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(54) **Bottle closure device with guarantee collar and antirefill valve**

Flaschenverschluss mit Garantiering sowie Sicherung gegen Wiederfüllen

Dispositif de bouchage d'une bouteille, comprenant une bague d'inviolabilité et une soupape pour empêcher un nouveau remplissage

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(56) References cited:
EP-A- 0 239 176
EP-A- 0 502 379
ES-U- 287 995
FR-A- 2 682 085
GB-A- 2 008 531
GB-A- 2 238 288
IT-U- 22 360
US-A- 2 378 919
US-A- 4 454 954
US-A- 4 534 480

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Description

[0001] The invention relates to a bottle closure device with a liquid pouring unit locked elastically and leaktightly inside the bottle mouth and comprising an antirefilling valve, and with an aluminium closure cap screwed onto the neck of the bottle and locked to the neck of the bottle by means of a pilfer proof guarantee collar, and in which the liquid pouring unit comprises:

a) a tubular body which contains a movable valve closure member and is provided at its lower end with a seat for this valve closure member, while its outer surface is designed to lock the tubular body in the orifice of the bottle and to form an elastic leaktight connection with the inner surface of the orifice of the bottle,
b) a pourer body, which comprises a cylindrical wall and is locked with this cylindrical wall elastically and leaktightly inside the tubular body by means of a snap pourer body being provided with apertures, through which the liquid can be poured out,
c) a shaped middle part of the pourer body projecting toward the underlying movable closure member and forming a stop for this valve closure member,
d) the pourer body being provided on its outside with a circular flange, which is clamped leaktightly against the rim of the bottle when the closure cap is screwed down,
e) the closure cap being provided with an inner stopper which has a circular flange which presses leaktightly against the underlying flange of the pourer body,
f) the inner stopper of the closure cap being made of plastics material having some elasticity and being provided with a peripheral flange which is elastically compressible in the radial direction and co-operates with the closure cap to restrain the stopper to the closure cap.

[0002] A bottle closure device of this kind according to the pre-characterizing part of claim 1 is known from the document ES-U-287995.

[0003] A similar bottle closure device is described in the document US-A-4454954, but in this device the liquid pouring unit comprising the antirefilling-valve has different construction and is lodged not inside the bottle mouth but inside a correspondingly voluminous two-part closure cap, which lower part is locked by means of a pilfer proof guarantee collar to the neck of the bottle. The pouring unit of the bottle closure device known from the document EP-A-0502379 has a pourer body, which extends on the outer side of the bottle neck, while the closure cap is formed from plastics material and comprises a tubular outer skirt which abuts against an annular outer portion of a collar fast with the lower part of the pouring body and is connected to this annular portion of the pouring body by a frangible outer ring. The closure cap is provided with an inner stopper, which comprises a middle projecting part, freely engaged in the mouth aperture of the pourer body and a tubular outer wall which is formed with an inside threadway engaging with an outer thredway of the pourer body.

[0004] The object of the present invention is to provide a bottle closure device of this kind, which can be preassembled as a whole independently from a bottle, thus obtaining - together with a small number of components and an inexpensive and single construction - a pre-assembled unit, which can be handled and applied as such to the bottle mouth on closing a bottle.

[0005] According to the invention, the said object is achieved by a bottle closure device of the kind initially described and comprising - according to the characterizing part of claim 1 - the combination of the following features:

g) the inner stopper has an inner cylindrical wall which snaps elastically into engagement with the pourer body,
h) the peripheral flange of the inner stopper is conically shaped and flares downwards,
i) the shaped, downwardly projecting middle part of the pourer body has a recess shaped like an upturned cup that joins on the outside with the circular flange via a wall containing the apertures through which the liquid can be poured out, while the lower rim of said recess forms the stop for the movable valve closure member,
j) an annular frangible band provided in the cylindrical wall of the pourer body and designed to sever if the device is tampered with.

[0006] Further improvements and advantages of the bottle closure device according to the invention will be made clear in the following description, which refers to the accompanying drawings in which some preferred embodiments of the invention are illustrated purely by way of example. In the drawings:

- Fig. 1 is a longitudinal section through the closure device according to the invention, locked in position in the mouth of a bottle;
- Fig. 2 shows the device shown in Fig. 1 with the dosure cap removed from the bottle mouth;
- Fig. 3 is a longitudinal section showing half of the pourer having the preferentially severable band in a first embodiment;
- Fig. 4 shows the pourer in a sectional view similar to that of Fig. 3 with a preferentially severable band in another embodiment;
- Fig. 5 is a longitudinal section through a pourer having a preferentially severable band in a third embodiment;
- Fig. 6 is a plan view, seen through the line A-A, of the pourer shown in Fig. 5.
- Fig 7 is a view, half in longitudinal section and half

in elevation, showing a modified embodiment of the closure device according to Figs. 1 and 2, before this device being applied to the mouth of the bottle. With particular reference to Figures 1 and 2, the closure device basically comprises a pourer unit 1, which is locked elastically and leaktightly inside the orifice 2 or 2A of the bottle 3, and an aluminium closure cap 4 with an inner stopper 5, which is screwed onto the neck of the bottle. The cap is provided in a known way with a guarantee collar 6 which will be torn when the bottle is opened for the first time.

[0007] In detail, the pourer unit 1 consists of two components made of elastic plastics material: a pourer 7 for pouring out the liquid and a tubular body 8, hereinafter termed the seal, which provides leaktightness and interconnects the parts.

[0008] The pourer 7 is specially shaped and comprises a middle part 9 and an outer cylindrical wall 10 that is locked elastically and leaktightly inside the seal 8. These parts are locked to each other by a snap connection between the two opposing lateral surfaces, one of which, for example the outer surface of the wall 10, has parallel annular projections or lips 11, while the other, namely the inner surface of the seal 8, has an equal number of parallel annular grooves or recesses 12.

[0009] The seal 8 in turn is also locked elastically and leaktightly inside the orifice 2 or 2A of the bottle, as explained below.

[0010] The pourer terminates at its outer end in a circular flange 13 which is clamped leaktightly against the rim of the bottle when the closure cap 4 is screwed down.

[0011] One very important aspect of the invention is that the cylindrical wall 10 of the pourer, at a point close to its connection with the flange 13, has an annular band or zone 14 designed to break when said flange or the middle part 9 of the pourer are tampered with by a turning or pulling or other illicit action.

[0012] The severable band 14 may be embodied in a variety of ways. It is essential that it consists of an annular wall whose thickness is less than that of the rest of the wall 10 so as to provide a weak zone that will tear readily in the event of the pourer's being forced.

[0013] The severing of the flange causes the pourer 7 to separate from the wall 10, which however remains locked inside the seal 2. The result of this is that as soon as any attempt is made to pour out the liquid, the pourer 7 falls out of the bottle.

[0014] As will be understood, the result of this is to discourage any attempt to tamper with the closure device, since any interference with the product would be clearly visible.

[0015] The antirefill function of the bottle is thus guaranteed with absolute certainty.

[0016] In Figures 1 to 3 the preferentially severable band 14 is formed by a rounded groove, i.e. its thickness decreases gradually towards the interior (see in particular Fig. 3).

[0017] In Fig. 4 the preferentially severable band 14A takes the form of a rectangular groove, while in Figures 5 and 6 it takes the form of a band 14B comprising a series of bridges, that is a succession of sectors of a circle of reduced thickness 15 and sectors of a circle of normal thickness 16.

[0018] The preferentially severable groove may also be triangular or may take the form of a suitable pre-incision.

[0019] Fig. 5 also shows that the wall 10 has an annular depression 12A instead of a lip for the snap connection with a corresponding annular projection, not shown, on the seal.

[0020] Another aspect of the invention is that the seal 8 is anchored elastically and leaktightly inside the orifice of the bottle by means of a plurality of parallel circular elastic flanges 17 which jam against the inside of the orifice.

[0021] In the rest condition the flanges 17 assume a laterally extended position, their edges only slightly raised, so that when the seal 8 is placed inside the mouth of the bottle the flanges bend (flex) upwards, thereby both preventing the liquid from escaping and locking the seal inside the bottle.

[0022] To improve this locking action, the orifice of the bottle may include a widening at an intermediate level, as indicated at 2A in Fig. 2.

[0023] A great advantage of the elastic flanges 17 is that with suitable shape and dimensions, it is possible to use the same pourer unit for closing bottles whose mouths are within a wide range of dimensions, thanks to the elasticity of the flanges which enable them to adopt the right curvature for the orifice of the bottle.

[0024] For example, using a seal with an external diameter of approximately 18 mm and four or five flanges extending approximately 2.5 to 3 mm outwards with a slight taper, it is possible to close standard bottles whose orifices vary between approximately 19 mm and 22 mm.

[0025] At the lower end of the seal 8 is a circular seat 18 on which the free stop means 19 of the valve, normally consisting of a ball, rests in normal rest conditions.

[0026] Furthermore, and also close to the lower end, the seal has radial walls or fins 20 whose function is to guide the movement of the stop means when the liquid is being poured.

[0027] Turning now to the pourer, it should be noted that its middle part 9 has a recess 21 shaped like an upturned cup, whose lower rim 22 forms a stop or check for the stop means 19, as Fig. 1 makes clear.

[0028] The purpose of the recess 21 is to catch at least some of the liquid as it flows into the mouth of the bottle as pouring begins, and so promote a steady outflow of the liquid over the flange 13.

[0029] In order to make this outflow possible, the pourer is provided with apertures 23 distributed at angular intervals all around the connecting wall to which the flange 13 is joined.

[0030] The closure device is completed by the cap 4, the wedge-shaped annular lip 24 of whose inner stopper 5 closes leaktightly on the flange 13 and squeezes it against the rim of the bottle.

[0031] The inner stopper 5 has a projecting inner cylindrical wall 25 whose edge catches under the top edge of the apertures 23 and in an annular groove, not shown, formed in the wall containing these apertures.

[0032] The purpose of the wall 25 is to keep the unit consisting of the pourer 7 and the seal 8 firmly anchored to the cap 4 and also to help to seal the liquid inside the bottle.

[0033] The cap 4, the inner stopper 5, the pourer 7 and the seal 8 constitute a pre-assembled unit which is mounted in the bottle orifice in a single step when the mouth is being closed.

[0034] At the same time a rotating tool clinches and threads the cap on the neck of the bottle.

[0035] At this point the bottle is dosed and to open it the cap must of course be screwed off, in which process the guarantee collar 6 will simultaneously be severed.

[0036] It will be clear from the above that the closure device according to the invention eliminates all the disadvantages and drawbacks of known devices.

[0037] It does this by providing an absolute guarantee of the bottle's being dosed, for any attempt to tamper with the structure in order illicitly to top up with a liquid will tear the specially severable band, allowing the pourer 7 to come loose and the stop means 19 of the bottle to escape when the liquid is poured out. It is also possible to use one and the same device for different mouths of standard bottles.

[0038] Lastly, thanks to the very small number of components and to its structural simplicity, the proposed device is both extremely inexpensive and functional for the uses for which the invention is intended.

[0039] Reference has been made to a closure system employing a valve with stop means 19, but it will be obvious that this part may be omitted without affecting the system's guarantees represented by the severing of the pourer if any attempt is made to tamper with it.

[0040] A variant of the system of fitting the device is to form the closure in two stages, by first inserting the pourer-seal unit 7-8 in the mouth of the bottle, and then applying the aluminium cap 4 with a seal differing in shape and material to that indicated for the inner stopper 5.

[0041] A quite advantageous characteristic of the closure device according to the invention resides in the fact that the inner stopper 5 which is preferentially made of plastics material having a certain elasticity, is provided with a peripheral conical flange designated by 26 in Fig. 7. This peripheral conical flange 26 extends radially outwardly with respect to the flange 13 and the pourer 7, and flares downwards. The aluminium dosure cap 4 is provided at a distance from the top thereof with an internal annular projection 27 which is made by suitably deforming radially the skirt of said cap 4. The peripheral conical flange 26 of the inner stopper 5 and the internal annular projection 27 in the aluminium closure cap 4 are appropriately dimensioned relative to each other, in such a manner that when the closure device is being assembled, the inner stopper 5 comes to be fitted into the cap 4, and the lower end edge of the peripheral conical flange 26 is caused, by being elastically compressed radially, to get over the internal annular projection 27 in the closure cap 4 and to be snappingly engaged with said projection 27. Thus, the peripheral flange 26 of the inner stopper 5 comes to be embedded in the aluminium closure cap 4 between the top and the internal annular projection thereof, so that the liquid pourer unit as a whole, which comprises the pourer 7 and the tubular body 8 with the valve stop means 19, is fastened by means of the inner stopper 5 to the interior of the aluminium closure cap 4. It is therefore possible to pre-assemble the closure device indipendently from a bottle, that is, to obtain a preassembled unit shown in Fig. 7, which can be handled and applied as such to the bottle mouth on dosing a bottle.

[0042] The pourer unit is similarly fastenable to the aluminium closure cap 4, so as to obtain a pre-assembled unit according to Fig. 7. Such a similar fastening, however having a lesser strength, can be effected even without the provision of the internal annular projection 27 in said cap 4, so that the inner stopper 5 is fitted with a light force into the aluminium closure cap 4, and a frictional embedding therein of the inner stopper 5 is obtained by taking advantage of the elastic radial compressibility of the preferentially conical flange 26 thereof.

Claims

1. Bottle closure device with a liquid pouring unit (1) locked elastically and leaktightly inside the bottle mouth and comprising an antirefilling valve, and with an aluminium closure cap (4) screwed onto the neck of the bottle by and locked to the neck of the bottle means of a pilfer proof guarantee collar (6), and in which the liquid pouring unit (1) comprises:

   a) a tubular body (8) which contains a movable valve closure member (19) and is provided at its lower end with a seat (18) for this valve closure member, while its outer surface is designed to lock the tubular body (8) in the orifice of the bottle (3) and to form an elastic leaktight connection with the inner surface of the orifice of the bottle,

   b) a pourer body (7), which comprises a cylindrical wall (10) and is locked with this cylindrical wall (10) elastically and leaktightly inside the tubular body (8) by means of a snap pourer body (7) being provided with apertures (23), through which the liquid can be poured out,

c) a shaped middle part (9) of the pourer body (7) projecting toward the underlying movable closure member (19) and forming a stop for this valve closure member (19),
d) the pourer body (7) being provided on its outside with a circular flange (13), which is clamped leaktightly against the rim of the bottle (3) when the closure cap (24) is screwed down,
e) the closure cap (4) being provided with an inner stopper (5) which has a circular flange (24) which presses leaktightly against the underlying flange (13) of the pourer body (7),
f) the inner stopper (5) of the closure cap (4) being made of plastics material having some elasticity and being provided with a peripheral flange (26) which is elastically compressible in the radial direction and co-operates with the closure cap (4) to restrain the stopper (5) to the closure cap (4),

characterised by the combination of the following features:

g) the inner stopper (5) has an inner cylindrical wall (25) which snaps elastically into engagement with the pourer body (7),
h) the peripheral flange (26) of the inner stopper (5) is conically shaped and flares downwards,
i) the shaped, downwardly projecting middle part (9) of the pourer body (7) has a recess (21) shaped like an upturned cup that joins on the outside with the circular flange (13) via a wall containing the apertures (23) through which the liquid can be poured out, while the lower rim (22) of said recess forms the stop for the movable valve closure member (19),
j) an annular frangible band (14, 14A, 14B) provided in the cylindrical wall (10) of the pourer body and designed to sever if the device is tampered with.

2. Bottle closure device according to claim 1, **characterised in that** the annular severable band (14, 14A, 14B) of the cylindrical wall (10) of the pourer body (7) is formed by a thickness which is less than that of said wall.

3. Bottle closure device according to claim 2, **characterised in that** the lesser thickness of the annular band is formed by a continuous recess.

4. Bottle closure device according to claim 3, **characterised in that** the form of the recess is rectangular or curved or tapering or a combination.

5. Bottle closure device according to claim 1, **characterised in that** the severable band (14, 14A, 14B) of the cylindrical wall (10) of the pourer body (7) is formed by pre-incision.

Patentansprüche

1. Flaschenverschluss mit einer im Innern des Flaschenmundes elastisch und auf abdichtende Weise festgepresste Flüssigkeitsgießeinheit (1), welche ein Ventil zum Verhindern des Nachfüllens umfasst, und mit einer Aluminiumverschlusskappe (4), die auf den Hals der Flasche geschraubt und gegen den Hals der Flasche mittels eines einbruchsicheren Garantiekragens (6) festgepresst wird, und in welchem die Flüssigkeitsgießeinheit (1) umfasst:

a) einen rohrförmigen Körper (8), welcher ein bewegliches Ventilschließteil (19) enthält und an seinem unteren Ende mit einem Sitz (18) für dieses Ventilschließteil ausgestattet ist, während die Außenfläche dergestalt ausgelegt ist, dass sie den rohrförmigen Körper (8) in der Öffnung der Flasche (3) festpresst und eine elastische abdichtende Verbindung mit der Innenfläche der Flaschenöffnung bildet;
b) einen Gießkörper (7), welcher eine zylinderförmige Wandung (10) umfasst und mit dieser zylinderförmigen Wandung (10) elastisch und dicht im Innern des rohrförmigen Körpers (8) mittels eines schnappenden Gießkörpers (7) festgepresst ist, welcher mit Öffnungen (23) versehen ist, durch welche die Flüssigkeit ausgegossen werden kann;
c) einen besonders gestalteten Mittelteil (9) des Gießkörpers (7), welcher in Richtung auf das darunterliegende bewegliche Verschlussteil (19) zeigt und einen Anschlag für dieses Ventilschließteil (19) bildet;
d) den Gießkörper (7), der auf seiner Außenseite mit einem kreisförmigen Flansch (13) versehen ist, welcher dicht gegen den Rand der Flasche (3) geklemmt wird, wenn die Verschlusskappe (24) festgeschraubt wird;
e) die Verschlusskappe (4), die mit einem inneren Stöpsel (5) versehen ist, welcher einen kreisförmigen Flansch(24) aufweist, der dicht gegen den darunter liegenden Flansch (13) des Gießkörpers (7) drückt;
e) den inneren Stöpsel (5) der Verschlusskappe (4), der aus einem eine gewisse Elastizität aufweisenden Kunststoff besteht und mit einem umfänglichen Flansch (26) versehen ist, welcher in radialer Richtung elastisch komprimierbar ist und mit der Verschlusskappe (4) zusammenwirkt, um den Stöpsel (5) an der Verschlusskappe (4) zurückzuhalten,

gekennzeichnet durch die folgenden Merkmale:

g) der innere Stöpsel (5) hat eine innere zylinderförmige Wandung (25), welche elastisch in eine Verbindung mit dem Gießkörper (7) ein-

schnappt,

h) der umfängliche Flansch (26) des inneren Stöpsels (5) ist kegelförmig gestaltet und zeigt nach unten;

i) der besonders gestaltete, nach unten ragende Mittelteil (9) des Gießkörpers (7) hat eine Vertiefung (21), der wie eine umgestülpte Tasse geformt ist, welche an der Außenseite mit dem kreisförmigen Flansch (13) über eine Wandung angefügt ist, welche die Öffnungen (23) enthält, **durch** welche die Flüssigkeit ausgegossen werden kann, während der untere Rand (22) der besagten Vertiefung den Anschlag für den beweglichen Ventilschließteil (19) bildet;

j) ein ringförmiges, zerbrechliches Band (14, 14A, 14B), welches in der zylinderförmigen Wand (10) der Gießkörpers enthalten ist und so ausgelegt ist, dass es reißt, wenn sich jemand an der Vorrichtung zu schaffen macht.

2. Flaschenverschluss nach Anspruch 1, **dadurch gekennzeichnet, dass** das ringförmige zerreißbare Band (14, 14A, 14B) der zylinderförmigen Wandung (10) des Gießkörpers (7) mit einer Stärke ausgebildet ist, die geringer als die der besagten Wandung ist.

3. Flaschenverschluss nach Anspruch 2, **dadurch gekennzeichnet, dass** die geringere Stärke des ringförmigen Bandes durch eine durchgehende Vertiefung ausgebildet ist.

4. Flaschenverschluss nach Anspruch 3 **dadurch gekennzeichnet, dass** die Form der Vertiefung rechteckförmig oder gekrümmt oder sich verjüngend oder eine Kombination aus diesen Formen ist.

5. Flaschenverschluss nach Anspruch 1, **dadurch gekennzeichnet, dass** das zerreißbare Band (14, 14A, 14B) der zylinde4rförmigen Wand (10) des Gießkörpers (7) durch vorheriges Einschneiden erzeugt wird.

Revendications

1. Dispositif de bouchage de bouteille muni d'une unité de versement de liquide (1) verrouillée de manière élastique et étanche à l'intérieur de la bouche de la bouteille et comprenant une soupape s'opposant à un nouveau remplissage, un bouchon de fermeture en aluminium (4) étant vissé sur le goulot de la bouteille et bloqué sur le goulot de la bouteille au moyen d'une bague de garantie anti-fraude ou d'inviolabilité (6), et dans lequel l'unité de versement de liquide (1) comprend :

a) un corps tubulaire (8) qui contient un élément de fermeture de soupape mobile (19) et est muni à son extrémité inférieure d'un siège (18) destiné à cet élément de fermeture de soupape, alors que sa surface extérieure est conçue pour bloquer le corps tubulaire (8) dans l'orifice de la bouteille (3) et pour former un raccord étanche élastique avec la surface intérieure de l'orifice de la bouteille,

b) un corps verseur (7), qui comprend une paroi cylindrique (10) et est bloqué avec cette paroi cylindrique (10) de façon élastique et étanche à l'intérieur du corps tubulaire (8) au moyen d'un corps verseur encliquetable (7) qui est muni d'ouvertures (23) au travers desquelles le liquide peut être versé,

c) une pièce centrale profilée (9) du corps verseur (7) faisant saillie vers l'élément de fermeture mobile sous-jacent (19) et formant une butée pour cet élément de fermeture de soupape (19),

d) le corps verseur (7) étant muni à l'extérieur d'un rebord circulaire (13), qui est serré de façon étanche contre le bord de la bouteille (3) lorsque le bouchon de fermeture (4) est vissé,

e) le bouchon de fermeture (4) étant muni d'une butée intérieure (5) qui présente un rebord circulaire (24) qui presse de façon étanche contre le rebord sous-jacent (13) du corps verseur (7),

f) la butée intérieure (5) du bouchon de fermeture (4) étant faite de matière plastique présentant une certaine élasticité et étant munie d'un rebord périphérique (26) qui peut être élastiquement comprimé dans la direction radiale et coopère avec le bouchon de fermeture (4) pour retenir la butée (5) sur le bouchon de fermeture (4),

caractérisé par la combinaison des caractéristiques suivantes :

g) la butée intérieure (5) présente une paroi cylindrique intérieure (25) qui s'encliquette élastiquement en prise avec le corps verseur (7),

h) le rebord périphérique (26) de la butée intérieure (5) est de forme conique et évasée vers le bas,

i) la partie centrale profilée faisant saillie vers le bas (9) du corps verseur (7) comporte un évidement (21) en forme de godet retourné qui rejoint à l'extérieur le rebord circulaire (13) par l'intermédiaire d'une paroi contenant les ouvertures (23) au travers desquelles le liquide peut être versé, alors que le bord inférieur (22) dudit évidement forme la butée pour l'élément de fermeture de soupape mobile (19),

j) une bande cassante annulaire (14, 14A, 14B) disposée dans la paroi cylindrique (10) du

corps verseur et conçue pour se détacher si le dispositif est violé.

2. Dispositif de bouchage de bouteille selon la revendication 1, **caractérisé en ce que** la bande annulaire pouvant être détachée (14, 14A, 14B) de la paroi cylindrique (10) du corps verseur (7) est formée avec une épaisseur qui est inférieure à celle de ladite paroi.

3. Dispositif de bouchage de bouteille selon la revendication 2, **caractérisé en ce que** l'épaisseur inférieure de la bande annulaire est formée d'un évidement continu.

4. Dispositif de bouchage de bouteille selon la revendication 3, **caractérisé en ce que** la forme de l'évidement est rectangulaire ou incurvée ou conique ou une combinaison de celles-ci.

5. Dispositif de bouchage de bouteille selon la revendication 1, **caractérisé en ce que** la bande pouvant être détachée (14, 14A, 14B) de la paroi cylindrique (10) du corps verseur (7) est formée par une incision préalable.

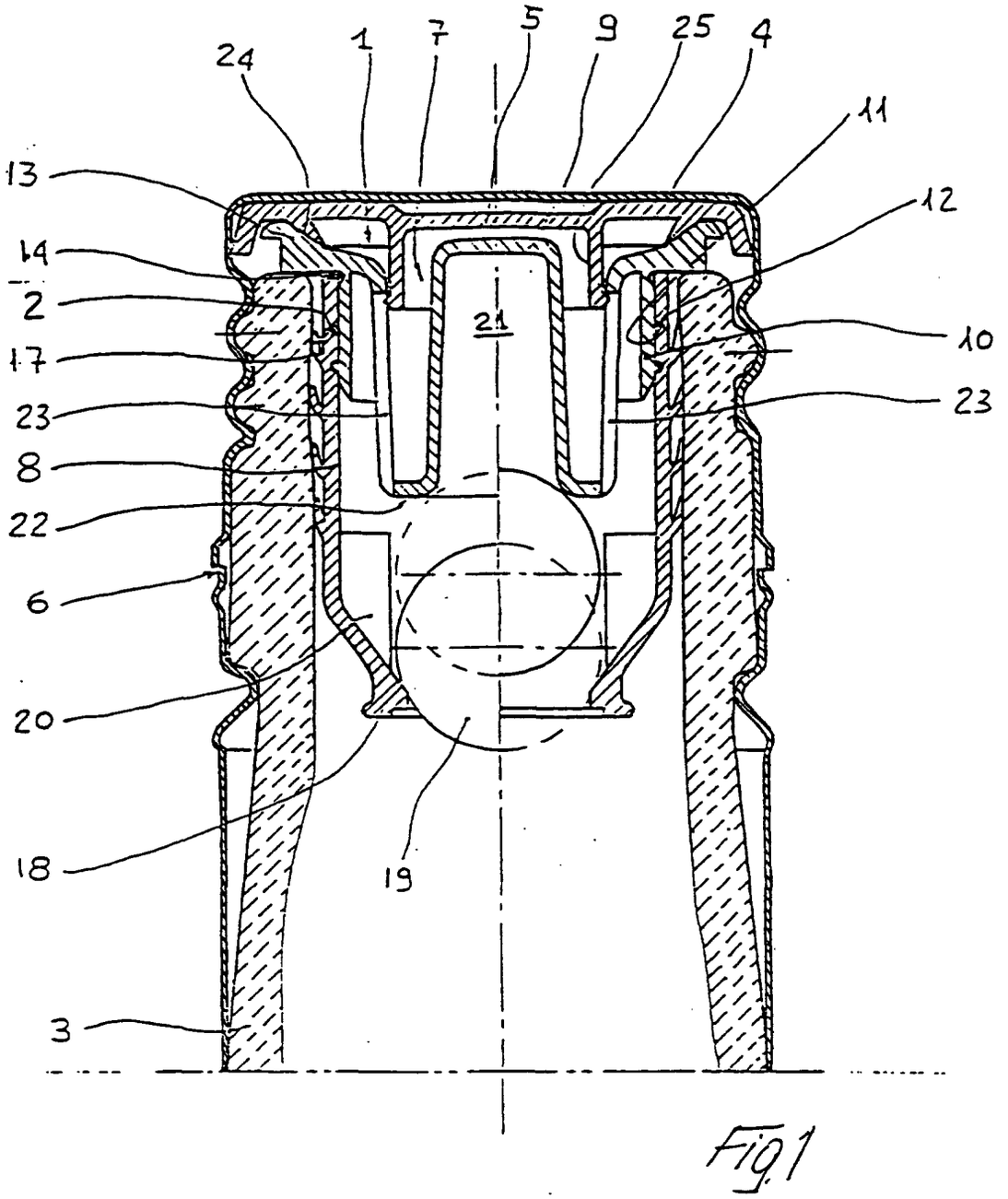

Fig.1

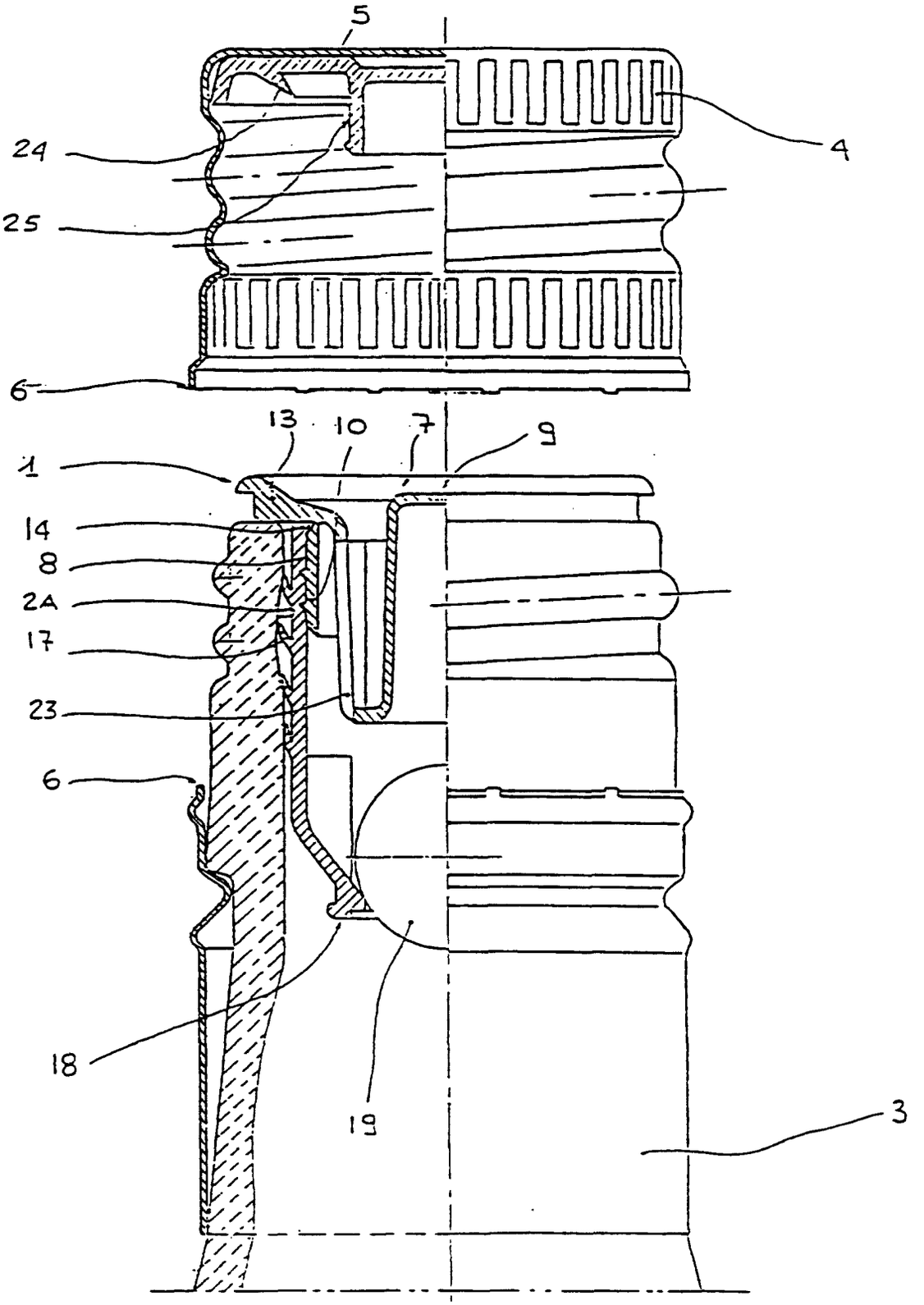

Fig. 2

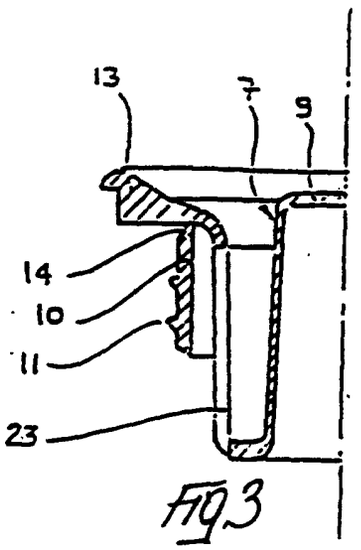

Fig.3

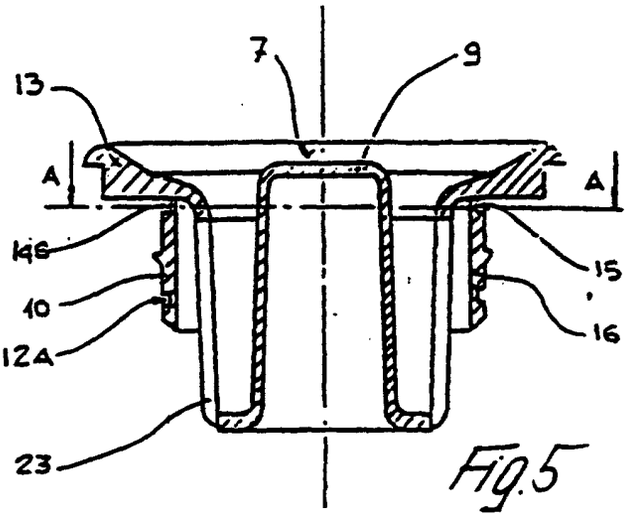

Fig.5

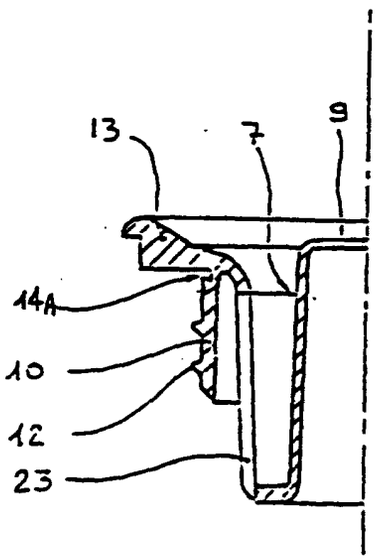

Fig.4

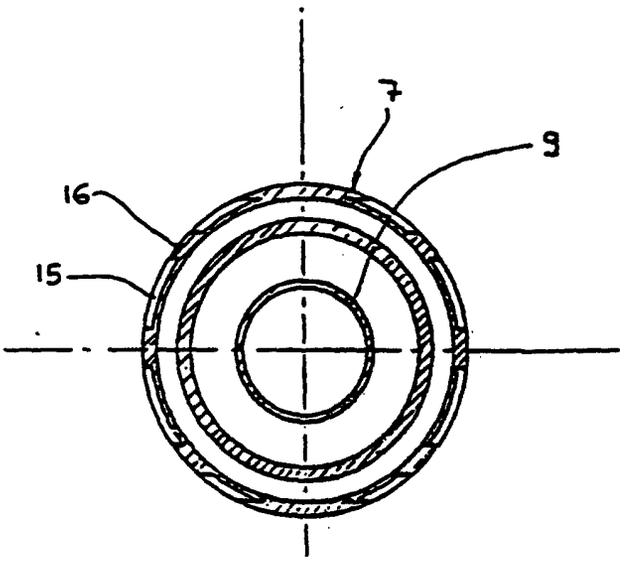

Fig.6

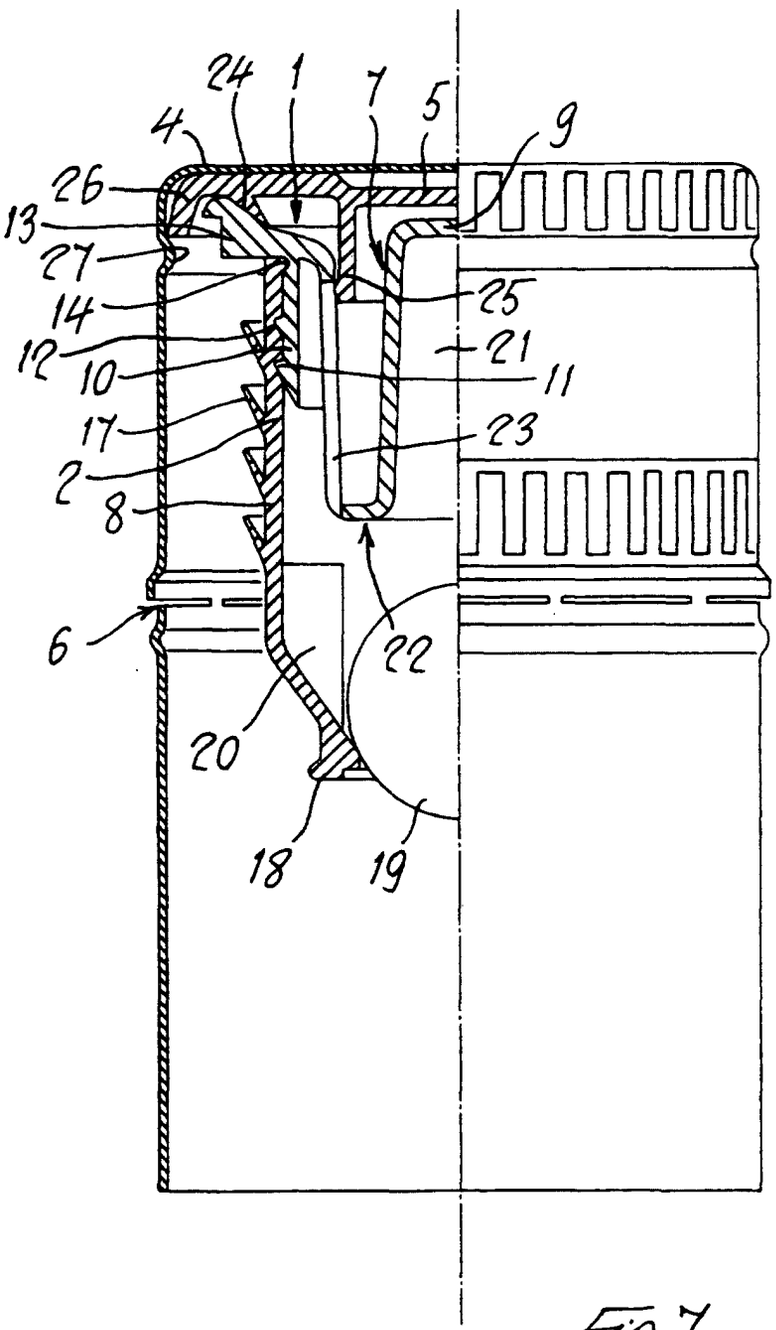

Fig. 7