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(54) **Container cap**

(57) The container cap (1) comprises a body (2) presenting an inner side facing said container (4), an outer

side and a chamber (7) presenting an access aperture (8) facing the outer side of the cap (1) and able to contain a product, so rendering it accessible from the outside.

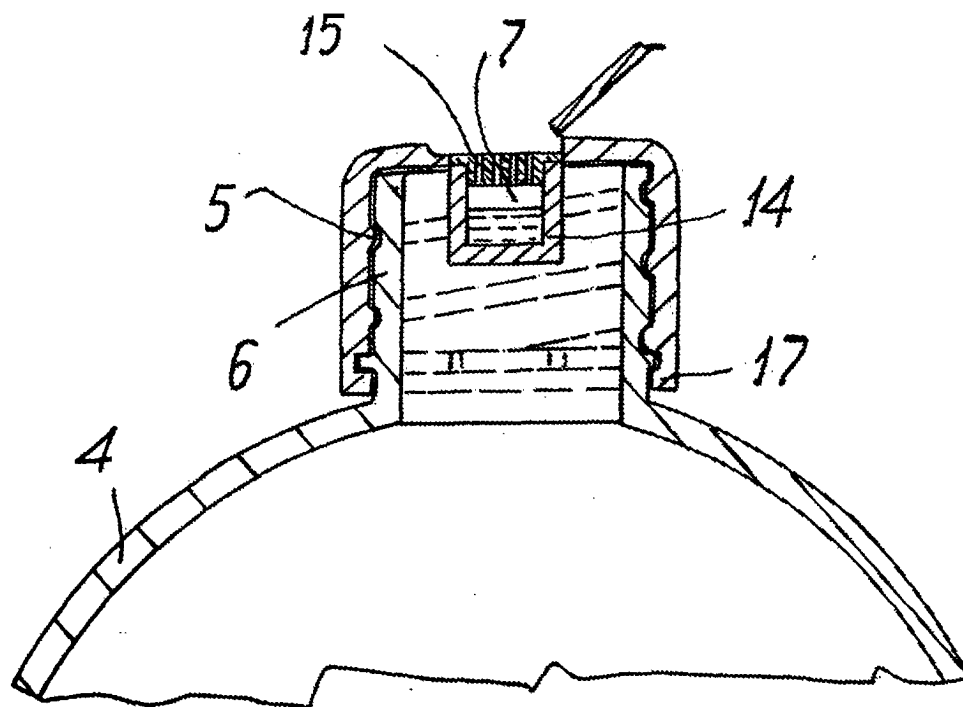


FIG. 5

Description

[0001] The present invention relates to a container cap.

[0002] In particular, reference will be made hereinafter to caps for containers of quality products, such as bubble bath, shampoo, creams of various types, detergents, wax, etc.

[0003] The products of the indicated type are known to be marketed in containers usually in the form of plastic bottles.

[0004] The neck of the bottle is closed by a cap which is screwed onto the bottle neck.

[0005] The cap is usually without a security seal or other member which prevents the bottle being opened, but instead is usually left free of obstacles in order to enable it to be opened in the shop, so that the possible purchaser is able to test the fragrance, colour or other characteristics of the product prior to its purchase.

[0006] However, this now widespread habit is not without risk.

[0007] A purchaser can for example open a container and use at least part of its contained product or pour it away.

[0008] This fact is most unwelcome by the consumer because it means that a partly empty container is purchased, and also by the shopkeeper (in particular of supermarkets) because it means that the shop has to be monitored to prevent this happening, with the products on sale being periodically checked and those which have been partly emptied then being removed.

[0009] Moreover, a further drawback is that a customer, after opening a container, could add a harmful product to the contained product; in extreme cases the container contents could even be replaced. For example, a floor wax container could be filled with a product which would stain the floor on use, with all the consequent damage which this would entail.

[0010] The technical aim of the present invention is therefore to provide a container cap by which the stated technical problems of the known art are eliminated.

[0011] Within the scope of this technical aim, an object of the invention is to provide a cap which cannot be opened before purchase, for example because the cap is provided with a security seal which clearly displays any opening prior to purchase, but at the same time allows testing of the fragrance and/or the colour and/or other characteristics of the product contained in the container to which said cap is applied.

[0012] Another object of the invention is to provide a cap which prevents a customer being able to at least partly pour away the contents of a container prior to its sale.

[0013] A further object of the invention is to provide a cap which prevents a customer being able to insert a product into a container on sale (in particular a harmful product, but not necessarily so) by adding it to, or replacing, the container contents.

[0014] The technical aim, together with these and other objects, are attained according to the present invention by a container cap comprising a body presenting an inner side facing said container and an outer side, characterised by comprising a chamber presenting an access aperture facing said outer side of said cap and able to contain a product which is rendered accessible from the outside.

[0015] Other characteristics of the present invention are defined in the subsequent claims.

[0016] Advantageously the cap of the present invention can also be used as a room deodorant.

[0017] Further characteristics and advantages of the invention will be more apparent from the description of a preferred but non-exclusive embodiment of the container cap according to the invention, illustrated by way of non-limiting example in the accompanying drawings, in which:

Figures 1 and 2 show a first embodiment of the cap of the invention, with an internal chamber closed and open respectively;

Figures 3 and 4 show a second embodiment of the cap of the invention, with the internal chamber closed and open respectively;

Figure 5 shows the cap of the second embodiment represented in Figures 3 and 4 applied to the neck of a bottle;

Figure 6 shows a further embodiment of the cap of the invention; and

Figure 7 is a partial section through a device of the invention.

[0018] Said figures show a container cap indicated overall by the reference numeral 1.

[0019] The cap 1 comprises a body 2 presenting a portion 3 for closing a container 4; for example, as shown in the accompanying drawings the cap 1 presents a threaded portion 5 collaborating with a corresponding threaded portion 6 provided on the container 4.

[0020] The body 2 also presents an inner side facing the container 4 and an outer side facing in the opposite direction to the preceding.

[0021] Advantageously the cap 1 comprises a chamber 7 presenting an access aperture 8 facing outwards from the cap and arranged to contain a product, so rendering it accessible from the outside; the chamber 7 is isolated from the interior of the cap 1.

[0022] In practice, the container 4 contains a product such as shampoo or bubble bath, while the chamber 7 contains a small quantity of the actual product contained in the container, to enable a user to test the product characteristics prior to purchase, for example its fragrance, without having to open the container.

[0023] The access aperture of the chamber 7 can be reclosed by a closure element formed integral with the cap itself.

[0024] The cap 1 also comprises a lead-in 11 for the opening of the closure element 9, this latter comprising a projection 12 to facilitate its opening.

[0025] In this embodiment, the cap preferably contains inside the chamber an inert support 13 for the product.

[0026] The inert support consists for example of chalk, cellulose, gel or any material able to absorb the product and retain it without however modifying its characteristics.

[0027] In practice the inert support must hence not contain components which react with the product or with components of the product and alter its characteristics, for example its fragrance.

[0028] As shown, the chamber 7 is defined by a dead-ended cylinder 14 formed integral with the body 2, the dead-ended cylinder being in the interior of said cap.

[0029] In a different embodiment, the chamber 7 is bounded by a perforated wall 15 which enables only the fragrance of the product to pass.

[0030] The cap also comprises at least one transparent portion 16 (shown in Figure 6), enabling the product contained in the chamber 7 to be seen.

[0031] In a suitable manner, the cap 1 also presents a security seal 17 which binds the cap to the container and prevents its opening prior to purchase.

[0032] The operation of the container cap according to the invention is apparent from that described and illustrated, and is substantially as follows.

[0033] The cap 1 is applied to the container 4 and is bound to it by the security seal 17; in this manner the container cannot be opened, however any successful opening is easily visible because the security seal would be broken.

[0034] A quantity of product is inserted into the chamber 7; as shown in Figures 1 and 2 (cap of the first embodiment) the product is supported by an inert support if very fluid (for example if the product is bleach or contains bleach, the inert support consists of chalk or cellulose or other suitable inerts), whereas if the product is a gel or cream (cap of the second embodiment) the product is inserted into the chamber 7 without the inert support, the perforated wall 15 then retaining it within the chamber 7 by preventing its dispersion to the outside.

[0035] When a consumer notices the container and wishes to test its fragrance or other characteristics of the product, the closure element 9 can be opened to test the product fragrance for its possible purchase.

[0036] The closure element maintains the chamber 7 closed, hence ensuring a long fragrance duration for the product contained in the chamber 7.

[0037] A consumer can also check the product colour without having to extract it from the chamber 7, by merely viewing it through the transparent portion 16.

[0038] Modifications and variants are evidently possible in addition to those already stated, for example instead of being formed on the cap, the chamber 7 can

be a separate device to be applied to the container or to the cap, or be formed on the container itself.

[0039] For example, Figure 7 shows a device 30 for containing a first quantity of product 31 to be made available to the public separately from a second quantity of product 32 contained in the container 4.

[0040] The device comprises a body 33 presenting the chamber 7 containing the first quantity of product 31.

[0041] As shown, the body 33 can be fixed to the container 4; for example the body is of annular shape for connection to a neck portion of the container 4.

[0042] In a further embodiment, not shown, the device is formed integral with the container and presents in the interior of the container a chamber which is open only towards its outside.

[0043] It has been found in practice that the container cap according to the invention is particularly advantageous because it enables the consumer to test the fragrance of a product while at the same time ensuring both for the consumer and for the seller that the product on sale has not been tampered with, and consequently that the contents are those indicated on the label by the producer.

[0044] The container cap conceived in this manner is susceptible to numerous modifications and variants, all entering within the scope of the inventive concept; moreover all details can be replaced by technically equivalent elements.

[0045] In practice the materials used, and the dimensions, can be chosen at will according to requirements and to the state of the art.

Claims

1. A container cap (1) comprising a body (2) presenting an inner side facing said container (4) and an outer side, **characterised by** comprising a chamber (7) presenting an access aperture (8) facing said outer side of said cap (1) and able to contain a product, so rendering it accessible from the outside.
2. A cap (1) as claimed in claim 1, **characterised in that** said chamber (7) is isolated from said inner side of said cap.
3. A cap (1) as claimed in one or more of the preceding claims, **characterised in that** said chamber (7) presents a reclosable access aperture.
4. A cap (1) as claimed in one or more of the preceding claims, **characterised in that** said access aperture (8) is bounded by a perforated wall (15), said perforated wall (15) enabling only the fragrance of said product to pass.
5. A cap (1) as claimed in one or more of the preceding

claims, **characterised in that** said access aperture (8) is reclosable by a closure element (9) formed integral with said cap.

6. A cap (1) as claimed in one or more of the preceding claims, **characterised by** comprising a lead-in (11) for the opening of said closure element (9). 5
7. A cap (1) as claimed in one or more of the preceding claims, **characterised in that** said closure element (9) comprises a projection (12) facilitating its opening. 10
8. A cap (1) as claimed in one or more of the preceding claims, **characterised by** comprising an inert support for said product. 15
9. A cap (1) as claimed in one or more of the preceding claims, **characterised by** comprising at least one transparent portion (16) enabling said product contained in said chamber (7) to be viewed. 20
10. A cap (1) as claimed in one or more of the preceding claims, **characterised in that** said chamber (7) is defined by a dead-ended cylinder (14) formed integral with said body (2). 25
11. A cap (1) as claimed in one or more of the preceding claims, **characterised in that** said dead-ended cylinder (14) is internal to said cap. 30
12. A cap (1) as claimed in one or more of the preceding claims, **characterised by** presenting a security seal (17). 35
13. A device for containing a first quantity of product to be made available to the public separately from a second quantity of product contained within a container, **characterised by** comprising a body presenting a chamber containing said first quantity of product, said body being fixable to said container. 40
14. A containing device as claimed in the preceding claim, **characterised by** presenting an annular shape and being connectable to a neck portion of said container. 45
15. A container cap, all as substantially described, represented in the accompanying drawings, and claimed. 50

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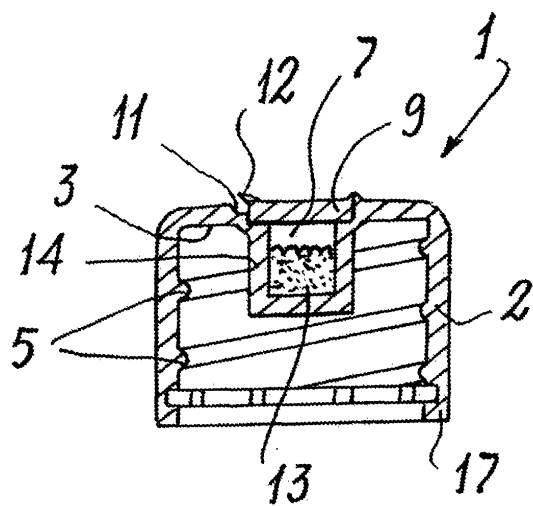


FIG. 1

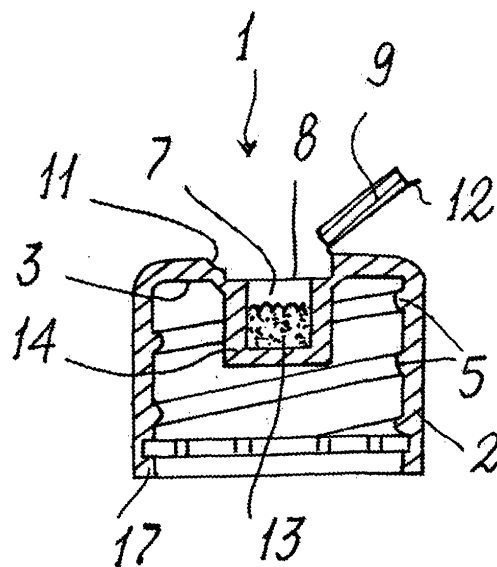


FIG. 2

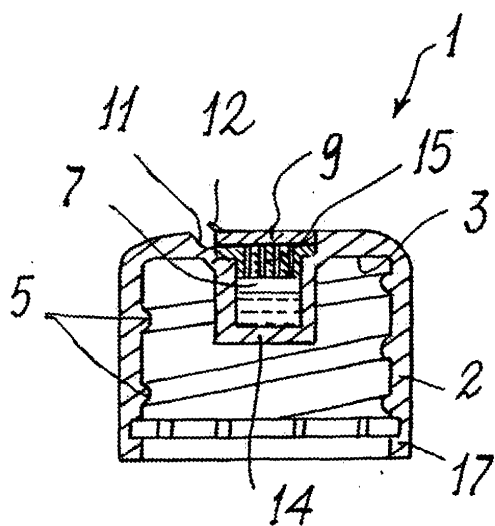


FIG. 3

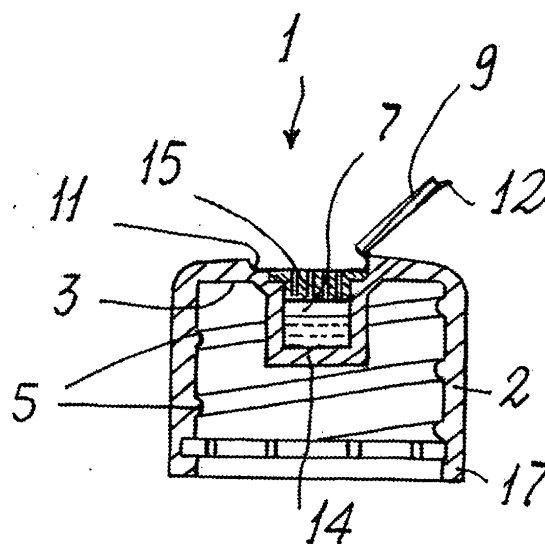


FIG. 4

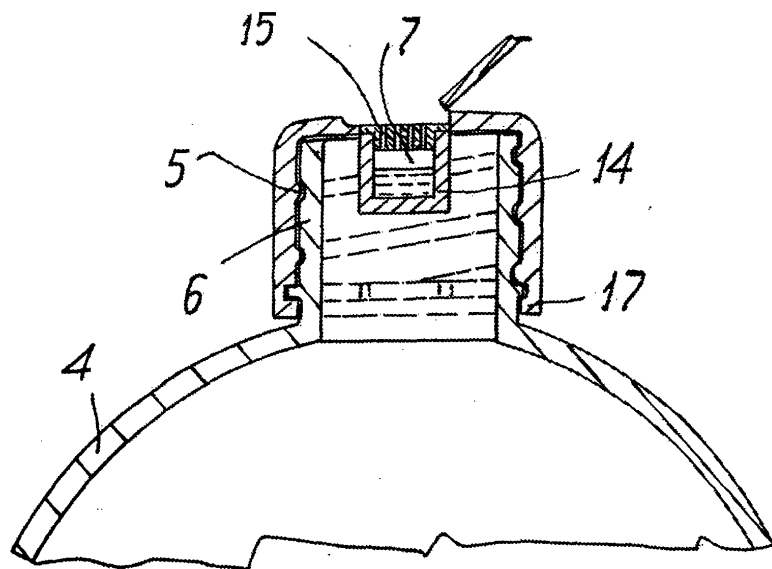


FIG. 5

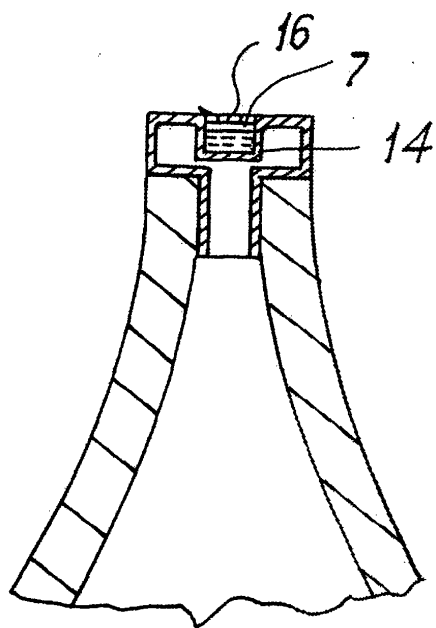


FIG. 6

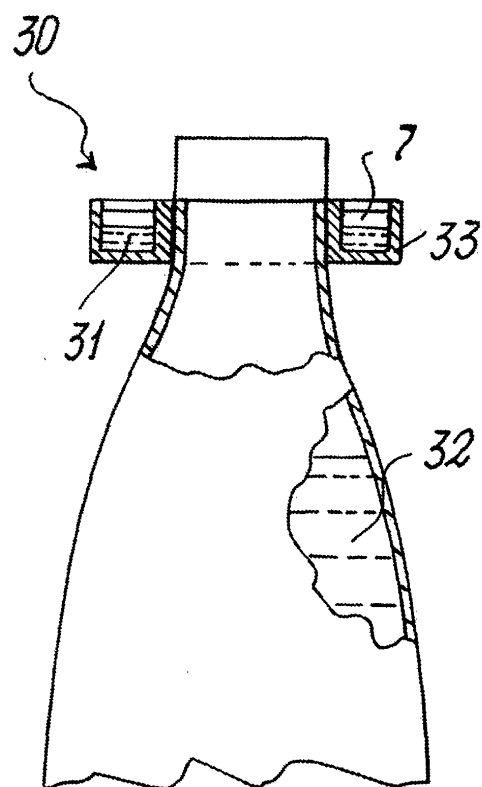


FIG. 7



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EUROPEAN SEARCH REPORT

Application Number
EP 04 10 3749

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
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Place of search Munich		Date of completion of the search 30 November 2004	Examiner Bevilacqua, V
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
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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