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(11) **EP 2 586 721 A1**

(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
01.05.2013 Bulletin 2013/18

(51) Int Cl.:
B65D 41/34 *(2006.01)*

(21) Application number: **12189474.5**

(22) Date of filing: **22.10.2012**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME

(30) Priority: **24.10.2011 IT MI20111912**

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(54) **Cap, particularly for bottles and the like**

(57) A cap (1), particularly for bottles and the like, comprising a cap body (2) and a ring (7) which is adapted to reveal, with its separation from the body (2) of the cap, evidence of any opening of the cap, its particularity residing in that the ring (7) is provided with at least one wing (8) which can be folded toward the inside of the body (2) of the cap.

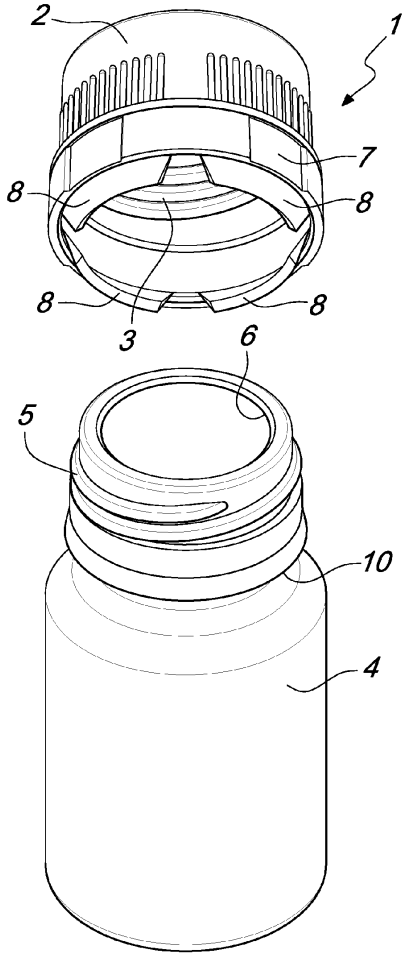

Fig. 1

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Description

[0001] The present invention relates to a screw cap, particularly for bottles and the like. More particularly, the invention relates to a tamper-resistant cap, particularly for bottles and the like.

[0002] As is known, tamper-resistant caps are commercially available which allow the user, once applied to the bottle that needs to be closed, to verify that the bottle has not been opened before.

[0003] Caps of the known type are provided in two components, with a ring adapted to provide evidence of any opening of the cap, which is sealed with ultrasounds or in any case provided as a separate body with respect to the cap body. The screwing of the cap on the bottle or the like causes the ring, during opening, to separate from the cap body, because it is connected to the latter by thin stems, so that the evidence of the opening is immediate and therefore the user can realize whether the bottle has been opened already or not.

[0004] The caps described above have the drawback that they are provided in two components, the cap body and the tamper-resistant ring, which must then be mutually coupled by virtue of some convenient method.

[0005] Moreover, since the bottles on which the caps described above must be applied are made mainly of glass or other material, and since the manufacturing tolerances of said bottles do not ensure a perfect symmetry of the bottle with respect to its axis that passes through the center, the cap, once applied on the bottle, might not have an optimum seal due to the irregularity of the mouth of the bottle.

[0006] Even a difference of a few tenths of a millimeter of one part with respect to the other part that is diametrically opposite to the first one causes the cap that must be screwed onto the bottle to have a less than optimum retention and above all entails that the rotation of the cap can occur without the tamper-resistant ring breaking, thus thwarting its function.

[0007] The aim of the present invention is to provide a cap, particularly for bottles and the like, that allows a reduction of manufacturing times.

[0008] Within the scope of this aim, an object of the present invention is to provide a cap, particularly for bottles and the like, that does not allow the cap to be rotated without the tamper-resistant ring separating from the cap body.

[0009] Another object of the present invention is to provide a cap, particularly for bottles and the like, that makes it possible to render evident any unauthorized opening.

[0010] Another object of the present invention is to provide a cap, particularly for bottles and the like, that is highly reliable, relatively easy to provide and has competitive costs.

[0011] This aim and these and other objects that will become more apparent hereinafter are achieved by a cap, particularly for bottles and the like, comprising a cap body and a ring which is adapted to reveal, with its separation from the body of the cap, evidence of any opening of the cap, **characterized in that** said ring is provided with at least one wing which can be folded toward the inside of the body of said cap.

[0012] Further characteristics and advantages of the invention will become more apparent from the description of a preferred but not exclusive embodiment of the cap according to the present invention, illustrated by way of non-limiting example in the accompanying drawings, wherein:

Figure 1 is a perspective view of the cap according to the invention and of a bottle to which the cap must be applied, with the cap in a first operational configuration;

Figure 2 is a perspective view of the cap according to the invention and of the bottle to which the cap must be applied, in a second operational configuration;

Figure 3 is a perspective view of the cap applied to a bottle;

Figure 4 is a sectional view, taken along the plane IV-IV, of the cap according to the invention applied to a bottle.

[0013] With reference to the figures, the cap according to the invention, generally designated by the reference numeral 1, comprises a cap body 2 provided internally with a thread 3, which allows to apply the cap on a bottle 4 also provided with a thread 5 at its mouth 6.

[0014] Conveniently, the cap 1 has a ring adapted to allow to verify the integrity of the cap screwed on the bottle and therefore to ascertain any unauthorized opening. The ring, designated by the reference numeral 7, is provided conveniently monolithically with the cap body 2 and in this manner the provision of the cap and of the corresponding ring is simplified, because the times for the coupling of the ring to the corresponding cap are eliminated since it is all provided monolithically.

[0015] Advantageously, the ring is provided with at least one wing 8 which can be folded and preferably with a plurality of wings 8 arranged in a circumferential manner along the ring and adapted to be folded inward, as shown in Figure 2 and in Figure 4, before the cap is screwed onto the thread 5 of the bottle 4. The wings 8, which can be folded inward, allow the cap, once it has been screwed, not to be removed, because the wings 8 engage against the shoulder 10 constituted by the neck of the bottle 4.

[0016] The wings therefore allow, once folded, to lock the ring 7, and therefore the cap body 2 jointly connected thereto, to the bottle, allowing the rotation of the cap body 2 and therefore the breakage of the ring 7 with its consequent separation from the cap body 2, without the possibility of relative movement between the ring and the bottle 4.

[0017] In practice it has been found that the cap according to the present invention fully achieves the intend-

ed aim and objects, since it can be provided monolithically and at the same time it allows optimum retention against the neck of the bottle to which it must be applied, so as to allow to open the cap and to break the connections between the cap body and the tamper-resistant ring and therefore ensuring that the user has the certainty that the cap has not been opened in advance without authorization.

[0018] The cap thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the accompanying claims.

[0019] Thus, for example, it is possible to provide a cap in which the upper surface is perforated and adapted to accommodate a pipette for withdrawing liquid that can be contained inside the bottle.

[0020] Moreover, all the details may be replaced with other technically equivalent elements.

[0021] In practice, the materials used, as well as the contingent shapes and dimensions, may be any according to the requirements and the state of the art.

[0022] The content of Italian Patent Application No. MI2011A001912, from which this application claims priority, is incorporated herein by reference.

[0023] Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. A cap (1), particularly for bottles and the like, comprising a cap body (2) and a ring (7) which is adapted to reveal, with its separation from the body (2) of the cap, evidence of any opening of the cap, **characterized in that** said ring (7) is provided with at least one wing (8) which can be folded toward the inside of the body (2) of said cap.

2. The cap according to claim 1, **characterized in that** said ring (7) and said body (2) of the cap are provided monolithically.

3. The cap according to claim 2, **characterized in that** it comprises a plurality of wings (8) which can be folded toward the inside of the body (2) of said cap, said wings being adapted to engage against a shoulder (10) of the neck of a bottle (4) to which the cap must be screwed.

4. The cap according to one or more of the preceding claims, **characterized in that** it comprises an internal thread (3) that is adapted to mate with a thread provided on the neck of said bottle.

5. The cap according to one or more of the preceding claims, **characterized in that** said ring (7) can be separated from said body (2) of the cap following an action of turning said cap body (2) with respect to said bottle (4), in order to unscrew said cap and open the bottle.

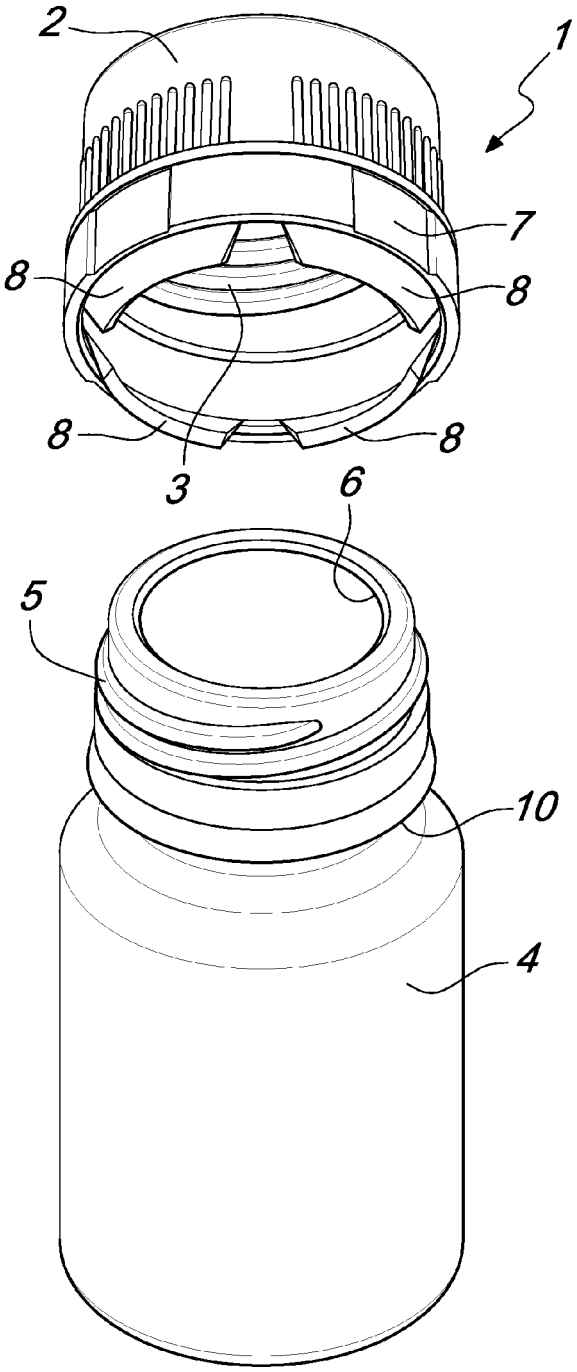

Fig. 1

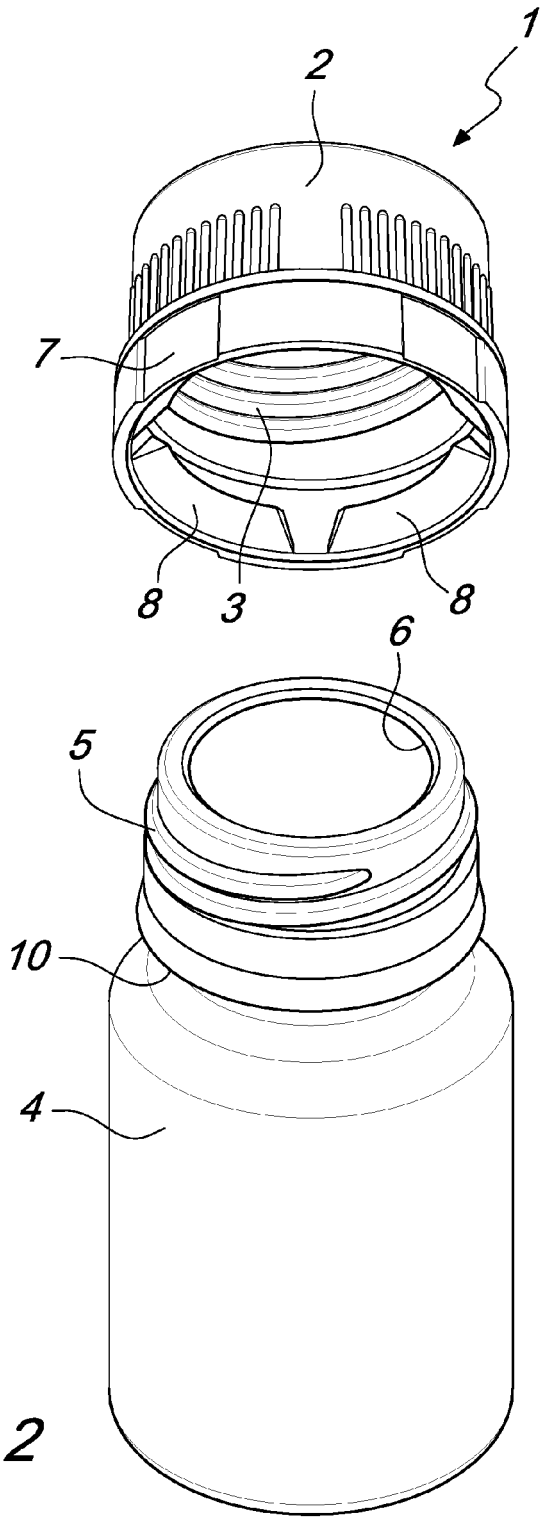

Fig. 2

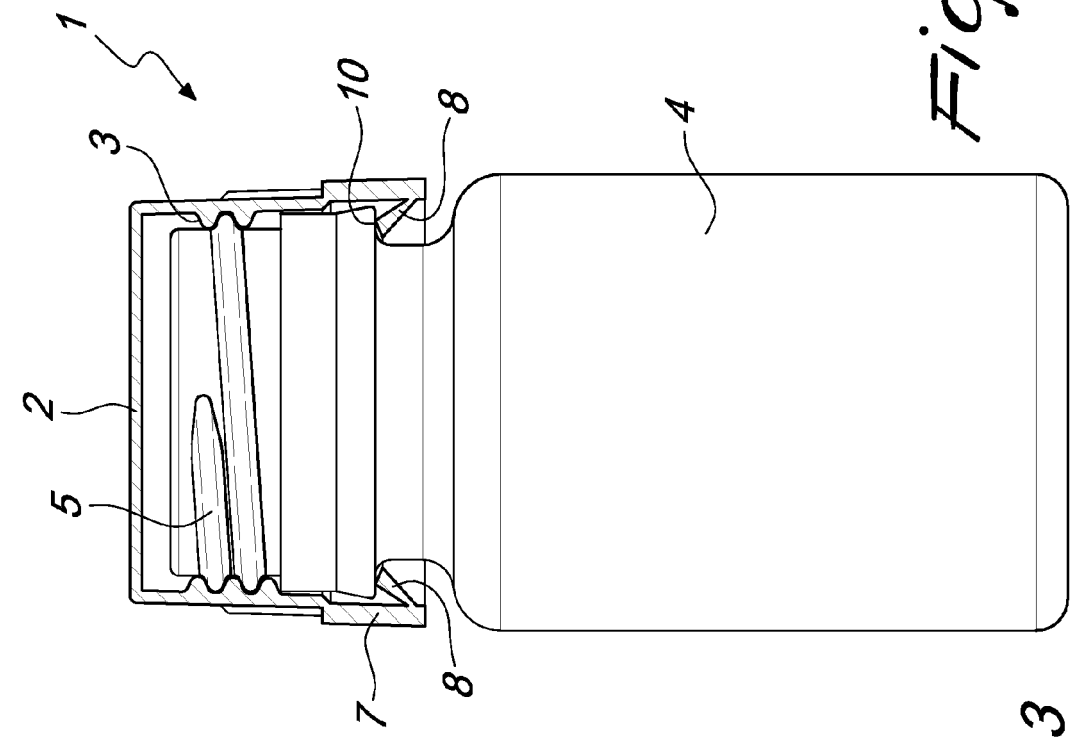

Fig. 4

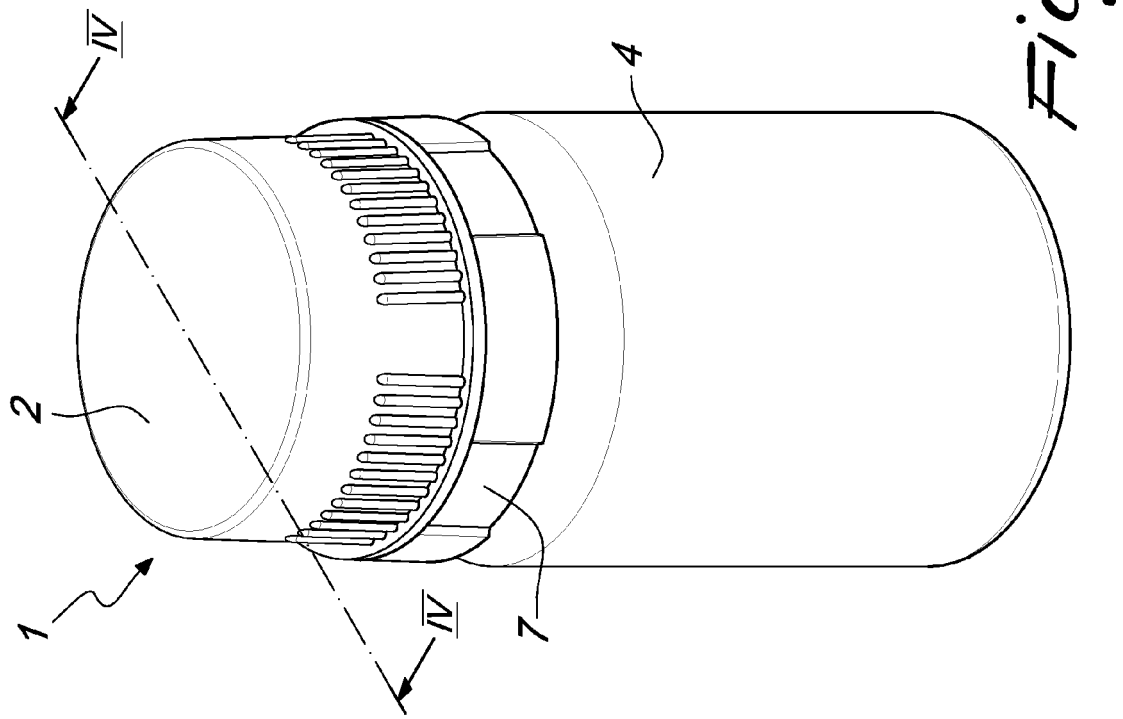

Fig. 3

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EUROPEAN SEARCH REPORT

Application Number
EP 12 18 9474

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	30 January 2013	Leijten, René

CATEGORY OF CITED DOCUMENTS

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REFERENCES CITED IN THE DESCRIPTION

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