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(54) **Crown cap**

(57) A crown cap, of the type made up of a metal cap (2), for example made of steel or aluminium, provided with a seamed edge (3) and a gasket (4) possibly provided with the so-called "bidule" or stopper (5). Such

crown cap (1) is characterised in that the gasket (4) is provided with an annular appendage (10), made of flexible material, fixed on the outer profile whose length upon seaming is such as to be inserted between the metal cap and neck of the bottle.

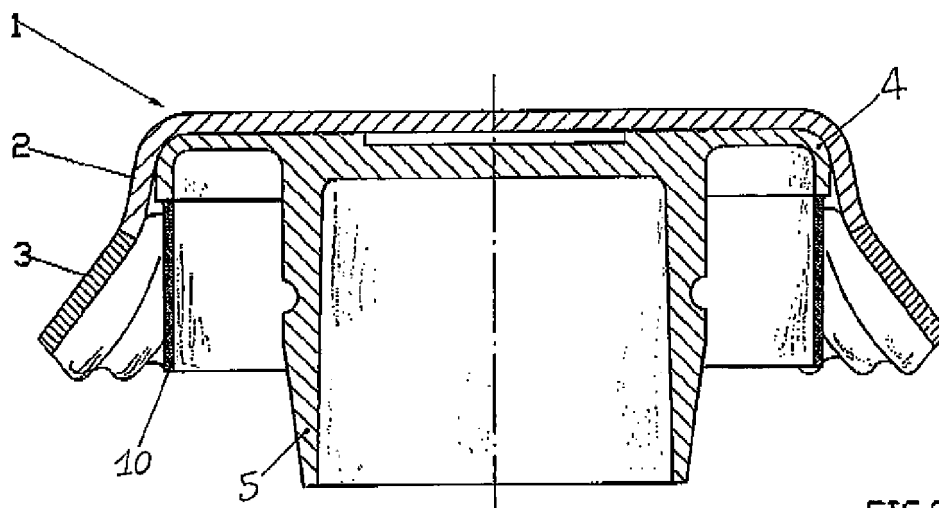


FIG.2

Description

[0001] The present invention regards an improved crown cap, according to the general part of claim 1.

[0002] As well known, the crown cap is constituted by a metal cap capable of being seamed to the mouth of a bottle; sealing to prevent the exit of the liquids or gas contained in the abovementioned bottle is provided for by a gasket, substantially flat or even provided with a central projection, which is fitted into the neck of the bottle, the so-called "bidule".

[0003] The gasket, simultaneously elastic and impermeable, positioned beneath the inner metal of the cap, through the operation of fixing a crown capsule is suitably compressed so as to perfectly adapt to the micro-channels present on the tip of the bottle, sealing it hermetically.

[0004] The crown cap is withheld on the neck of the bottle through the "seam-configured" annular edge thereof, which is seamed on the end part of the neck of the bottle, at the toroidal end portion and the underlying annular groove.

[0005] During actual application, the metal portion constituting the annular edge of the cap is constantly arranged at contact with the glass portion constituting the neck of the bottle and this implies the drawback related to the fact said metal part, in presence of a moist atmosphere, forms rust which might contaminate the bottled product when pouring; preventing the occurrence of such drawback requires using standard and economic caps made of tinplate and using - vice versa - steel caps which are obviously more costly.

[0006] A further drawback lies in the fact that during the seaming operation, in the area of contact of the metal with the glass, the glass may be subjected to micro-traumas which determine cracks with formation of glass microparticles which, upon opening, in particular during pouring come to contact and mix with the liquid product.

[0007] An object of the present invention is to provide a crown cap capable of overcoming such drawback and simultaneously increasing the sealing of the cap on the side edge of the neck of the bottle.

[0008] Such object is attained by providing a crown cap in which the sealing gasket is provided with an annular appendage which, through the seaming operation, is inserted between the metal portion and the glass portion, adapting to the profile of the mutual contact area.

[0009] The invention will be defined further through the description of a possible embodiment thereof provided solely by way of non-limiting example, with the reference to the attached drawings, wherein:

- figure 1 represents the cross-section of a gasket with "bidules", provided with the appendage according to the invention,
- figure 2 represents the cross-section of a crown cap according to the invention
- figure 3 represents the cross-section of a crown cap according to the invention fixed to a bottle.

[0010] As observable in figures 1 and 2 the crown cap according to the invention, indicated in its entirety with reference number 1, is constituted by a metal cap 2, made of steel or aluminium, provided with a seamed edge 3 and by the gasket provided with the "bidule" 5, the entirety being per se known.

[0011] As observable in figure 1, the gasket 4 is provided with an annular appendage 10, made of flexible material, fixed to the outer profile and having length, upon seaming, such to be inserted between the metal cap and neck of the bottle. Specifically, as observable in figure 3, the annular appendage 10, when the crown cap 1 is seamed, adheres to the glass surface at the toroidal ring 11 and the groove 12 of the neck of the bottle and prevents contact with the metal part of the edge 3.

[0012] Laboratory tests confirmed that a material particularly suitable for providing the appendage 10 is constituted by metallocene-based polyethylene-octene which, with respect to standard polyethylene, is more neutral and thus further preserves the overall properties of the bottled product, maintains a considerable elasticity over a long period of time, even at low temperatures and increases the sealing of the cap on the side edge of the bottle.

[0013] Obviously, embodiments different from the one described above can be provided for without departing from the scope of protection of the claims outlined hereinafter.

Claims

1. IMPROVED CROWN CAP, of the type made up of a metal cap (2), for example made of steel or aluminium, provided with a seamed edge (3) and a gasket (4) possibly provided with the so-called "bidule" (5), said crown cap (1) being **characterised in that** the gasket (4) is provided with an annular appendage (10), made of flexible material, fixed on the outer profile whose length upon seaming is such to be inserted between the metal cap and neck of the bottle.
2. CROWN CAP (1) according to claim 1, **characterised in that** the annular appendage (10), when the crown cap is seamed, adheres to the glass surface at the toroidal ring (11) and the groove (12) of the neck of the bottle and prevents contact between the glass portion and the metal part of the edge (3).
3. CROWN CAP (1) according to claim 1, **characterised in that** the annular appendage (10), is made of metallocene- based polyethylene-octene.
4. GASKET, to be inserted into a crown cap, possibly provided with a bidule (5), **characterised in that** it has an annular appendage (10), made of flexible material, fixed on the outer profile.

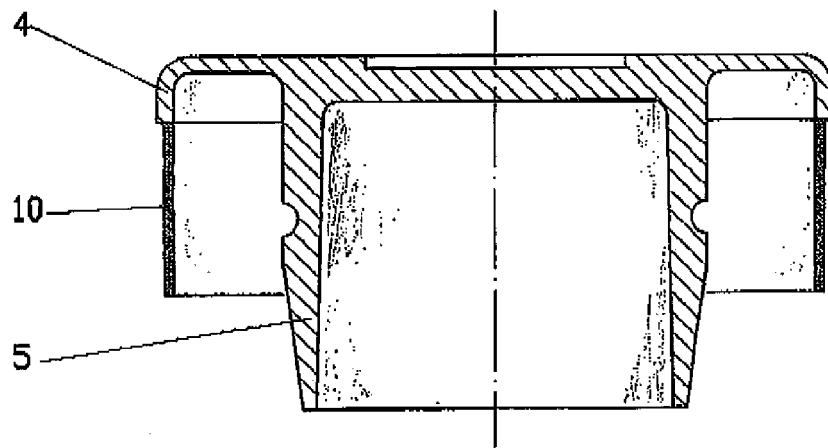


FIG.1

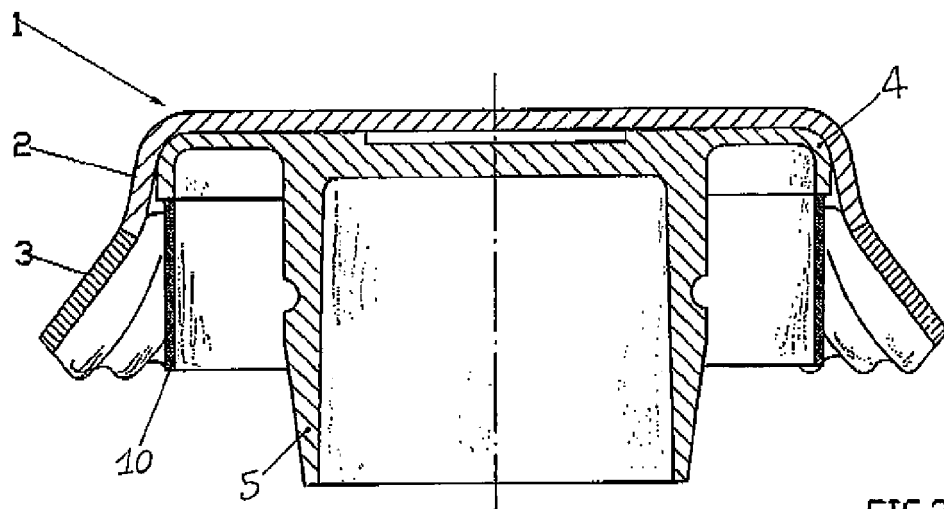


FIG.2

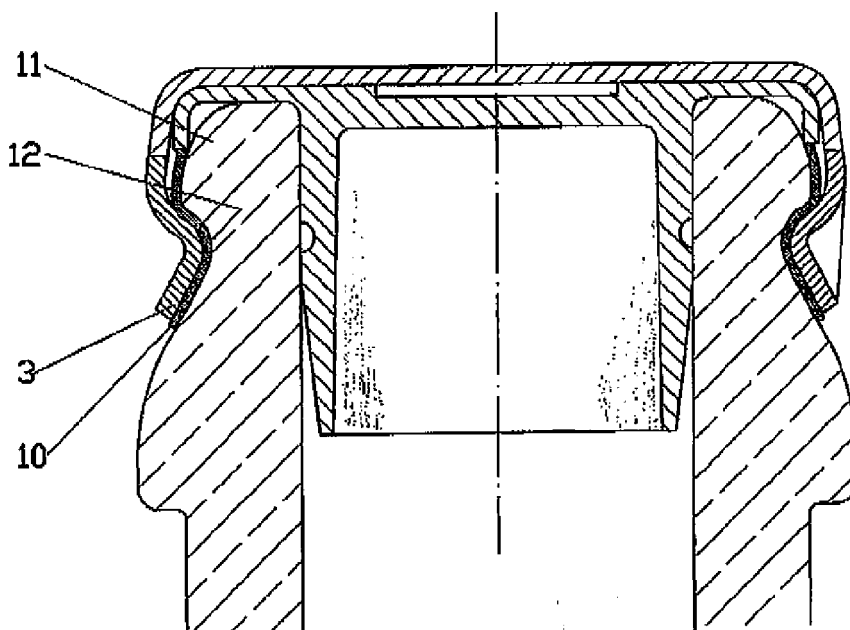


FIG.3



EUROPEAN SEARCH REPORT

Application Number
EP 11 16 6443

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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Y	US 2004/192847 A1 (AJBANI MANOJ [US] ET AL) 30 September 2004 (2004-09-30) * page 2, paragraph 22 - paragraph 24 * * page 6, paragraph 68 - page 7, paragraph 70; figures 2-9 *	3	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			B65D
Place of search		Date of completion of the search	Examiner
The Hague		21 July 2011	Newell, Philip
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

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

EP 11 16 6443

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
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