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(54) Dispensing closure for containers

(57) The present invention relates to a closure (1) suitable for dispensing pourable product from a container (2). More specifically, the present invention is directed to a "twist to open" type closure (1) operated by a twisting action.

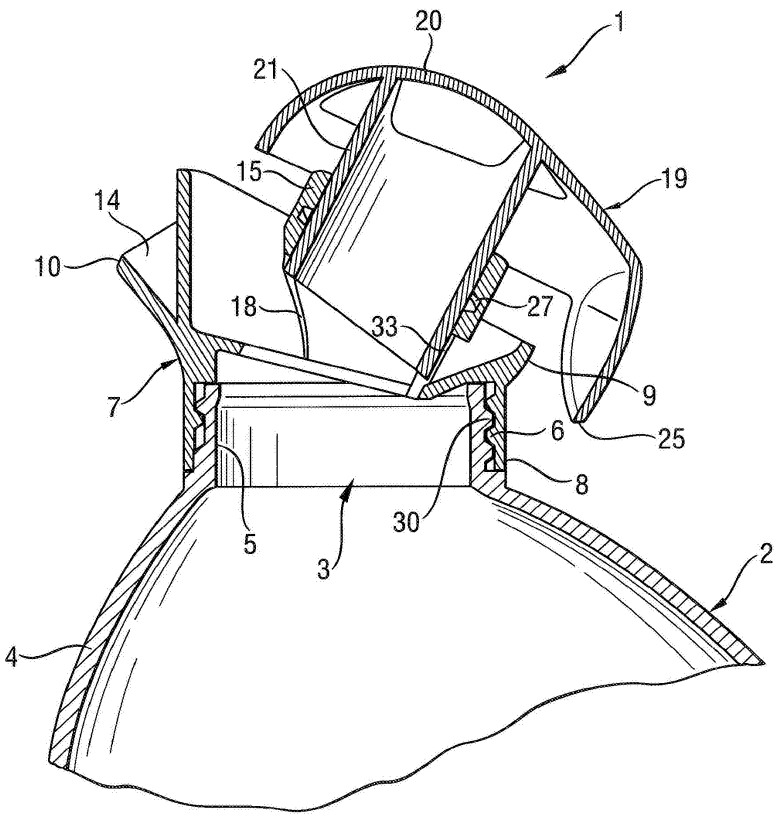

Fig. 1

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Description

Technical field

[0001] The present invention relates to a closure suitable for dispensing pourable product from a container. More specifically, the present invention is directed to a "twist to open" type closure operated by a twisting action.

Background of the invention

[0002] Dispensing closures for containers are commonly known in the art and may be based on various opening mechanisms such as "push and turn", "twist and turn", "twist to open" or "push and pull". Those closures are commonly used in combination with containers designed to contain products such as food, beverages, personal care products, pharmaceutical or cosmetic products. Typical types of dispensing closures are for example described in US-B1-6,202,876 (push and twist), US-A-5305932 (snap-on), US-A-2004015507 (push and pull) or in WO 2004/110889 (push to open). The specific type of "twist to open" closures is described for example in US-B1-5,305,932; EP-B1-0 378 488; WO 00/30949; EP-A1-0 417 891 and in WO 03/050033.

[0003] Although the above-types of closures will generally function satisfactorily in the applications for which they are designed, they typically only permit slow dispensing of limited amount of fluids. However, in certain circumstances, it is required to dispense the contained products much faster and in a relatively large quantity. This is typically the case in the context of liquid detergent containers. It has indeed been discovered that the users of containers equipped with the corresponding dispensing closures primarily seek for the fastest possible delivery of the contained liquid detergent into an appliance or receptacle. Most commonly used closures for containers adapted for delivering liquid detergent compositions, which are typically viscous liquids by nature, are described e.g. in EP-B1-0 109 704. Those dispensing closures typically consist of two separate parts: a spouted transition piece and a screw-type cap. Although the spouted piece allows for precise pouring of the viscous liquid into the intended receptacle, the cap is however often seen as difficult and/or too long to open and may easily get lost.

[0004] Another drawback associated with the use of the above dispensing system is that under usage, liquid detergent compositions may be spilled in the area where liquid detergent is consumed and/or on the user's hands which may lead to skin irritation or even bums. This often occurs when the above-mentioned cap is also used as a dosing means.

[0005] It is therefore an objective of the present invention to provide a dispensing closure suitable for dispensing pourable product from a container which provides fast dispensing of the contained product, which is easy-to-use, mess-free and which overcomes the above-mentioned drawbacks.

[0006] It has now been found that the above objective can be met by providing a dispensing closure **1** according to the present invention.

[0007] Advantageously, the dispensing closure **1** according to the present invention exhibits improved opening/closing ergonomics. A further advantage associated with the dispensing closure **1** according to the present invention is that it provides excellent sealing vis-à-vis the contained product.

[0008] It is still another advantage that, due its particular configuration, the dispensing closure **1** of the present invention provides more convenient way of dispensing pourable product and allows better viewing of the amount of product being dispensed.

[0009] It is still a further advantage that the dispensing closure **1** of the present invention requires a minimum number of components, which greatly facilitates its manufacture and assembly, and substantially reduces the associated production costs. In addition, the dispensing closure **1** of the present invention provides a more aesthetic appeal when compared to similar closures known in the art, and contributes to provide the user with a more pleasant experience while operating domestic tasks.

[0010] Advantageously, the dispensing closure **1** according to the present invention does not require any modification of the container **2** on which it is mounted, for the dispensing closure **1** to become operable.

[0011] Other advantages and more specific properties of the dispensing closure **1** according to the present invention will be clear after reading the following description of the invention in combination with the attached drawings.

Summary of the invention

[0012] The present invention relates to a dispensing closure **1** suitable for being mounted on a container **2,** the container **2** having a dispensing opening **3** and being suitable for containing a pourable product in its interior volume, wherein the dispensing closure **1** comprises:

(a) a base member **7** comprising a means for attachment **6** to said container **2,** a draining canal **12** adapted to communicate with the interior volume of the container **2,** a discharging means **13** and a hollow sleeve **15;** wherein the hollow sleeve **15** is adapted to communicate with the draining canal **12** and comprises a dispensing aperture **18** capable of dispensing the pourable product.

(b) a cap **19** comprising a cap top **20** and a barrel **21** extending downwardly from the cap top **20,** whereby the cap top **20** is capable of covering the discharging means **13** in a tight manner vis-à-vis the content of the container **2;**

(c) complementary means **27,28** of raising and lowering the cap **19** by rotation thereof, wherein the complementary means **27,28** are located in the barrel **21**

and the hollow sleeve **15,** and are adapted to switch the cap **19** from a lower position wherein said discharging means **13** is covered by the cap top **20** and the dispensing aperture **18** is obstructed by the barrel **21,** and an upper position wherein the discharging means **13** is uncovered and the dispensing aperture **18** is unobstructed.

[0013] In another embodiment, the present invention is directed to a container closure assembly, comprising:

(a) a container **2** having a body portion **4** for holding container content, a lower closed end for supporting the container **2,** an upper end including a means of attachment **30** thereon adapted to receive and affix a dispensing closure for containers; and
(b) a dispensing closure **1** as above-indicated, mounted on the container **2.**

[0014] The present invention further encompasses a method of dispensing the content of a container **2** comprising the steps of:

(a) providing a container closure assembly as above-described, wherein the cap **19** is in its lower position;
(b) rotating the cap **19** so as to raise the cap **19** to its upper position;
(c) pouring the required amount of the container content through the discharging means **13;**
(d) rotating the cap **19** so as to lower the cap **19** back towards its lower position.

Brief description of the drawings

[0015]

FIG. 1 is a cross-section view of a container closure assembly according to the present invention. The assembly comprising a container **2** onto which is mounted a dispensing closure **1** according to another embodiment of the invention.
FIG. 2 is a top perspective view of a dispensing closure **1** according to the invention in its lower/closed position.
FIG. 3 is a top perspective view of a dispensing closure **1** according to the invention in its upper/open position.
FIG. 4 is a bottom perspective view of the cap **19** for use in a dispensing closure **1** according to the invention.
FIG. 5 is a top perspective view of the base member **7** for use in a dispensing closure **1** according to the invention.
FIG. 6 is a top view of a dispensing closure **1** according to the invention in its lower/closed position.
FIG. 7 is a top view of a dispensing closure **1** according to the invention in its upper/open position.
FIG. 8 is a side view of a dispensing closure **1** according to the invention in its lower/closed position.
FIG. 9 is a side view of a dispensing closure **1** according to the invention in its upper/open position.
FIG. 10 is a cross-sectional side view of a dispensing closure **1** according to the invention in its lower/closed position.
FIG. 11 is a cross-sectional side view of a dispensing closure **1** according to the invention in its upper/open position.

Detailed description of the invention

[0016] For the purposes of promoting and understanding the principles of the present invention, reference will be made to the embodiment illustrated in the drawings and specific language will be used to describe the same. While this invention is susceptible of embodiments in many different forms, this specification and the accompanying drawings discloses specific forms as examples of the invention. However, the invention is not intended to be limited to the embodiment so described.
In a first embodiment, the present invention is directed to a dispensing closure **1** suitable for being mounted onto a container **2** having a dispensing opening **3.**
Referring now to **FIG.1,** a dispensing closure **1** according to a first embodiment of the invention is represented which is mounted onto a container **2.**

CONTAINER 2

[0017] In a preferred embodiment, the container **2** comprises a body portion **4** for holding container content, a lower closed end for supporting said container **2,** an upper end including a neck **5** delimiting a dispensing opening **3.** The dispensing closure **1** of the present invention may be securely mounted onto said container **2,** via its base member **7,** using any means of attachment commonly know to those skilled in the art including co-operative threads, crimping, clipping means, heat sealing force fitting, clasp elements, snap-fit bead, groove arrangements, and mixtures thereof.
Preferably, the dispensing closure **1** of the invention is provided with an inner female thread **6** typically located in the base member **7,** as described hereinafter, and the container neck **5** is provided with a male thread **30** formed adjacent its dispensing opening **3.** Typically, the dispensing closure **1** is mounted onto the container **2** with the female thread **6** of the base member **7** screwed on the male thread **30** of the container **2.**
Alternatively, the container **2** may not need to have a neck **5.** Instead the container **2** may consist of a just a body portion **4** with a dispensing opening **3.** The dispensing closure **1** of the present invention is suitable for use with a variety of conventional or special containers having various designs, the details of which, although not illustrated or described, would be apparent to those skilled in the art. The container **2** may have a rigid wall or walls, or may have a somewhat flexible wall or walls.

[0018] In a preferred aspect of the invention, the dispensing closure **1** is a separate element which is adapted to be removably or non-removably mounted, via its base member **7,** to a previously manufactured container **2** which has a dispensing opening **3** to the container interior. The dispensing closure **1** is adapted to be used with a container **2** having a dispensing opening **3** to provide access to the container interior volume and to a product contained therein, which is preferably a pourable product. However, the dispensing closure 1 of the invention may be used with many products, including but not limited to, relatively low or high viscosity liquids, creams, gels, suspensions, mixtures, lotions, pastes, particulates, granular products, and mixtures thereof. Typical products for use in the present invention may be those constituting a food product, a personal care product, an industrial or household cleaning product, or other compositions of matter for use in activities involving manufacturing, commercial or household maintenance, construction, agriculture.

Preferably, said pourable product is a liquid composition, more preferably a viscous liquid composition, most preferably a laundry liquid detergent composition.

BASE MEMBER 7

[0019] The dispensing closure **1** according to the present invention comprises as a first essential element, a base member **7. FIG.5** shows is a top perspective view of the base member **7** for use in the dispensing closure **1** according to the invention.

[0020] The base member **7** is intended to be mounted onto a container **2** using any suitable means of attachment as indicated above. Suitable means of attachment are designed so as to provide secure sealing between the dispensing closure **1** and the container **2** vis-à-vis its content.

The base member **7** may have any suitable configuration, form or dimension for accommodating an upwardly projecting neck **5** or portion of a container **2.** A preferred execution of the present invention, wherein the base member **7** has a substantially egg-like shape, preferably an egg-like shape, more preferably an elliptical shape, when seen from the top, as represented in the accompanying drawings.

[0021] The base member **7** is comprised of two distinct parts: a skirt **8** and a platform **9.** The skirt **8** generally forms the lower part of the base member **7** and extends substantially towards the container direction, typically parallel to the neck **5** of the container **2.** Preferably, the skirt **8** has a substantially cylindrical shape, preferably a cylindrical shape. The platform **9,** which typically extends substantially transversely to the longitudinal axis of the container **2,** generally corresponds to the upper part of the base member **7.** In a preferred execution of the present invention, the platform **9** has a substantially flat, platelike shape and is provided with a platform lip **10** extending substantially over the outer perimeter of said platform **9.** Platform **9** may be substantially horizontal. However, according to a highly preferred embodiment, platform **9** may be adapted such as to have an inclination of between 5 and 45 degrees, preferably between 10 and 40 degrees, more preferably between 20 and 30 degrees, most preferably between 20 and 25 degrees, above a virtual horizontal axis. As shown in **FIG.10** and **FIG.11,** the means for attachment **9** is preferably located onto the inner wall **11** of the skirt **8.**

[0022] Also shown in **FIG.10** and **FIG.11,** the base member **7** further comprises a draining canal **12** adapted to communicate with the interior volume of the container **2** such as to permit dispensing of the container content by the discharging means **13,** via the dispensing opening **3** and the dispensing aperture **18,** when the cap **19** is in its upper position. Said draining canal **12** is typically delimited by the contours of said skirt **8.**

[0023] Discharging means **13** for use herein may be readily recognized and selected by those skilled in the art. Preferably, said discharging means **13** is a pouring spout. In a more preferred execution, the discharging means **13** is a beveled spout which extends upwardly from said base member **7,** preferably from said platform **9.** Such preferred spout allows better control and more precise dispensing of the container content, especially viscous liquids such as liquid detergents. It is preferred that said discharging means **13** has a substantially annular shape.

[0024] In a further preferred embodiment of the present invention, said discharging means **13** is located in such a way as to form spacing between said discharging means **13** and the outer perimeter of said platform **9.** Said spacing may preferably take the form of a circular drainer **14** adapted to recuperate any pourable product contained within the container **2,** preferably viscous liquid product, which would not have been properly dispensed from said discharging means **13.** Also, said spacing is preferably provided with apertures **33** communicating with the interior of the container **2** so as to permit the recuperated product to be drained back into the container **2.** Additionally, said apertures **33** will also constitute air intake means adapted to allow air to penetrate into the container **2** in response to the evacuation of its content and thereby contribute to a better dispensing of the container content, preferably viscous liquids.

[0025] Referring now specifically to **FIG.5,** the base member **7** further comprises a hollow sleeve **15** adapted to communicate with said draining canal **12.** The hollow sleeve **15** shall be adapted so as engage the hereafter-described barrel **21** for axial motion with respect to said hollow sleeve **15.** Suitable hollow sleeve **15** for use herein will be readily apparent to those skilled in the art. However, in a preferred execution, said hollow sleeve **15** has a substantially cylindrical shape, preferably a cylindrical shape, and is provided with an inner **16** and an outer surface **17.** Preferably, said hollow sleeve **15** extends upwardly from said base member **7,** more preferably from said platform **9,** and is open at both ends.

The hollow sleeve **15** may extend substantially towards the container direction, typically parallel to the neck **5** of the container **2** and therefore towards a substantially vertical axis. In a highly preferred embodiment however, said hollow sleeve **15** may be positioned such as to have an inclination of between 5 and 45 degrees, preferably between 10 and 40 degrees, more preferably between 20 and 30 degrees, most preferably between 20 and 25 degrees, below a virtual vertical axis.

[0026] According to the present invention, said hollow sleeve **15** is provided with a dispensing aperture **18** capable of dispensing the pourable product contained into said container **2,** and positioned such as to communicate with said discharging means **13.**

[0027] The constituting parts of the base member **7** are formed from any suitable material commonly known in the art. Preferably, said parts are all formed from heat sealable thermoplastic materials such as polyethylene or polypropylene single piece. Accordingly, and in a preferred execution of the invention, the base member **7** is a monolithic piece formed from the same thermoplastic material. According to this specific embodiment, the different parts may be advantageously molded within a single injection molding operation which therefore involves both a simple and economical manufacturing process.

CAP 19

[0028] The dispensing closure **1** according to the present invention is further provided with a cap **19,** the role of which is to cover the discharging means **13** in a tight manner vis-à-vis the content of the container **2** when said cap **19** is in its lower/closed position. **FIG.4** shows a bottom perspective view of said cap **19.**

[0029] The cap **19** for use herein is comprised of two distinct parts: a cap top **20** and a barrel **21.** The cap top **20** generally forms the upper part of the cap **19** and extends substantially transversely to the longitudinal axis of the container **2.** It is typically provided with an inner face **32** and an outer surface **31.**

[0030] The cap top **20** for use herein may however have any suitable configuration, form or dimension for accommodating said platform **9** and said discharging means **13.** Suitable cap tops **20** for use herein will easily be recognized by those skilled in the art. In a preferred execution, the cap **19** has a substantially rounded shape which will allow proper covering of said discharging means **13.** Preferably, the cap **19** has a concave form with the concavity turned towards the direction of the platform **9.** More preferably, the cap top **20** is provided with a substantially egg-like shape, preferably an egg-like shape, more preferably an elliptical shape, when seen from the top, as represented in the accompanying drawings.

In a highly preferred execution of the present invention, said cap top **20** is further provided with a front screen **24** which is intended to selectively cover the extremity of said discharging means **13.** Typically, said front screen **24** is located at the front part of said cap top **20.**

[0031] The cap top **20** for use herein preferably possesses a cap lip **25** which is typically a substantially annular lip and which extends over the outer perimeter of said cap top **20.** In that preferred embodiment, the cap lip **25** is adapted to tightly conform to the platform lip **10** contours, so as to provide a first sealing means of said cap **19** onto the base member **7** vis-à-vis the content of the container **2** when said cap **19** is in its lower/closed position.

[0032] According to a preferred aspect of the invention, the outer surface **31** of said cap top **20** is further provided with a gripping means **26,** which is preferably a finger grip and which is typically located at the back part of the cap top **20.** Any gripping means commonly known in the art may be used in the context of the present invention. In a very preferred embodiment, the gripping means **26** is especially adapted to provide suitable gripping by pinching with two fingers.

The exterior configuration of the cap top **20** for use herein may be varied as desired for aesthetic appearance or for further improved gripping. The latter may be e.g. provided with incrustations, serrations, grooves, indentations or any other operation commonly know in the art.

[0033] As show in **FIG.4,** the cap **19** is further provided with a barrel **21** which generally forms the lower part of the cap **19.** Said barrel **21** typically extends substantially transversely to the plan formed by said cap top **20.**

[0034] The barrel **21** for use herein may however have any suitable configuration, form or dimension for accommodating said discharging means **13** and in particular said hollow sleeve **15.** Suitable barrel **21** for use herein will easily be recognized by those skilled in the art. However, in a preferred execution, said barrel **21** has a substantially cylindrical shape, preferably a cylindrical shape, and is provided with an inner **22** and an outer surface **23.** Preferably, said barrel **21** extends downwardly from said cap top **20** and is open at the end (i.e. lower end) opposite to that facing said cap top **20** (i.e. upper end).

[0035] As previously mentioned, the barrel **21** is adapted so as to be engaged for axial motion with respect to said hollow sleeve **15.** Accordingly, and in a highly preferred embodiment of the present invention, the outer diameter (corresponding to the outer surface **23)** of said barrel **21** is slightly inferior to the inner diameter (corresponding to the inner surface **16)** of said hollow sleeve **15.** According to this preferred embodiment, the barrel **21** is allowed to axially slide within the interior of said hollow sleeve **15,** via the hereinafter described complementary means **27,28** of raising and lowering the cap **19,** while still providing efficient air tight seal (second sealing means) vis-à-vis the content of the container **2** when said barrel **21** obstructs said dispensing aperture **18.**

[0036] In another highly preferred execution, the lower end of said barrel **21** is provided with a cross section which is non-perpendicular to the longitudinal axis thereof. As represented in **FIG.10** and **FIG.11,** the barrel **21**

for use in the present invention is preferably provided with a beveled lower end. According to this highly preferred embodiment, the dispensing aperture **18** may be unobstructed/obstructed with a limited rotation of said cap **19** and thus much faster than with the configuration where the lower end of said barrel **21** in non-beveled.

[0037] The cap **19** for use in the present invention may be formed from any suitable material commonly known in the art. Preferably, said cap **19** is formed as a single piece from heat sealable thermoplastic materials such as polyethylene or polypropylene single piece.

COMPLEMENTARY MEANS 27,28 OF RAISING AND LOWERING THE CAP 19

[0038] The dispensing closure **1** according to the present invention further comprises, as another essential technical feature, complementary means **27,28** of raising and lowering said cap **19** by rotation thereof.

[0039] Complementary means **27,28** for use in the present invention are located in said barrel **21** and in said hollow sleeve **15,** and are adapted for switching said cap **19** from a lower position and an upper position, by rotation of said cap **19.**

[0040] Suitable complementary means **27,28** for use herein will easily be recognized by those skilled in the art. Those include but are not limited to angled or helical threads, helical grooves or notches, in combination with complementary helical threads or lugs

[0041] According to a preferred embodiment of the present invention, the complementary means **27,28** of raising and lowering said cap **19** by rotation thereof, are a cooperative combination of discontinuous helical grooves **27** and lugs **28.** In a more preferred execution, and as represented in **FIG.4** and **FIG.5**, said helical grooves **27** are located in said hollow sleeve **15,** preferably in the inner surface **16** of said hollow sleeve **15,** and said lugs **28** are positioned in said barrel **21,** preferably in the outer surface **23** of said barrel **21.**

In the illustrated embodiment, two such helical grooves **27** are provided at an angular increment of 180 degrees. The corresponding two lugs **28** are preferably spaced at 180 degrees increment as well. In a preferred execution, said lugs **28** have a substantially cylindrical shape, preferably a cylindrical shape, to conform to and slide within the corresponding grooves **27.**

[0042] As indicated above, the complementary means **27,28** of raising and lowering said cap **19** by rotation thereof, are adapted to switch said cap **19** from a lower/closed position to an upper/open position. According to a highly preferred execution of the present invention, said complementary means **27,28** are adapted so as to allow said cap **19** to be switched from said lower position to said upper position through a limited angular displacement, preferably 180 degrees. In a very preferred embodiment, said helical grooves **27** are adapted such as angular displacement of more than 180 degrees is not permitted. This may be achieved e.g. by means of suitable rotation stops **29**, as represented in **FIG.5.**

[0043] In the normal course of a closing/opening operation, while said cap **19** is in its lower/closed position (see **FIG.10),** the dispensing aperture **18** is obstructed by said barrel **21** and therefore seals the content of the container **2.** Also, while said cap **19** is its lower position, said cap top **20** covers the discharging means **13** which provides a further sealing means for the container content and provides a visual indication that the dispensing container according to the invention is in its closed position.

[0044] While said cap **19** is being engaged in a rotational movement, said complementary means **27,28** are working in cooperation so as to progressively raise said cap **19** towards the axis of said hollow sleeve **15.** As the cap **19** is rising, said dispensing aperture **18** is becoming progressively less and less obstructed until it is completely unobstructed. Concurrent to this axial motion, said cap top **20** is progressively uncovering said discharging means **13.**

When said dispensing aperture **18** is completely unobstructed, the cap **19** has attained its open position, allowing the content of the container **2** to be dispensed through the discharging means **13** via said dispensing aperture **18.**

[0045] In a highly preferred execution of the present invention, said complementary means **27,28** and said barrel **21** are adapted and configured so as to allow said cap **19** to be switched from the lower position to the upper position through an angular rotation of preferably 180 degrees.

[0046] In the context of the present invention, it is preferred that said complementary means **27,28** are integrally part of the specific elements they are located in. More specifically and according to a highly preferred embodiment, said helical grooves **27** are preferably integrally part of said hollow sleeve **15** and said lugs **28** are preferably integrally part of said barrel **21.**

Container closure assembly

[0047] In another embodiment, the present invention is directed to a container closure assembly, comprising:

(a) a container **2** having a body portion **4** for holding the container content, a lower closed end for supporting the container **2,** an upper end including a means of attachment thereon adapted to receive and affix a dispensing closure for containers;

(b) a dispensing closure **1** according to the invention, mounted on the container **2.**

A method of dispensing the content of a container 2

[0048] The present invention further encompasses a method of dispensing the content of a container **2** comprising the steps of:

(a) providing a container closure assembly according to the invention, wherein said cap **19** is in its lower position;
(b) rotating said cap **19** so as to raise said cap **19** to its upper position;
(c) pouring the required amount of the container content through said discharging means **13;**
(d) rotating said cap **19** so as to lower said cap **19** back towards its lower position.

Use of a container closure assembly according to the invention, for dispensing a liquid composition.

[0049] In a further embodiment, the present invention is directed to the use of a closure assembly according to the present invention for dispensing a liquid composition, preferably a liquid detergent composition, most preferably a liquid laundry detergent composition.
[0050] The dimensions and values disclosed herein are not to be understood as being strictly limited to the exact numerical values recited. Instead, unless otherwise specified, each such dimension is intended to mean both the recited value and a functionally equivalent range surrounding that value. For example, a dimension disclosed as "40 mm" is intended to mean "about 40 mm".

Claims

1. A dispensing closure **(1)** suitable for being mounted on a container **(2),** said container **(2)** having a dispensing opening **(3)** and being suitable for containing a pourable product in its interior volume, wherein said dispensing closure **(1)** comprises:

(a) a base member **(7)** comprising a means for attachment **(6)** to said container **(2),** a draining canal **(12)** adapted to communicate with the interior volume of said container **(2),** a discharging means **(13)** and a hollow sleeve **(15);** wherein said hollow sleeve **(15)** is adapted to communicate with said draining canal **(12)** and comprises a dispensing aperture **(18)** capable of dispensing said pourable product.
(b) a cap **(19)** comprising a cap top **(20)** and a barrel **(21)** extending downwardly from said cap top **(20),** whereby said cap top **(20)** is capable of covering said discharging means **(13)** in a tight manner vis-à-vis the content of said container **(2);**
(c) complementary means **(27,28)** of raising and lowering said cap **(19)** by rotation thereof, wherein said complementary means **(27,28)** are located in said barrel **(21)** and said hollow sleeve **(15),** and are adapted to switch said cap **(19)** from a lower position wherein said discharging means **(13)** is covered by said cap top **(20)** and said dispensing aperture **(18)** is obstructed by said barrel **(21),** and an upper position wherein said discharging means **(13)** is uncovered and said dispensing aperture **(18)** is unobstructed.

2. A dispensing closure **(1)** according to claim 1, wherein said base member **(7)** is provided with a substantially egg-like shape, preferably an egg-like shape, more preferably an elliptical shape, when seen from the top.

3. A dispensing closure **(1)** according to claim 1 or 2, wherein said means for attachment **(6)** is a cooperative thread.

4. A dispensing closure **(1)** according to any of the preceding claims, wherein said base member **(7)** comprises a skirt **(8)** and a platform **(9),** wherein said platform **(9)** has an inclination of between 5 and 45 degrees, preferably between 10 and 40 degrees, more preferably between 20 and 30 degrees, most preferably between 20 and 25 degrees, above a virtual horizontal axis.

5. A dispensing closure **(1)** according to any of the preceding claims, wherein said hollow sleeve **(15)** has a substantially cylindrical shape, preferably a cylindrical shape.

6. A dispensing closure **(1)** according to any of the preceding claims, wherein said hollow sleeve **(15)** extends upwardly from said base member **(7)** so as to have an inclination of between 5 and 45 degrees, preferably between 10 and 40 degrees, more preferably between 20 and 30 degrees, most preferably between 20 and 25 degrees, below a virtual vertical axis.

7. A dispensing closure **(1)** according to any of the preceding claims, wherein said cap top **(20)** has a substantially egg-like shape, preferably an egg-like shape, more preferably an elliptical shape, when seen from the top.

8. A dispensing closure **(1)** according to claim 4, wherein said platform **(9)** comprises a platform lip **(10)** and said cap top **(20)** comprises a cap lip **(25)** conforming to said platform lip **(10).**

9. A dispensing closure **(1)** according to any of the preceding claims, wherein said cap top **(20)** further comprises a gripping means **(26).**

10. A dispensing closure **(1)** according to any of the preceding claims, wherein said barrel **(21)** has a substantially cylindrical shape, preferably a cylindrical shape.

11. A dispensing closure **(1)** according to any of the pre-

ceding claims, wherein said hollow sleeve **(15)** is capable of engaging said barrel **(21)** for axial motion.

12. A dispensing closure **(1)** according to any of the preceding claims, wherein the lower end of said barrel **(21)** is provided with a cross section which is non-perpendicular to the longitudinal axis thereof.

13. A dispensing closure **(1)** according to any of the preceding claims, wherein said complementary means **(27,28)** of raising and lowering said cap **(19)** by rotation thereof, are a cooperative combination of discontinuous helical grooves **(27)** and lugs **(28).**

14. A dispensing closure **(1)** according to claim 13, wherein said discontinuous helical grooves **(27)** are located in said hollow sleeve **(15),** preferably in the inner surface **(16)** of said hollow sleeve **(15),** and said lugs **(28)** are positioned in said barrel **(21),** preferably in the outer surface **(23)** of said barrel **(21).**

15. A dispensing closure **(1)** according to any of the preceding claims, wherein said complementary means **(27,28)** are adapted so as to allow said cap **(19)** to be switched from said lower position to said upper position through a limited angular displacement which is preferably 180 degrees.

16. A dispensing closure **(1)** according to any of the preceding claims, wherein said pourable product is liquid, preferably a viscous liquid.

17. A container closure assembly, comprising:

(a) a container **(2)** having a body portion **(4)** for holding container content, a lower closed end for supporting said container **(2),** an upper end including a means of attachment **(30)** thereon adapted to receive and affix a dispensing closure for containers; and
(b) a dispensing closure **(1)** according to any of the preceding claims mounted on said container **(2).**

18. A method of dispensing the content of a container **(2)** comprising the steps of:

(a) providing a container closure assembly according to claim 17 wherein said cap **(19)** is in its lower position;
(b) rotating said cap **(19)** so as to raise said cap **(19)** to its upper position;
(c) pouring the required amount of the container content through said discharging means **(13);**
(d) rotating said cap **(19)** so as to lower said cap **(19)** back towards its lower position.

19. Use of a dispensing closure **(1)** according to any of the preceding claims for dispensing a liquid laundry detergent composition.

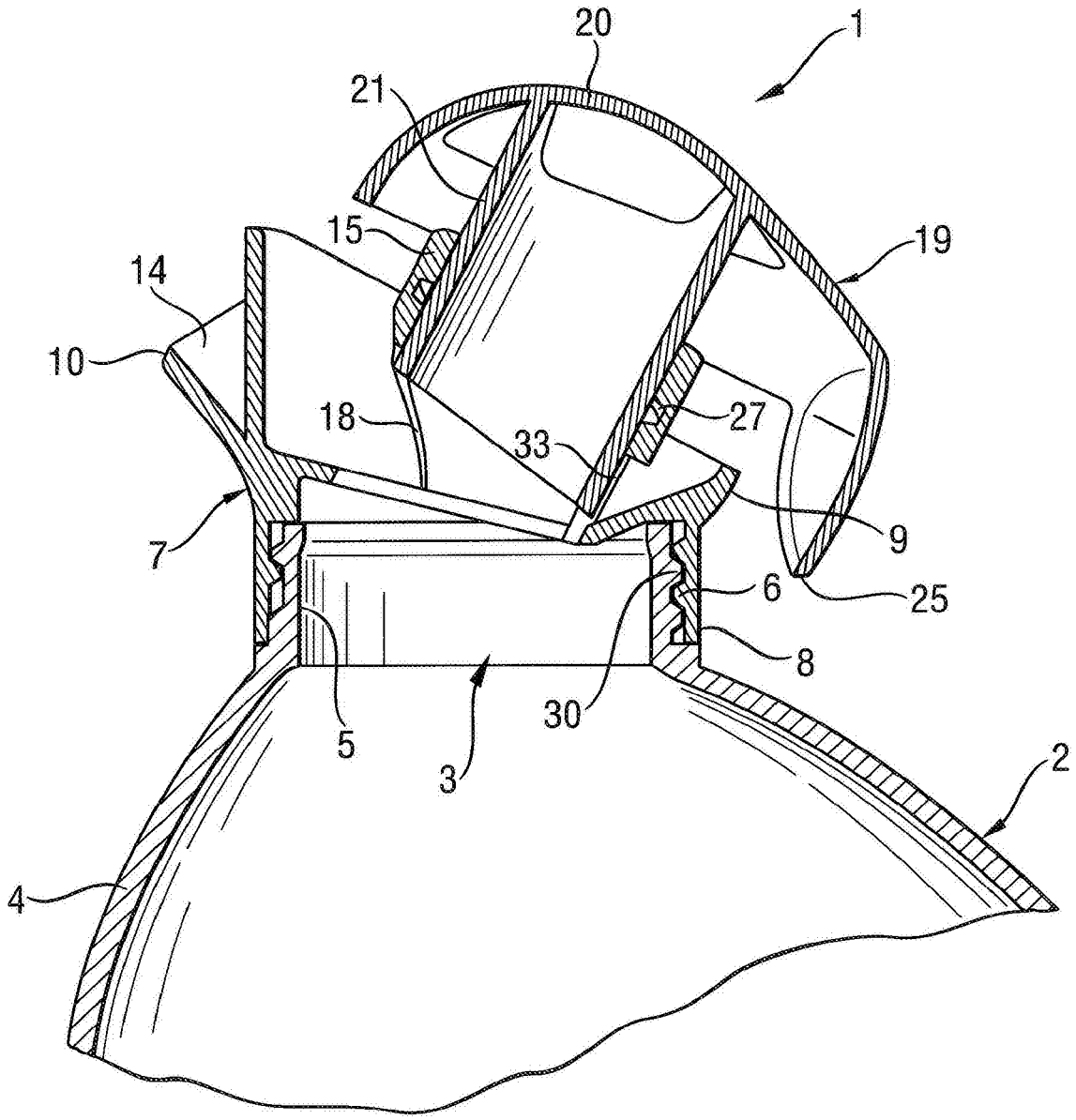


Fig. 1

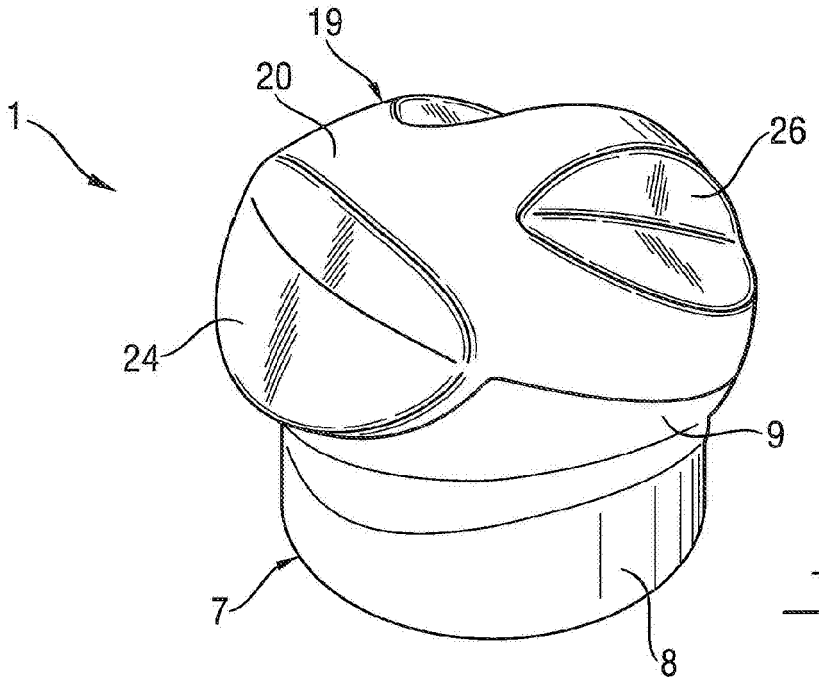


Fig. 2

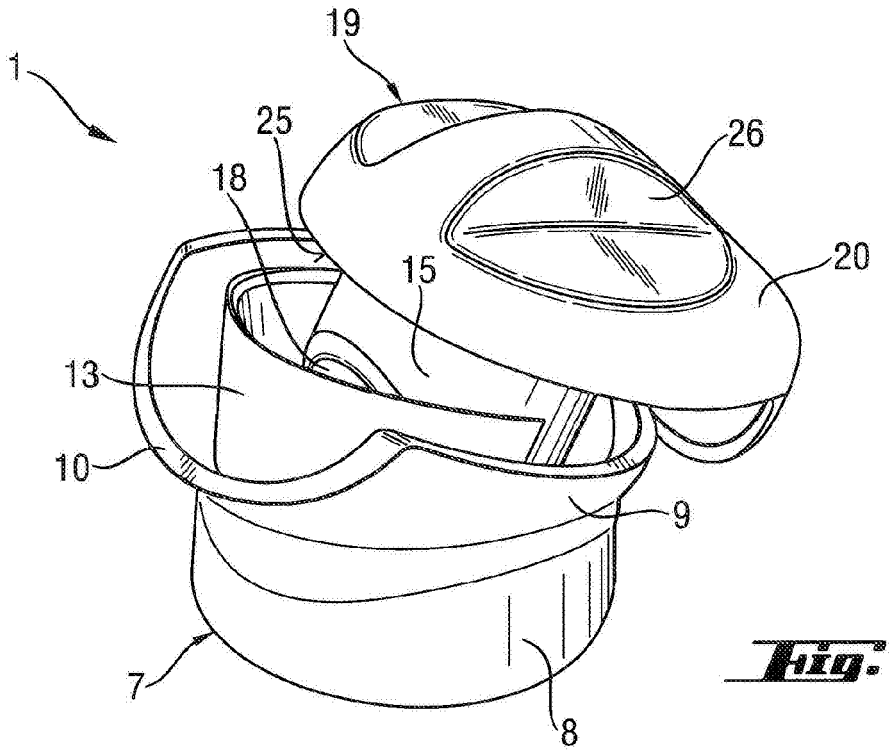


Fig. 3

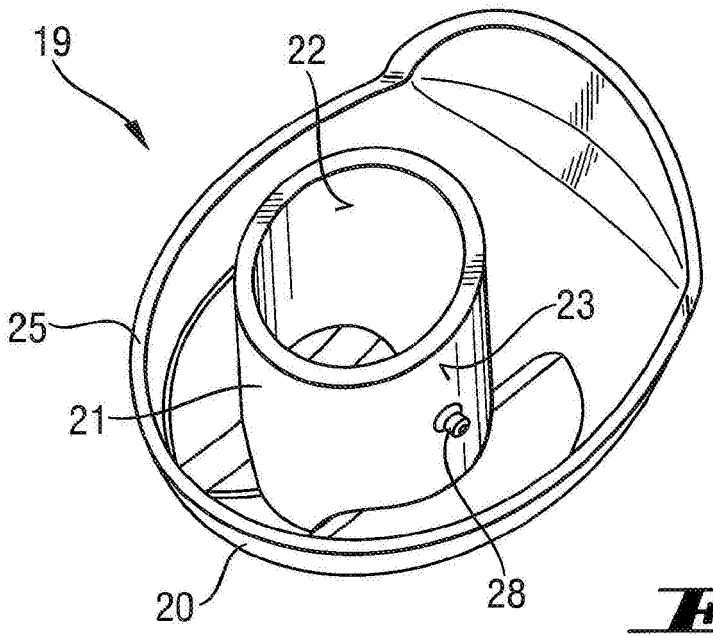


Fig. 4

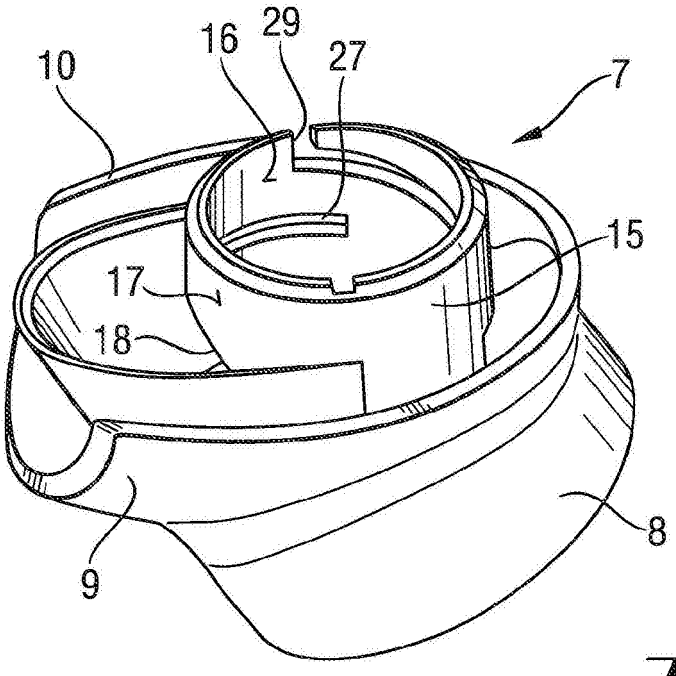


Fig. 5

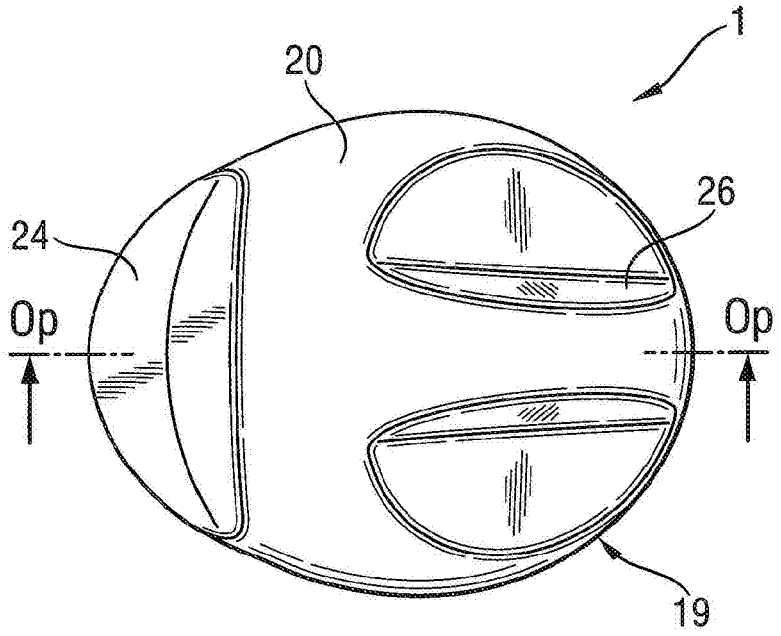


Fig. 6

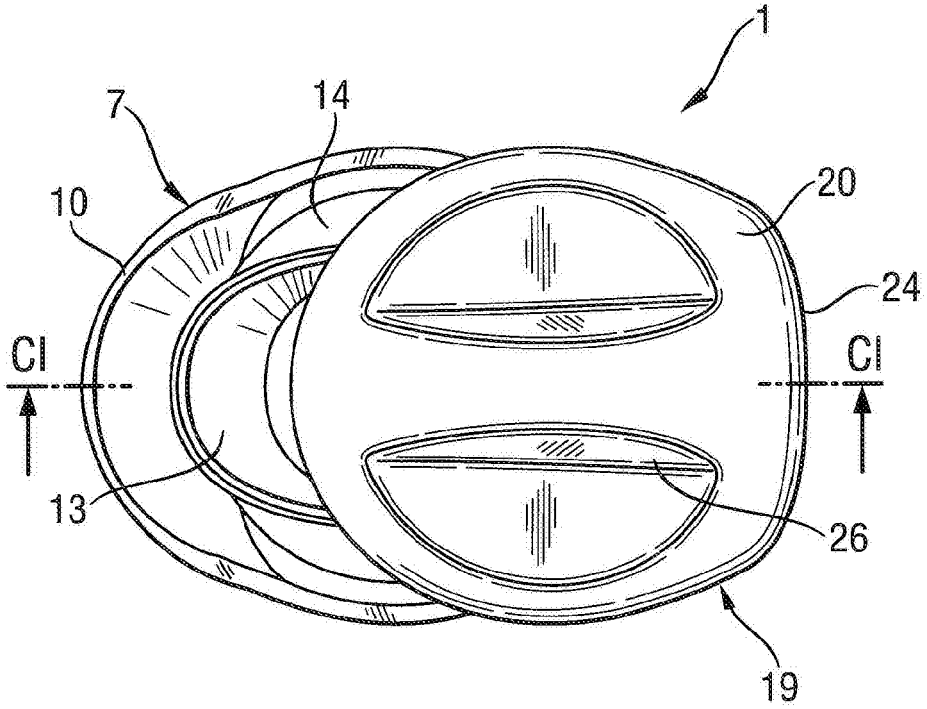


Fig. 7

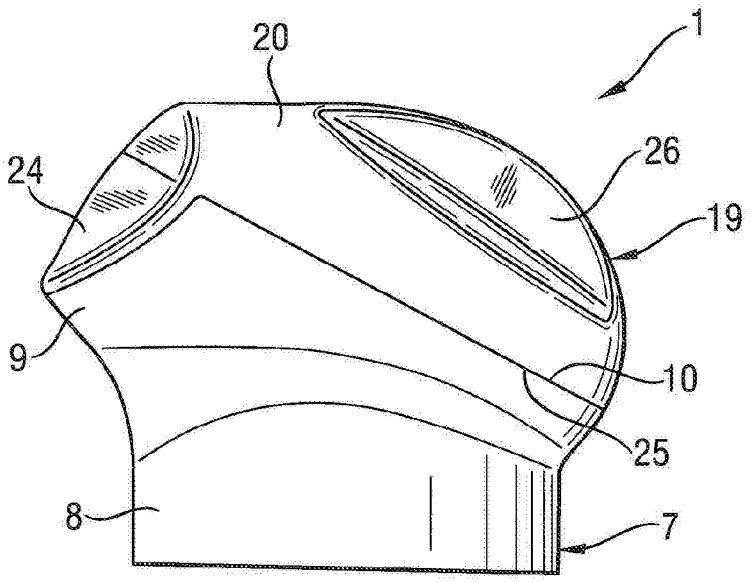
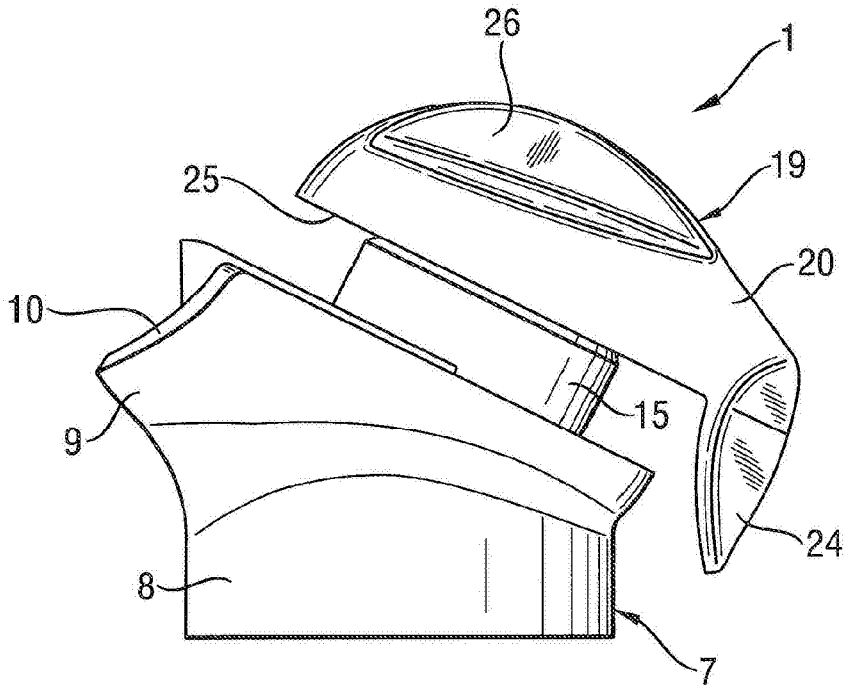


Fig. 8



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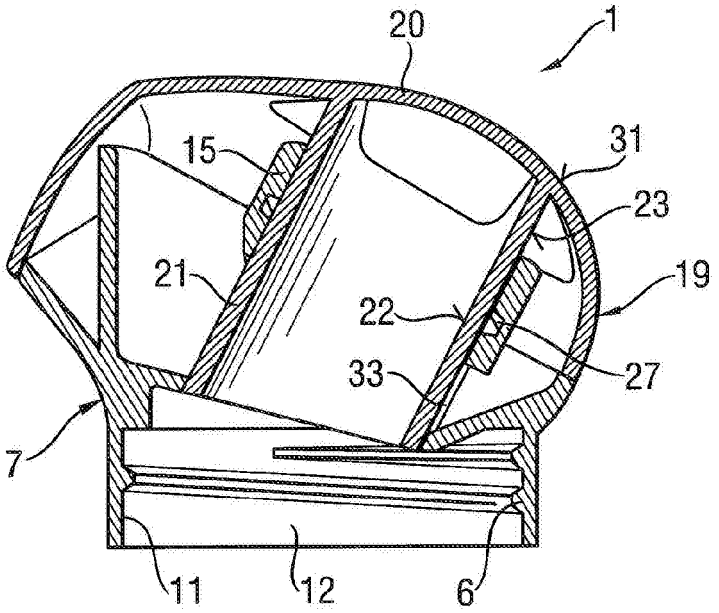
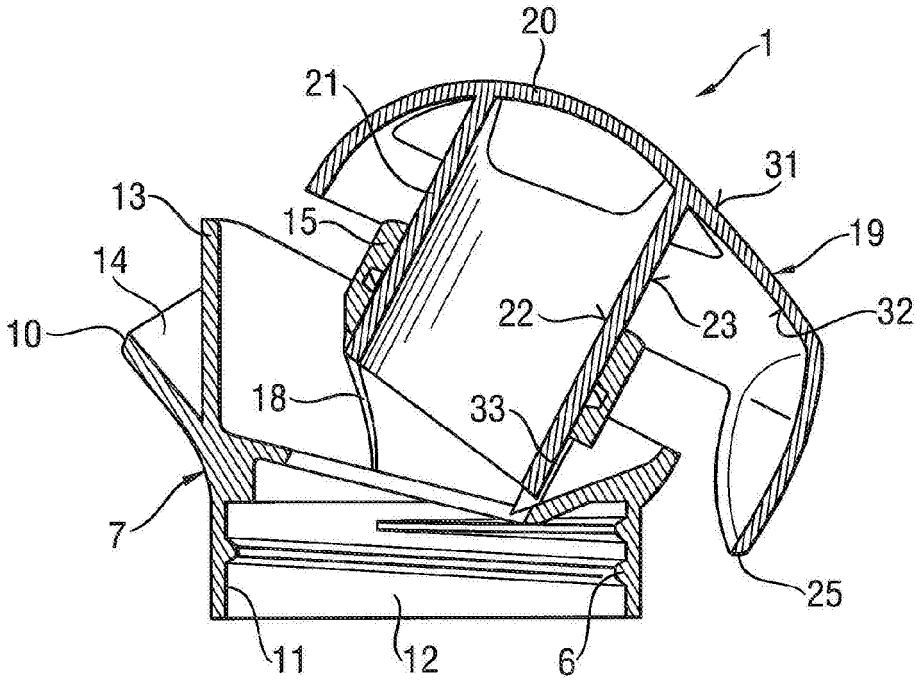


SECTION Op-Op

Fig. 10



SECTION CI-CI

Fig. 11

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 06 12 2519

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	AU 740 720 B2 (DART INDUSTRIES INC) 15 November 2001 (2001-11-15) * page 4, last paragraph - page 9, line 4; figures 1-5 *	1-19	INV. B65D47/26
A	EP 1 391 393 A1 (OREAL [FR]) 25 February 2004 (2004-02-25) * paragraph [0032] - paragraph [0045]; figures 1,2,4,5 * * paragraph [0059] - paragraph [0062] *	1-19	
A,D	WO 03/050033 A (PORTOLA PACKAGING INC [US]; ADAMS BRIAN M [US]; MA MIKE XIAOLI [US]) 19 June 2003 (2003-06-19) * the whole document *	1-19	

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
Munich	23 January 2007	Segerer, Heiko

CATEGORY OF CITED DOCUMENTS

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23-01-2007

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
AU 740720 B2	15-11-2001	AU 6992598 A	07-01-1999
		CA 2240050 A1	27-12-1998
		CZ 9802008 A3	15-09-1999
		EP 0887279 A2	30-12-1998
		HR 980349 A2	30-04-1999
		HU 9801465 A2	28-04-1999
		IL 124781 A	28-01-2001
		IS 4764 A	28-12-1998
		NO 982953 A	28-12-1998
		PL 327024 A1	04-01-1999
		US 5931356 A	03-08-1999
		ZA 9805565 A	20-01-1999
EP 1391393 A1	25-02-2004	BR 0303112 A	24-08-2004
		CN 1486909 A	07-04-2004
		DE 60304950 T2	30-11-2006
		ES 2261893 T3	16-11-2006
		FR 2843736 A1	27-02-2004
		KR 20040018164 A	02-03-2004
WO 03050033 A	19-06-2003	US 2003106911 A1	12-06-2003
		US 2003127467 A1	10-07-2003
		ZA 200404732 A	15-06-2005

EPO FORM P0459

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REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 6202876 B1 **[0002]**
- US 5305932 A **[0002]**
- US 2004015507 A **[0002]**
- WO 2004110889 A **[0002]**
- US 5305932 B1 **[0002]**
- EP 0378488 B1 **[0002]**
- WO 0030949 A **[0002]**
- EP 0417891 A1 **[0002]**
- WO 03050033 A **[0002]**
- EP 0109704 B1 **[0003]**