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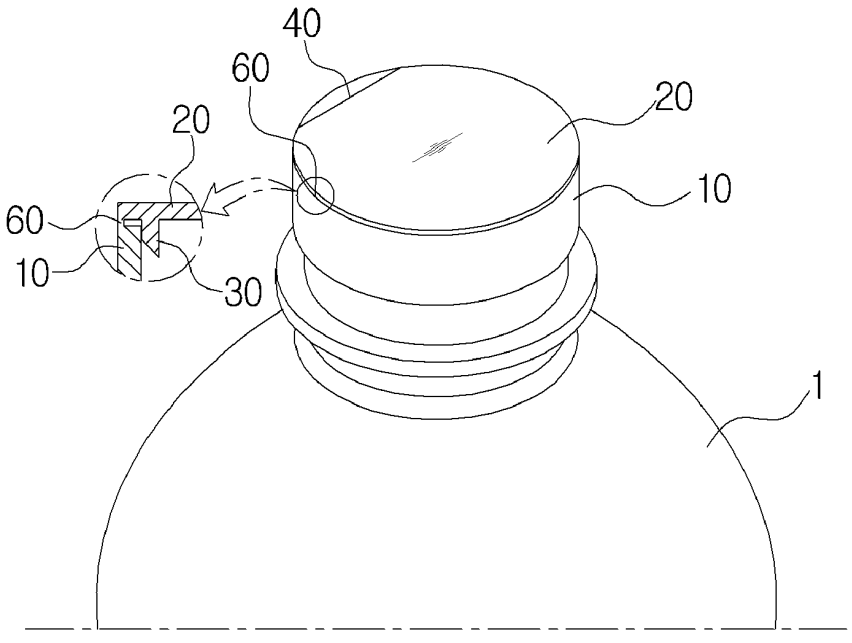
(54) CONTAINER LID

(57) A container lid which can control the degree of opening at a mouth (2) of a container (1) in a state where it is joined to the mouth of the container. The container lid includes: a rotating body (10) detachably joined to a mouth of a container in a spiral manner; a cover (20) of which the end is connected to one side of the rotating body to open and close the mouth of the container; an insertion part (30) formed in the cover to be inserted and fixed into the mouth of the container so that the cover can close the mouth of the container; a hinge part (40) of which the end is connected to one side of the rotating body to support the opening and closing actions of the cover; and a pressing part (50) formed on the cover to be pressed to the mouth of the container by rotation of the rotating body so that the degree of opening of the cover is controlled.

FIG. 1



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Description

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] The present invention relates to a container lid which can control the degree of opening at a mouth of a container in a state where it is joined to the mouth of the container.

Background Art

[0002] In general, a lid is joined to a container which contains drinking water, beverage or a medicinal fluid. Such a lid is generally joined to an end portion of a container by being pressed in. In this instance, once the lid is separated from the container, the lid cannot be joined to the container again. Therefore, in order to reuse the contents in the container, the lid must be openable and closable by a user.

[0003] For this, the lid may have a female screw part formed on the inner surface thereof so as to be detachably joined to the mouth of the container which has a male screw part. Such a lid can open or close the mouth of the container when the user rotates the lid in the clockwise direction or in the counterclockwise direction.

[0004] However, the above-mentioned lid must be completely separated from the mouth of the container in order to discharge the contents from the container to the outside, but cannot control an amount of the contents discharged out because the lid cannot open the mouth of the container little by little.

[0005] For your reference, Korean Patent Laid-open No. 10-2005-0103668 published on November 05, 2005 discloses a bottle cap.

SUMMARY OF THE INVENTION

[0006] Accordingly, the present invention has been made in view of the above-mentioned problems occurring in the prior art, and it is an object of the present invention to provide a container lid which can control the degree of opening at a mouth of a container in a state where it is joined to the mouth of the container.

[0007] It is another object of the present invention to provide a container lid which can completely open the mouth of the container by being separated from the mouth of the container or control the degree of opening of the mouth of the container in a state where the lid is joined to the mouth of the container.

[0008] To accomplish the above object, according to the present invention, there is provided a container lid including: a rotating body detachably joined to a mouth of a container in a spiral manner; a cover of which the end is connected to one side of the rotating body to open and close the mouth of the container; an insertion part formed in the cover to be inserted and fixed into the mouth of the container so that the cover can close the mouth of the container; a hinge part of which the end is connected to one side of the rotating body to support the opening and closing actions of the cover; and a pressing part formed on the cover to be pressed to the mouth of the container by rotation of the rotating body so that the degree of opening of the cover is controlled.

[0009] Preferably, the cover has an outer jaw formed on the rim thereof to be fit and fixed to the outside of the mouth of the container.

[0010] Preferably, the insertion part is formed in a tube type which has the outer diameter getting gradually larger from the bottom to the top.

[0011] Preferably, the hinge part has elasticity.

[0012] Preferably, the container lid further includes a separating part for separably connecting the outer rim of the cover from the inner rim of the rotating body so that the cover can be separated from the rotating body by external pressure applied to the cover.

[0013] Preferably, the pressing part is formed between the hinge part and the insertion part.

[0014] The container lid according to a preferred embodiment of the present invention can control the degree of opening at a mouth of a container in a state where it is joined to the mouth of the container, thereby controlling an amount of the contents discharged out of the container.

[0015] The container lid can completely open the mouth of the container by being separated from the mouth of the container or control the degree of opening of the mouth of the container in a state where the lid is joined to the mouth of the container, thereby being capable of being used selectively.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] The above and other objects, features and advantages of the present invention will be apparent from the following detailed description of the preferred embodiments of the invention in conjunction with the accompanying drawings, in which:

FIG. 1 is a perspective view showing a state where a container lid according to a preferred embodiment of the present invention is joined to a mouth of a container;

FIG. 2 is a perspective view showing an open state of the container lid according to the preferred embodiment of the present invention;

FIG. 3 is a perspective view showing a separated state of the container lid from the container;

FIG. 4 is a sectional view showing a state where the container lid closes the mouth of the container;

FIG. 5 is a sectional view showing a state where the container lid opens the mouth of the container a little; and

FIG. 6 is a sectional view showing a state where the container lid completely opens the mouth of the con-

tainer.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0017] Hereinafter, a container lid according to a preferred embodiment of the present invention will be described in detail with reference to the attached drawings.

[0018] As shown in FIGS. 1 to 3, the container lid according to the preferred embodiment of the present invention includes a rotating body 10, a cover 20, an insertion part 30, a hinge part 40 and a pressing part 50.

[0019] First, a container 1 may be a glass bottle or a PET bottle which can be filled with content, such as drinking water or beverage. Such a container 1 may have a male screw thread formed on the outer circumferential surface of a mouth 2 through which the content is put in the container or is discharged out.

[0020] The rotating body 10 is detachably joined to the mouth 2 of the container 1 in a spiral manner, is in the form of a tube, and may have a female screw thread formed on the inner circumferential surface thereof. Therefore, the rotating body 10 may be joined to the mouth 2 of the container 1 in the spiral manner. Additionally, the rotating body 10 may descend along the mouth 2 of the container 1 when it is rotated in a normal direction but ascend when it is rotated in a reverse direction.

[0021] The cover 20 opens or closes the mouth 2 of the container 1 in a state where an end of the cover 20 is connected to one side of the top of the rotating body 10, and is in the form of a plate.

[0022] Here, in order to separate the cover 20 from the rotating body 10 by external pressure applied to the cover 20, the container lid according to the present invention further includes a separating part 60 which detachably connects the outer rim of the cover 20 with the inner rim of the rotating body 10. Such a separating part 60 connects the outer rim of the cover 20 and the inner rim of the rotating body 10 with each other and is thinner than the cover 20 or the rotating body 10. That is, the cover 20 can be separated from the rotating body 10 by the external pressure applied to the cover 20. Therefore, the cover 20 keeps a state where it is connected integrally with the rotating body 10 until the external pressure is applied.

[0023] Moreover, the cover 20 includes an outer jaw 21 formed on the rim thereof to be fit and fixed to the outside of the mouth 2 of the container 1. Such an outer jaw 21 may be formed in a tube type which has the inner diameter a little bit larger than the outer diameter of the mouth 2 so that the mouth 2 of the container 1 can be inserted. Therefore, when the outer jaw 21 is fit and fixed to the outside of the mouth 2 of the container 1, the outside of the mouth 2 can be closed firmly.

[0024] The insertion part 30 is formed on the bottom side of the cover 20 to close the mouth 2 of the container 1 by being inserted and fixed to the mouth 2 of the container 1. The insertion part is formed in a tube type in such a way that the outer diameter gets gradually larger from the bottom to the top. That is, the insertion part 30 has an inclined side 31 formed on the outer circumferential surface thereof. Therefore, the insertion part 30 may be forcedly inserted and fixed to the inside of the mouth 2 of the container 1 by the external pressure.

[0025] The hinge part 40 supports the opening and closing actions of the cover 20 in a state where an end of the cover 20 is connected to one side of the rotating body 10, and may be formed thinner than the rotating body 10 and the cover 20 in a straight line by injection-molding. In this instance, the hinge part 40 is formed integrally with the rotating body 10 and the cover 20 by injection-molding so as to have elasticity. That is, due to elasticity of the hinge part 40, the cover 20 can elastically close the mouth 2 of the container 20. Therefore, when the rotating body 10 rotates on the hinge part 40 as an axis in the normal direction, the cover 20 is pressed to the mouth 2 of the container 1 to open the mouth 2. In this instance, the cover 20 opens the mouth 2 of the container at a predetermined angle by elasticity of the hinge part 40. Furthermore, when the rotating body 10 rotates in the reverse direction, the cover 20 forcedly closes the mouth 2 of the container by elasticity of the hinge part 40.

[0026] Because the rotating body 10 and the cover 20 are connected to each other by the hinge part 40, the cover 20 can open and close the upper portion of the rotating body 10 by rotating on the hinge part 40 as the axis.

[0027] The pressing part 50 is formed on the bottom side of the cover 20 and is pressed to the mouth 2 of the container 1 by rotation of the rotating body 10 so as to control the degree of opening of the cover 20. Preferably, the pressing part 50 is formed flat between the hinge part 40 and the insertion part 30. Therefore, when the rotating body 10 is rotated, the pressing part 50 is pressed to the top of the mouth 2 of the container 1 while moving along the mouth 2 in the state where the pressing part 50 is supported to the mouth 2 of the container 1, so that the cover 20 can open the mouth 2 of the container 1 while rotating on the hinge part 40.

[0028] Hereinafter, actions and effects of the container lid according to the preferred embodiment of the present invention will be described.

[0029] As shown in FIGS. 4 to 6, when the rotating body 10 is rotated in the normal direction in the state where the rotating body 10 is screw-coupled to the mouth 2 of the container 1 which is filled with the content, the bottom side of the cover 20 comes into close contact with the top of the mouth 2.

[0030] Moreover, when the rotating body 10 is rotated more, because the rotating body 10 descends along the mouth 2 of the container 1, the pressing part 50 is pressed to the top of the mouth 2 a little bit. Because the pressing part 50 is pressed, the separating part 60 is separated. That is, when the cover 20 is separated from the rotating body 10, the cover 20 is available to rotate on the hinge part 40 in a vertical direction.

[0031] Furthermore, when the rotating body 10 is rotated more, because the cover 20 rotates upwardly on the hinge part 40 to form a gently inclined state, the mouth 2 of the container 1 is opened a little. Here, the insertion part 30 and the outer jaw 21 are respectively separated from the inside and the outside of the mouth 2 of the container 1. In this instance, due to elasticity of the hinge part 40, the inclined state of the cover 20 can be kept firmly. In such a state, when the container 1 is tilted, the content which fills the container 1 can be discharged out little by little.

[0032] Continuously, when the rotating body 10 is rotated more, because the rotating body 10 descends more along the mouth 2 of the container 1, the pressing part 50 is pressed further to the top of the mouth 2. In this instance, the cover 20 is rotated further upwardly on the hinge part 40 to be inclined sharply, so that the mouth 2 of the container 1 is opened wider than before. In such a state, when the container 1 is tilted, lots of the content can be discharged out of the container 1.

[0033] Of course, when the rotating body 1 is completely rotated, the cover 20 is rotated to be in a perpendicular state so as to completely open the mouth 2 of the container 1. In other words, the mouth 2 of the container 1 can be completely opened in a state where the rotating body 10 is not separated from the mouth 2 of the container 1.

[0034] As described above, because the degree of opening of the cover 20 is controlled according to the degree of rotation of the rotating body 10, it can control the amount of the contents discharged out. Moreover, because only the cover 20 can be opened in the state where the rotating body 10 is not separated from the mouth 2 of the container 1, there is no concern about losing the cover 20.

[0035] Furthermore, when the rotating body 10 is rotated in the reverse direction and the top of the rotating body 10 is located at the same height with the top of the mouth 2 of the container, the cover 20 is rotated downwardly by elasticity of the hinge part 40 so as to close the mouth 2 of the container 1. In this instance, because the insertion part 30 is inserted and fixed to the inside of the mouth 2 and the outer jaw 21 is fit and combined to the outside of the mouth 2, it can be firmly kept that the cover 20 closes the mouth 2 of the container 1.

[0036] Additionally, because the rotating body 10 is screw-coupled with the mouth 2 of the container 1, if necessary, it is easy to separate the container lid from the container and to replace the container lid with a new one, and another container lid can be used through screw-coupling.

[0037] As described above, the container lid according to the present invention can control the amount of the content discharged out of the container 1 because it can completely open the mouth 2 of the container 1 or control the degree of opening of the mouth 2 in the state where the lid is joined to the mouth 2 of the container 1. Therefore, the container lid according to the present invention is very useful because it can be widely used and applied to a container.

[0038] As described above, while the present invention has been particularly shown and described with reference to the example embodiment thereof, it will be understood by those of ordinary skill in the art that various changes, modifications and equivalents may be made therein without departing from the spirit and scope of the present invention. Therefore, it will be also understood that the scope of the present invention is not limited to the example embodiment of the present invention but is defined by the claims and equivalences.

Claims

1. A container lid comprising:

a rotating body detachably joined to a mouth of a container in a spiral manner;
a cover of which the end is connected to one side of the rotating body to open and close the mouth of the container;
an insertion part formed in the cover to be inserted and fixed into the mouth of the container so that the cover can close the mouth of the container;
a hinge part of which the end is connected to one side of the rotating body to support the opening and closing actions of the cover;
a pressing part formed on the cover to be pressed to the mouth of the container by rotation of the rotating body so that the degree of opening of the cover is controlled; and
a separating part for separably connecting the outer rim of the cover from the inner rim of the rotating body so that the cover can be separated from the rotating body by external pressure applied to the cover,

wherein the mouth of the container has a male screw thread formed on the outer circumferential surface thereof,
wherein the rotating body is formed in a tube type and has a female screw thread formed on the inner circumferential surface thereof to correspond to the male screw thread,
wherein the cover has an outer jaw formed on the rim thereof to be fit and fixed to the outside of the mouth of the container,
wherein the outer jaw is formed in a tube type which has the inner diameter larger than the outer diameter of the mouth of the container,
wherein the insertion part is formed in a tube type which has the outer diameter getting gradually larger from the bottom to the top,
wherein the hinge part has elasticity,
wherein the separating part connects the outer rim

of the cover and the inner rim of the rotating body with each other and is thinner than the cover and the rotating body, and

wherein the pressing part is formed between the hinge part and the insertion part.

FIG. 1

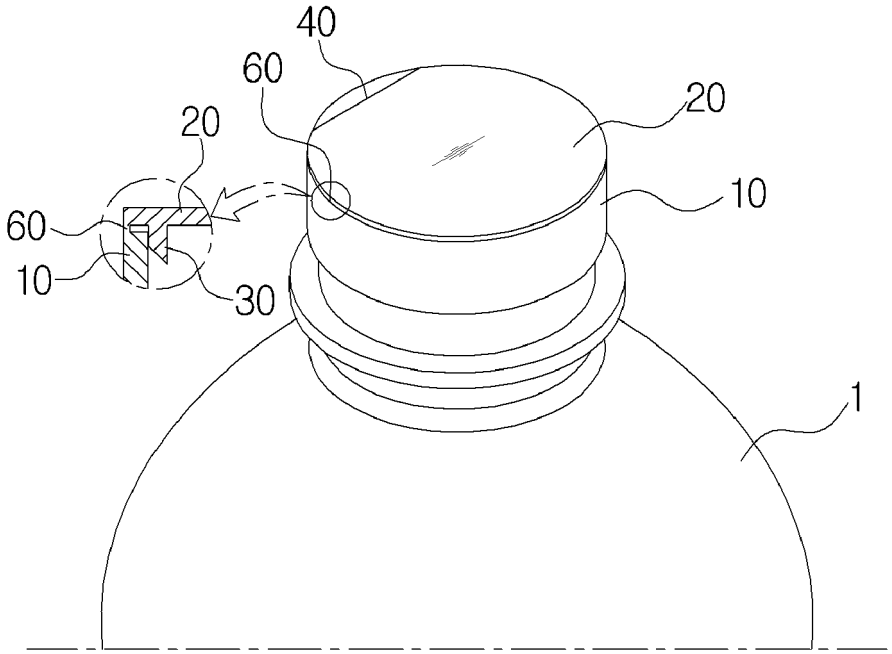


FIG. 2

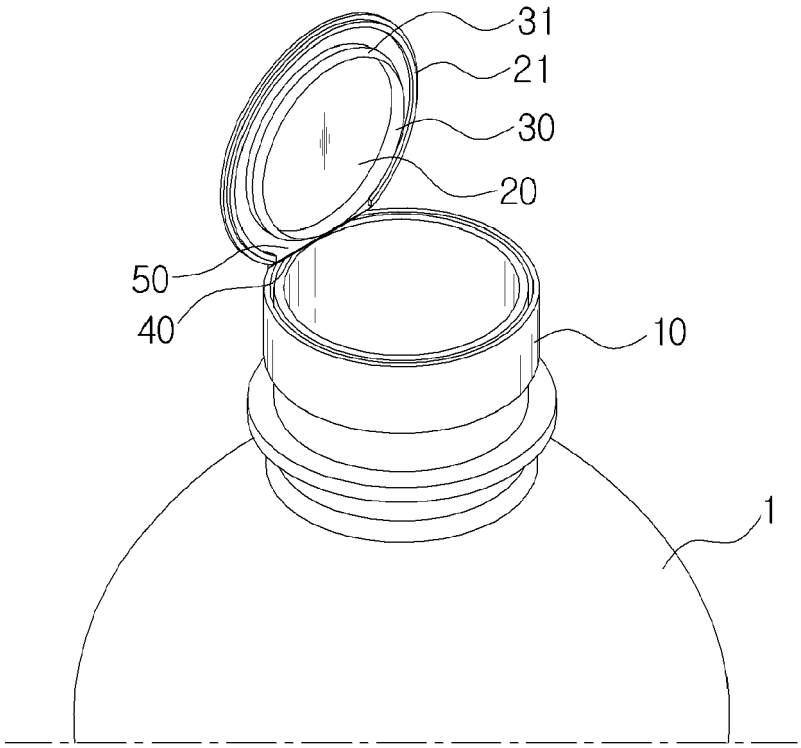


FIG. 3

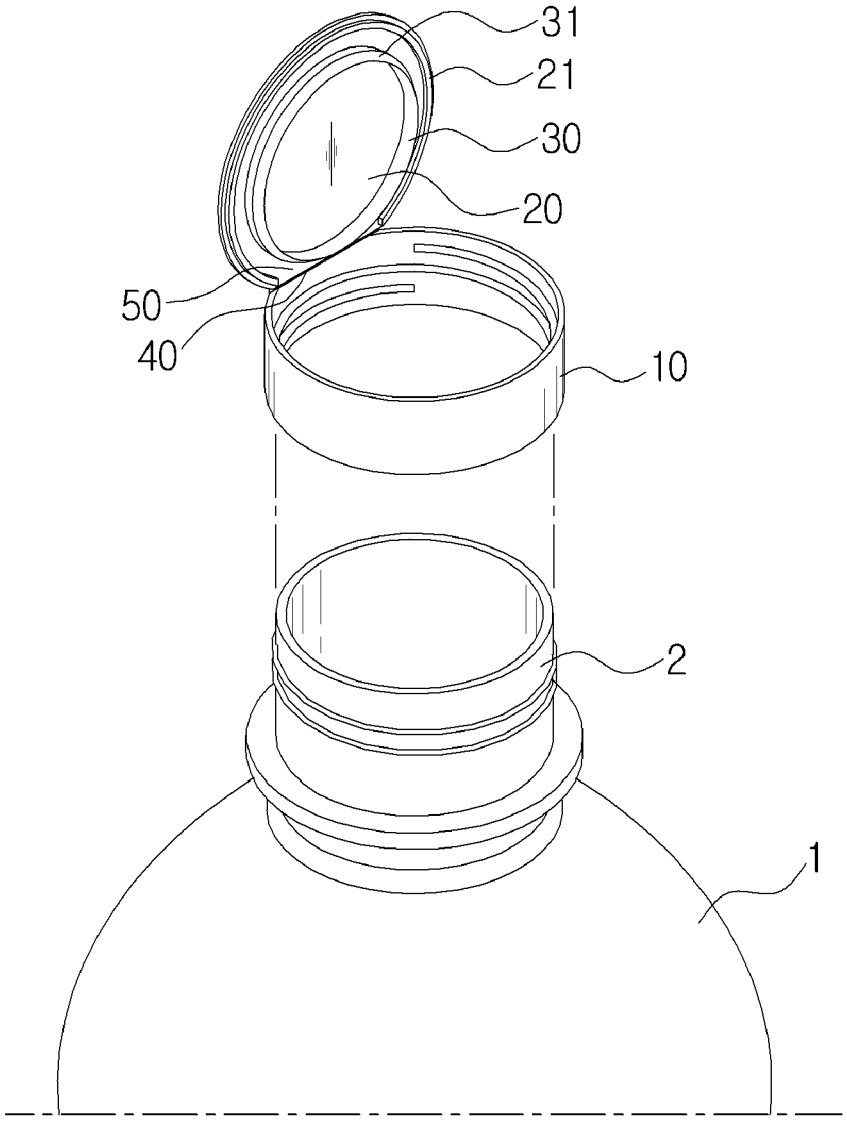


FIG. 4

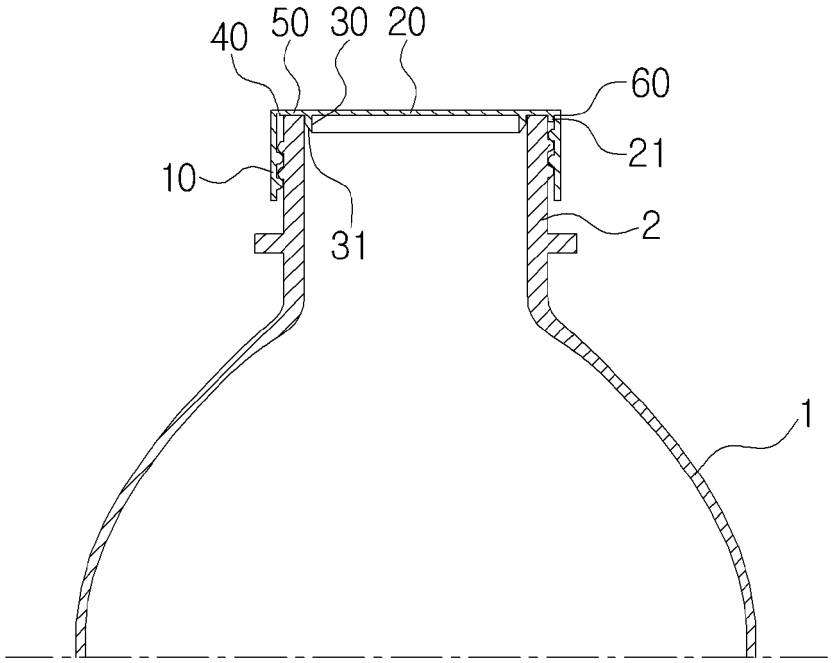


FIG. 5

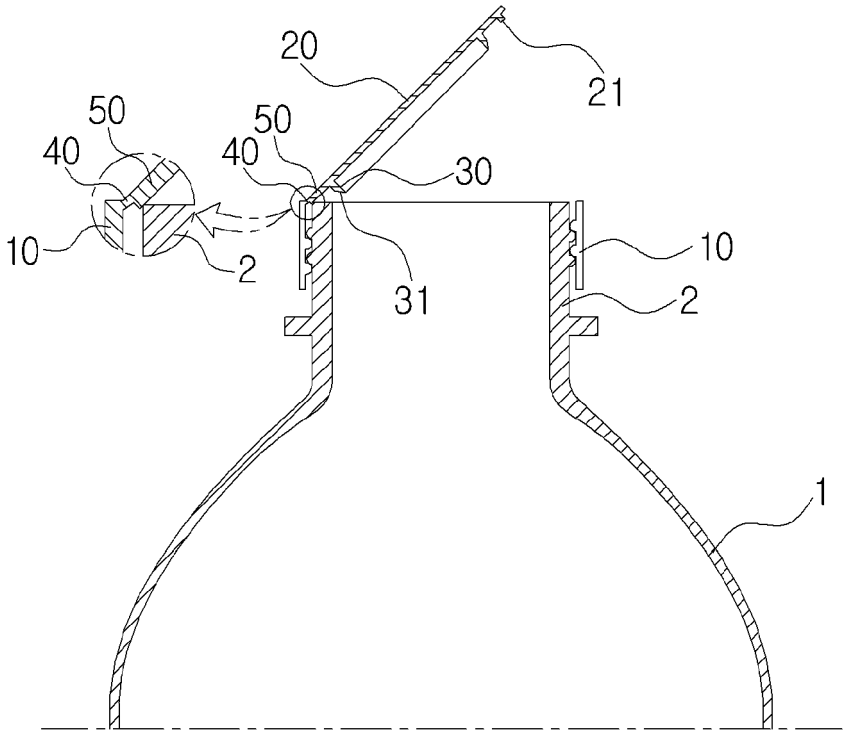
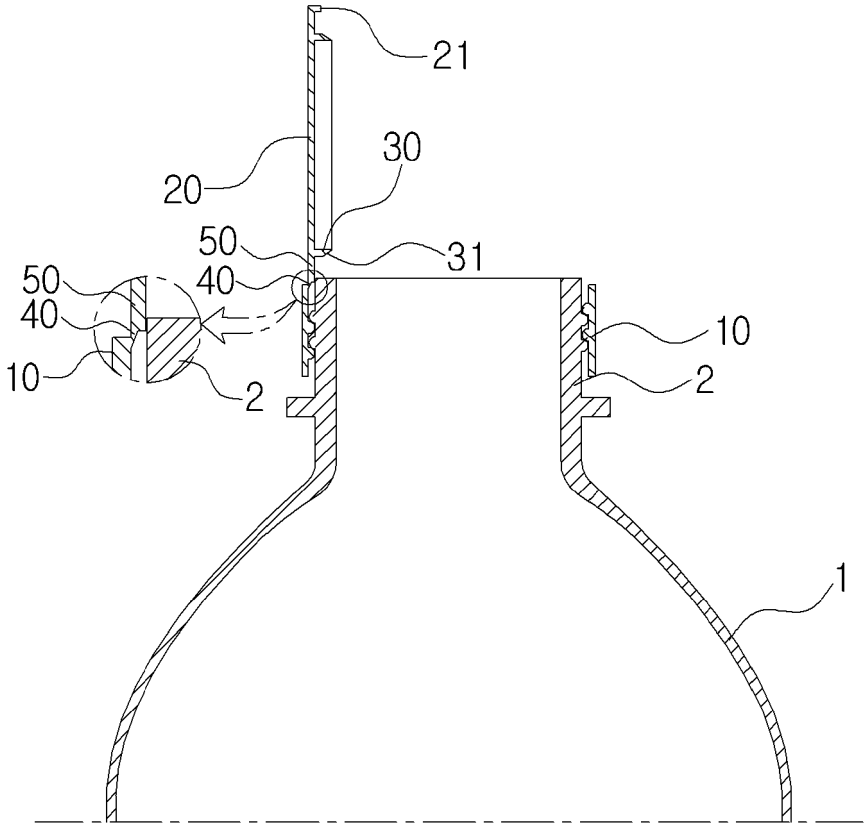


FIG. 6



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EUROPEAN SEARCH REPORT

Application Number
EP 16 17 1634

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	DE 15 86 727 A1 (HEINEMANN FRITZ) 12 November 1970 (1970-11-12) * figures 1,2 * -----	1	INV. B65D43/26 B65D47/08 B65D55/16
A	US 3 110 410 A (PEHR HAROLD T) 12 November 1963 (1963-11-12) * column 1, line 71 - line 72; figures 1-4 * * column 2, line 12 - line 13 * -----	1	

TECHNICAL FIELDS SEARCHED (IPC)

B65D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	20 September 2016	Sundell, Olli

CATEGORY OF CITED DOCUMENTS

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EPO FORM 1503 03.82 (P04C01)

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20-09-2016

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 1586727 A1	12-11-1970	NONE	
US 3110410 A	12-11-1963	NONE	

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

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Patent documents cited in the description

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