outwardly protruding flange formed at an outer periphery of the cup opening, and a flat attachment surface formed at tops of the cup rim and the flange of the cup body, such that the adjacent cup bodies can be stacked with each other by using the flat attachment surface of the first end to constitute a simple structured and stably stackable cup-shaped container.

2. The cup-shaped container according to claim 1, wherein the cup body has an outer edge with a diameter gradually increasing from the first end to the second end, and curving downwardly and being folded at the second end.

3. The cup-shaped container according to claim 1, wherein the second end of the cup body has an inwardly concave portion disposed at the middle, and a circular abutting surface formed at the periphery of the inwardly concave portion of the second end and provided for erecting the cup body from a plane.

4. The cup-shaped container according to claim 3, wherein the circular abutting surface has a width of 0.1mm~0.5mm.

5. The cup-shaped container according to claim 3, wherein the flange of the cup rim of the cup body is protruded from an outer wall of the cup body by a distance of 0.05~0.3mm, and the flat attachment surface has a width of 0.1mm~0.5mm.

6. The cup-shaped container according to claim 1, wherein the cup body is made of polyethylene terephthalate (PET).

7. The cup-shaped container according to claim 2, wherein the cup body is made of polyethylene terephthalate (PET).

8. The cup-shaped container according to claim 3, wherein the cup body is made of polyethylene terephthalate (PET).

9. The cup-shaped container according to claim 4, wherein the cup body is made of polyethylene terephthalate (PET).

10. The cup-shaped container according to claim 5, wherein the cup body is made of polyethylene terephthalate (PET).

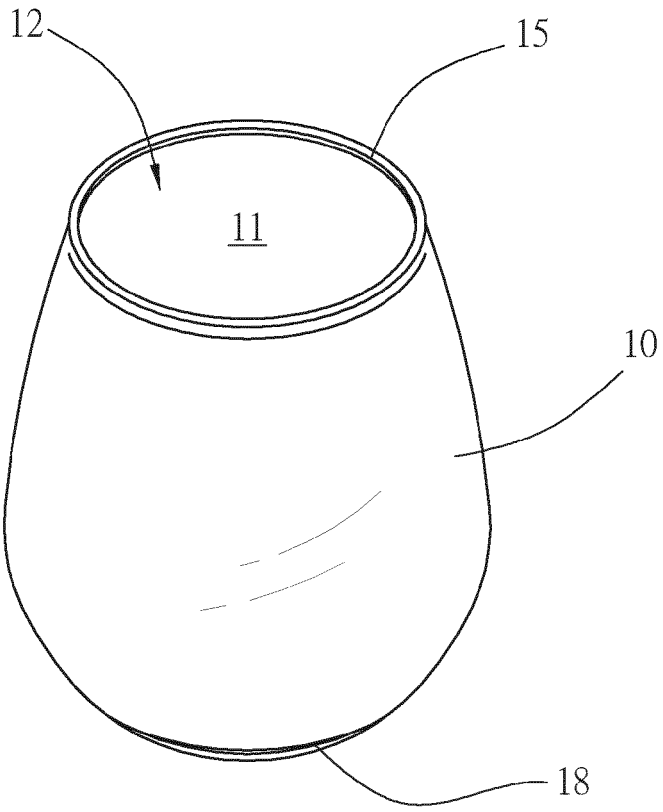

Fig. 1

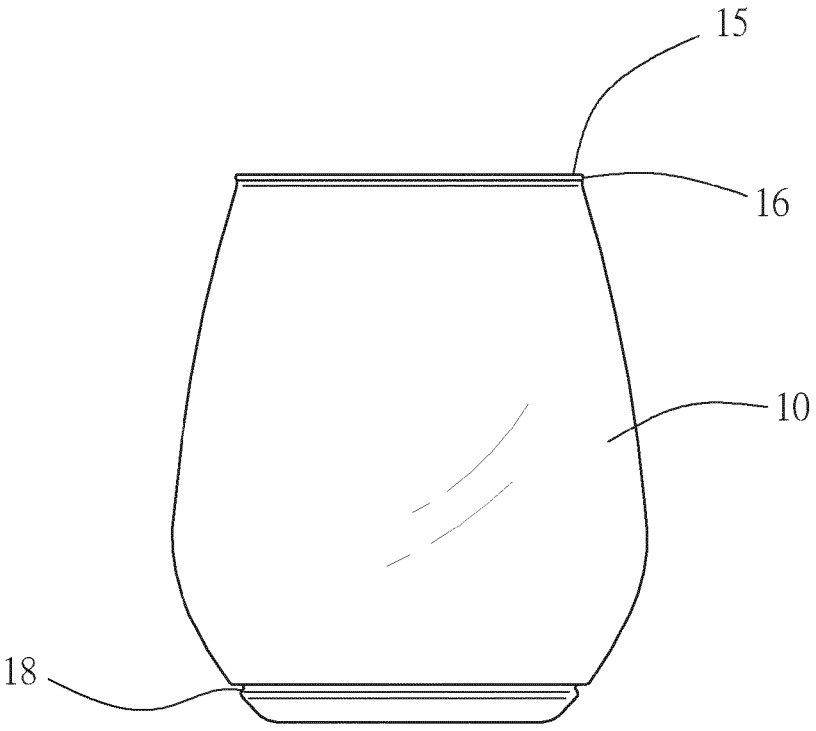

Fig. 2

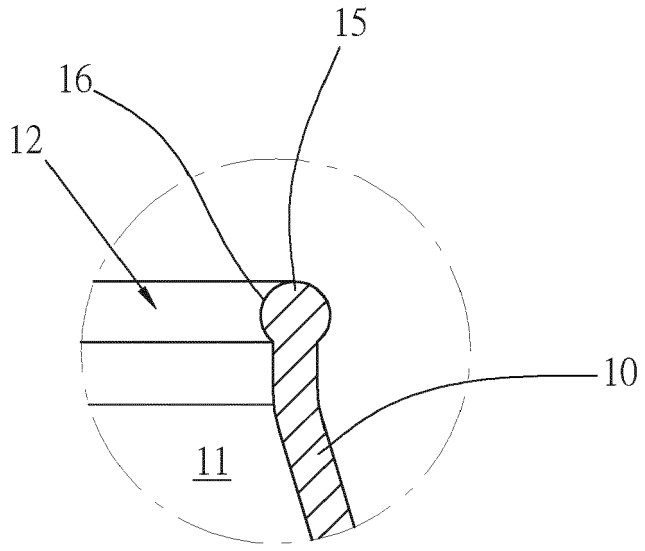

Fig. 3

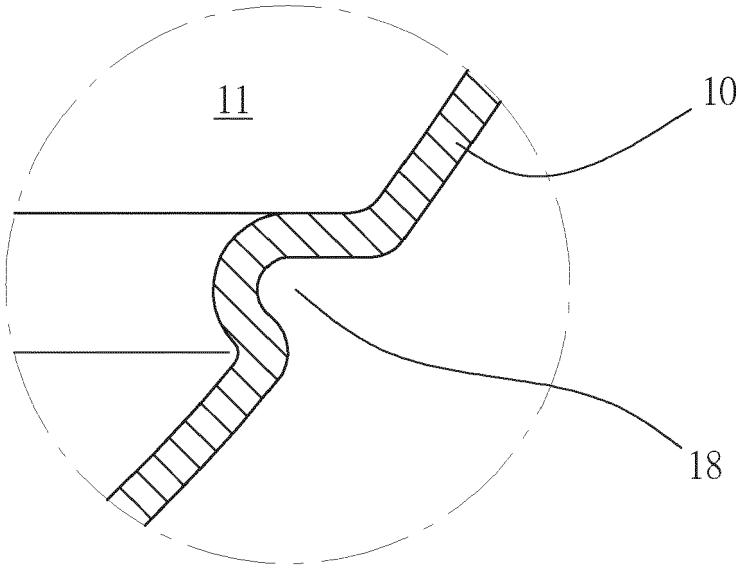

Fig. 4

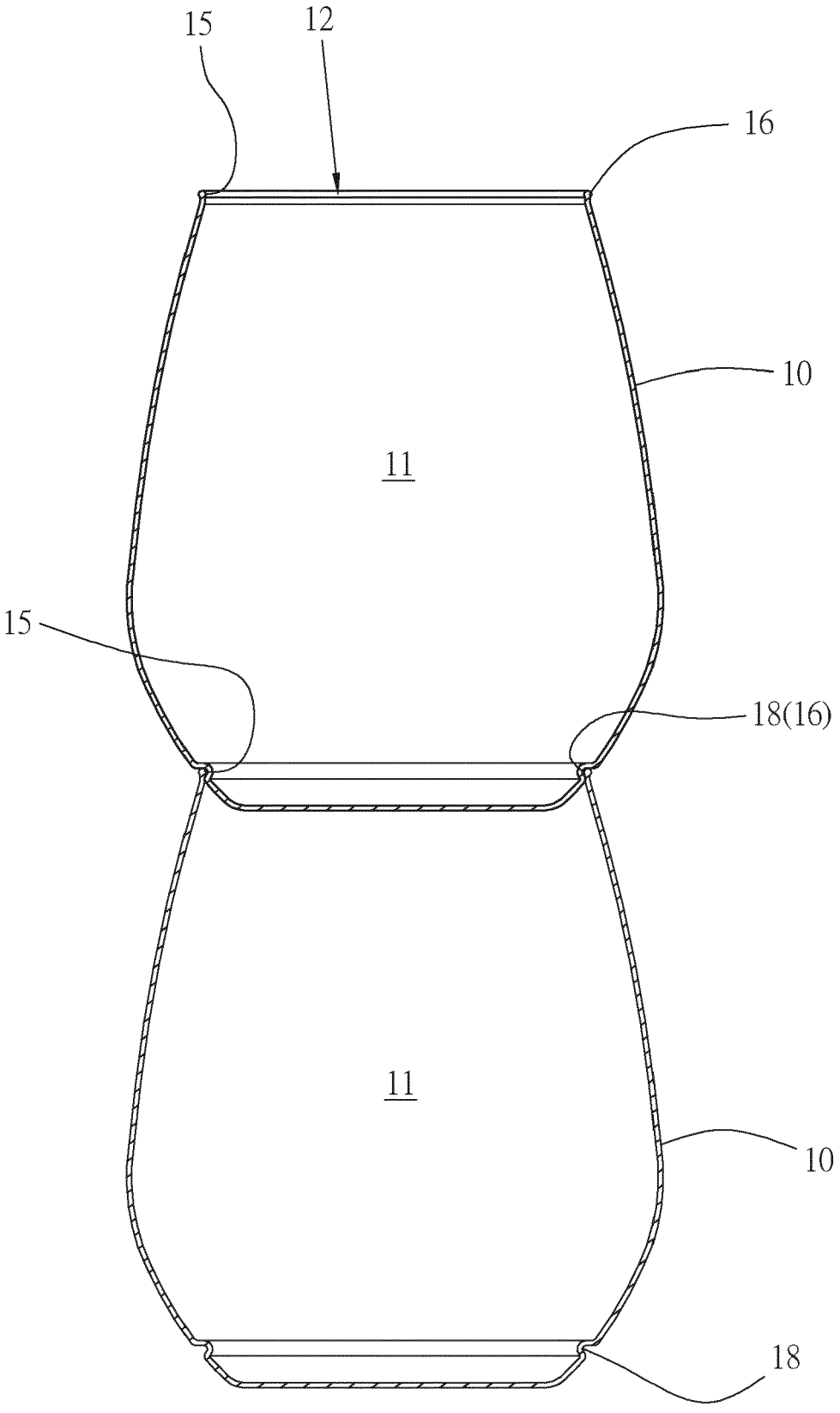

Fig. 5

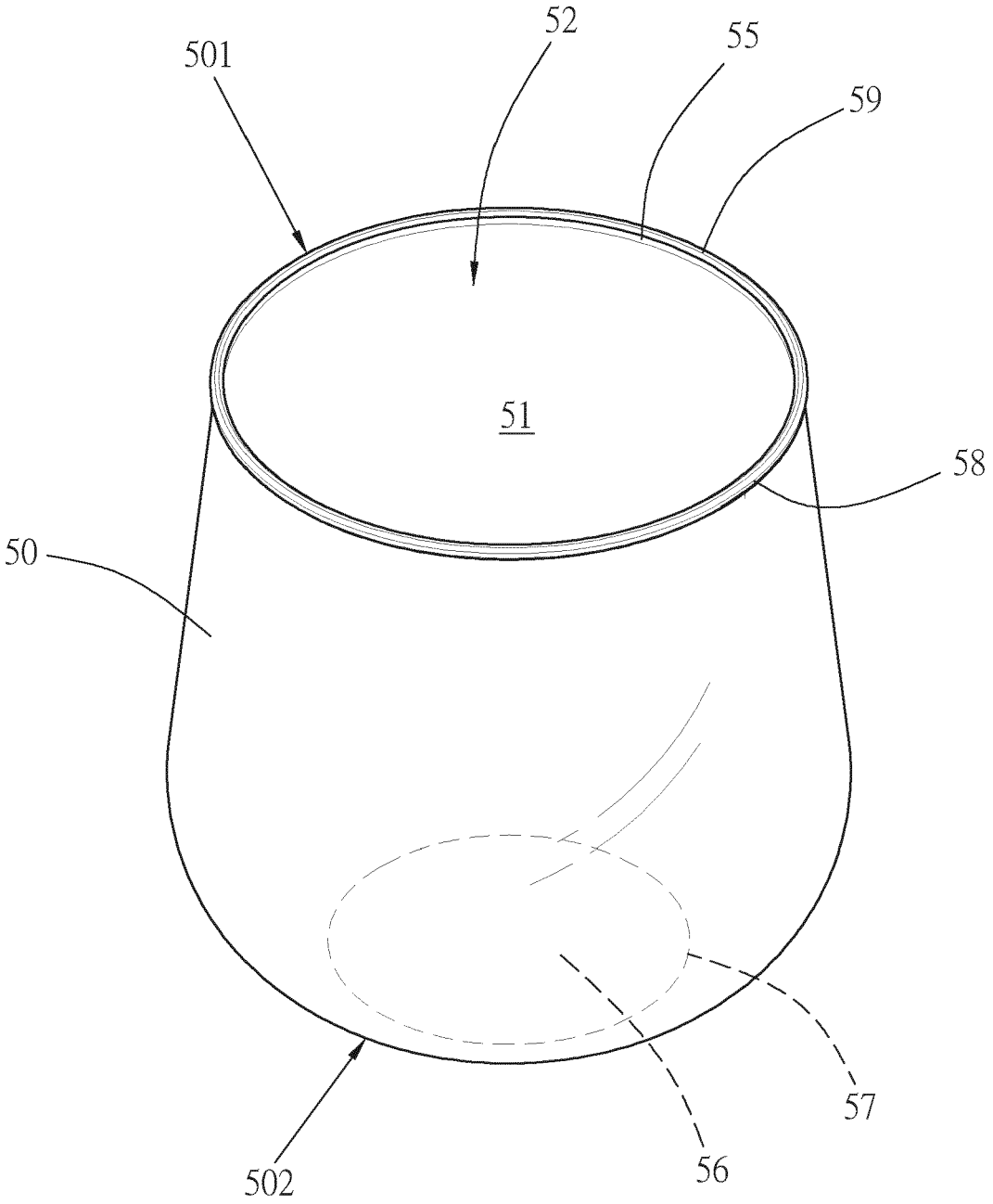

Fig. 6

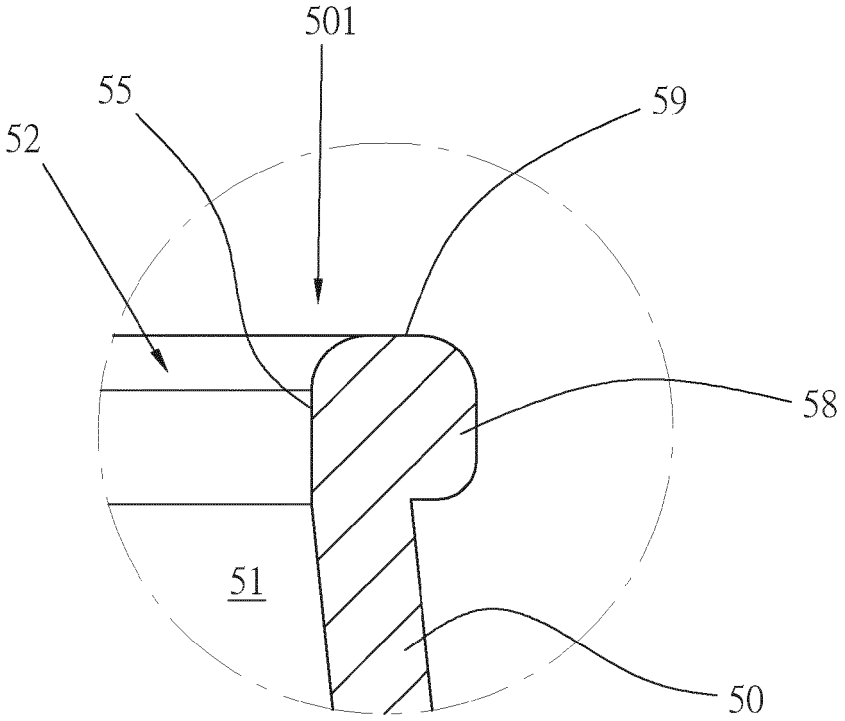

Fig. 7

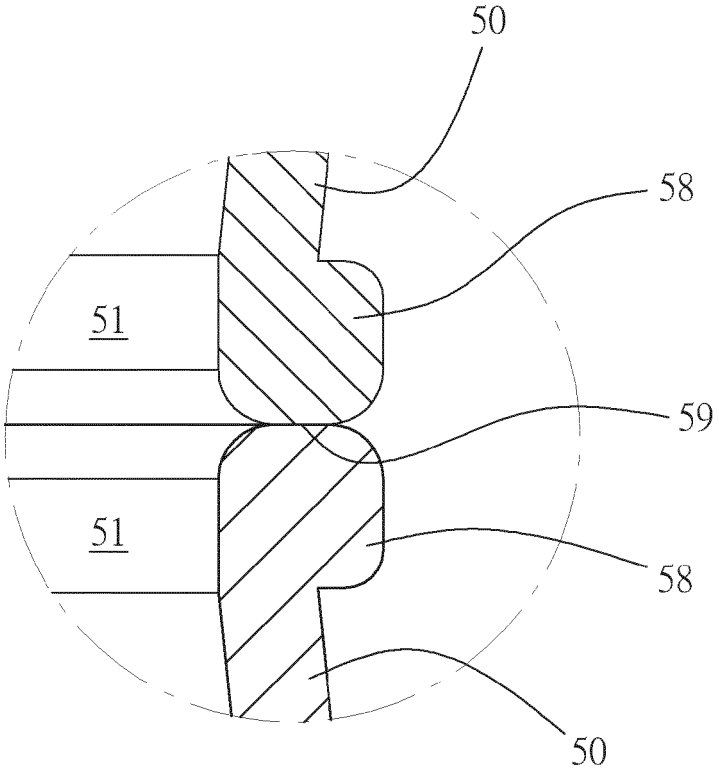

Fig. 9

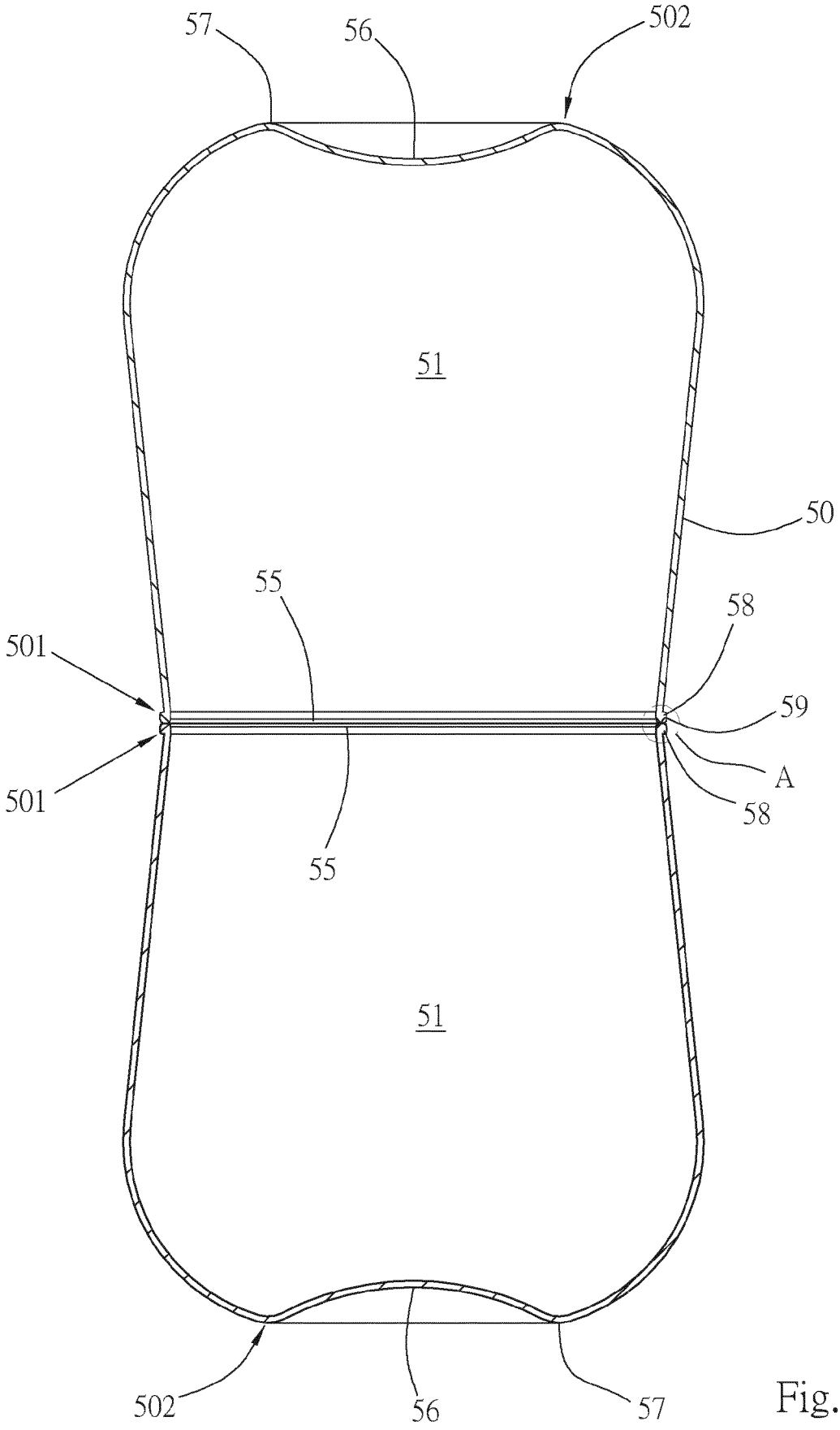

Fig. 8

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EUROPEAN SEARCH REPORT

Application Number
EP 20 20 8794

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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TECHNICAL FIELDS SEARCHED (IPC)

A47G
B65D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	22 April 2021	Vistisen, Lars

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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