



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
27.04.2005 Bulletin 2005/17

(51) Int Cl.7: **B65D 51/18, B65D 41/34**

(21) Application number: **03023427.2**

(22) Date of filing: **17.10.2003**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IT LI LU MC NL PT RO SE SI SK TR
 Designated Extension States:
AL LT LV MK

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(54) **Bottle stopper**

(57) A stopper for bottles of beverages in general, particularly for wine, champagne, cider, sodas, and the like, which comprises:

- 1) a metallic cap (2) with internal plastic plastering or lining (3) so as to attain airtight closure and a "twist-off" system or the like with screwed threads that enables a quick opening of the bottle;
- 2) a plastic block (6) of adequate hardness, with negative impressions or locks that hold and coincide with the external locks in the metallic cap (2), and the external diameter of which has a number of vertical grooves that allow for an anti-turn locking mechanism when it is placed inside an external aluminium cover (11);
- 3) an external aluminium cover (11), the internal diameter of which locks with the outside of the plastic cube (6), in a cylinder-like and closed manner on one end on which are set the two parts mentioned above. The cover (11) may have different width and length according to the purpose it is intended to serve, and it has circular threads or frangible bridges in order to guarantee the security of the content.

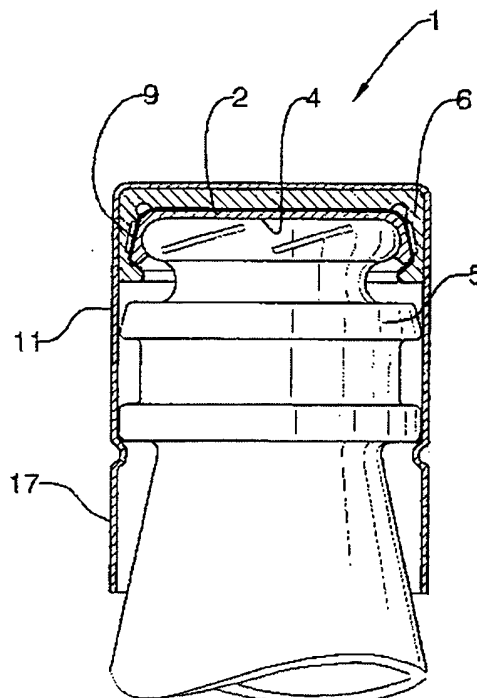


Fig.1

Description

Field of the invention

[0001] This invention involves a new stopper that is especially useful for closing containers holding different types of beverages, mainly bottles of beverages such as wine, cider, champagne, etc. More specifically, this invention relates to a bottle stopper offering several advantages and allowing for traditional closure means to be replaced, as is the case of the wine cork stopper, and serving the same purpose.

Background of Invention

[0002] In the beverages industry, a great number of stoppers and bungs are known for containers, particularly for bottles, since this are the containers most commonly used in order to hold beverages of all kinds. For the sole purpose of mentioning just a few examples of the most widely known stoppers, we may begin by referring to the crown cap which, although it offers many functional advantages, such as prevention of leakage and safety, it is not an adequate stopper, from the aesthetical point of view, for the purpose of closing more expensive beverages, such as wine or champagne; additionally, it lacks certain relevant features for this kind of beverages, as is the case of safety mechanisms.

[0003] Another kind of stopper very commonly used in the market is the so-called "pilfer-proof", which serves the purpose of prevention of leakage, safety and security, but presents the drawback of its high cost and, thus, it can only be used in those cases where so justified by the price of the beverage concerned.

[0004] In the particular case of wines, there are basically two types of stoppers for bottles: for lower-price wines, agglomerated cork is normally used, and for more expensive ones, premium cork is preferred. As it is known, cork is a natural material obtained from the cork oak which, although offering the product an excellent aesthetical look, involves countless problems. In fact, cork must be adequately shaped and placed; otherwise, it may affect the beverage. Moreover, it is known that most types of cork, since they are of a vegetal origin, interact with the wine contained in the bottle during storage prior to sale. Finally, cork is a high-price stopper; therefore, in the case of low-price beverages, second-class cork, called agglomerated cork, is used, which consists of small pieces of cork compacted and bound; this type of cork is not adequate for high-quality beverages.

[0005] Another type of stopper for cider, champagne and some kinds of wine bottles are plastic stoppers commonly used to close cider bottles. However, they are not good for high-price beverages, since they pose countless inconveniences, especially due to inadequate adjustments between the stopper and the inner surface of the bottle neck, as well as the difficulty for their removal.

[0006] As a consequence of the foregoing, the stopper involved in this invention has been developed; it combines several features which result in a novel stopper serving an excellent purpose, and the advantages of which are as follows.

a) It offers total closure thus preventing the entry of oxygen, as well as airtightness, and it is capable of tolerating internal pressures, such as those generated by beverages like sodas, sparkling wines, beer, cider, champagne, etc.

b) It has a highly competitive price, as compared to other types of multi-functional stoppers, for example cork stoppers.

c) When the bottle is to be opened, the stopper may be easily removed, without requiring the aid of any external device, such as corkscrews and the like.

d) It has an aesthetically appealing look that is comparable to that of the highest detail, found in fine wines.

Brief Description of the Invention:

[0007] Summarizing, this invention refers to a stopper for bottles holding beverages in general, particularly wine, champagne, cider, sodas, and the like, which comprises:

1) a metallic cap with internal plastic plastering (liner) in order to attain airtight closure and a "twist-off" threaded system or the like that allows for a quick opening;

2) a plastic cube of adequate hardness, with negative impression or locks that hold and coincide with the external locks of the metallic cap, and the external diameter of which has certain vertical grooves that allow for an anti-turn lock mechanism, when placed inside the external aluminum cover;

3) the said plastic cube, in turn, has a projecting circular part intended to affix the metallic cap onto the referred plastic lock when the system is opened;

4) an external aluminum cover, the internal diameter of which locks with the outside of the said plastic cube, in a cylinder-like and closed manner in one end on which are set the two parts referred to above. It may have different width and length, according to the purpose it is intended to serve, and it holds circular threads or frangible bridges in order to guarantee the safety of the content.

Brief Description of the Figures

[0008] The improvements referred to above are only some of the most remarkable ones of this invention, which will be explained in detail throughout this description that is to be made in accordance with the drawings attached hereto, for the purposes of illustration only, and without restricting the invention in any manner, pursuant

to the following.

Figure 1 shows a cut illustrating the proposed stopper that is already placed on, for example, a glass wine bottle.

Figure 1A is an alternative embodiment of Figure 1 including screwed threads.

Figure 2 offers an extended graphical view illustrating the component parts of the referred stopper. Figure 2A is an alternative embodiment of Figure 2 including screwed threads.

Figure 3 shows a lateral elevation view of the full stopper placed on the bottle.

Figure 4 show an alternative for the stopper's frangible bridge.

Figure 5 offers a cut illustrating an alternative design for short screw caps.

Figure 6 shows another alternative for the design of the stopper, with frangible bridges and riveted cover on the glass of the bottle.

Figure 7 illustrates an alternative design especially adequate for champagne bottles with full aluminum cover, frangible bridges and riveted cover on the mouth.

Detailed Description of the Invention

[0009] In accordance with the foregoing descriptions and illustration provided by the figures attached hereto, a stopper, pursuant to this invention, indicated by number reference 1, comprises a metallic stopper or cap 2 with internal plastic plastering or lining 3 in order to attain airtight closure between the upper edge 4 of the mouth in bottle 5. Furthermore, the said upper edge of the mouth 4 has a number of protruding grooves that define a so-called "twist-off" system 8 or screwed threads, while interacting with the thread of the stopper, thus allowing for a quick opening. This system shall not be described in detail due to the fact that it is well known in the state of the art, and it is not novel (see Figures 1 and 1A)

[0010] The above-referred metallic stopper is set inside piece 6, which defines the shape of a stopper that presents, in its external side, an upper flat surface 7 and a perimetric wall 8, while inside it has a hollow space having a shape resembling that of the metallic stopper. Once piece 2 is affixed inside piece 6, they define an indivisible body that works like a twist-off stopper, while lacking the look of the traditional metallic one that would deteriorate the appearance of the pieces thus assembled.

[0011] Piece 6 referred to above is defined by a plastic "cube" or block or capsule having appropriate hardness, with negative impressions 9 or locks that hold and coincide with external locks 10 in the metallic stopper, and the external diameter of which has a number of vertical grooves allowing for an anti-turn lock mechanism in its joint with cover 11.

[0012] The assembly is completed by an external aluminum cover 11, the internal diameter of which locks with the outside of the referred plastic cube 6, in a cylinder-like and closed manner on one end on which are set the two parts indicated above. This cover may be of different width and length, according to the purpose it is intended to serve, and it contains a safety device in order to avoid alterations to the content of the bottle that, depending on the type of design, may have the form of circular threads or frangible bridges, so as to guarantee the security of the content, as will be explained below.

[0013] Figures 3 and 4 show two different types of manufacturing, in one of which (Figure 3) it is shown that the external aluminum cover 11 has two threaded lines 12 that conform a security stripe 13 that presents, as it is already known, a tear tab 14 that is to be held by user and, when pulling, thus removes stripe 13 from the body of cover 11. On the other hand, in the alternative design shown by Figure 4, there are shown a series of aligned threads 15 which define frangible bridges 16 that are to be cut by user in order to release the content in the bottle. In the alternative design of Figure 3, cover 11 has internal anti-turn locks that coincide with the locks in the bottle that hold cover 11 in relation to the mouth, and thus prevent it from turning.

[0014] Closure process in this design for the stopper must be carried out in two closing stages. In the first one, the metallic stopper is placed and, in the second one, it is placed on the bottle external cover 11 that carries plastic lock 6. The said cover 11, while being placed on the mouth of the bottle, previously closed with 2, allows for the locking mechanism between pieces 6 and 2, and the stopper-placing machine rivets the referred cover 11 under ring 13 (in both alternatives). It should be noted that the skirt in cover 11 has anti-turn locks 20 that allow for the referred cover to be locked onto the bottle (alternative 3).

[0015] Furthermore, in the case of designs shown by Figures 3 and 4, it may be seen that external cover 11 has a lower skirt 17 that, on the one side helps improve its appearance, since on its external face it may be applied a certain label and/or advertisement; on the other hand, it presents middle notch 18 that maintains the assembly on the mouth of the bottle, while guaranteeing its safety.

[0016] The design in Figure 5 shows another stopper similar to the ones described above, although this time the external cover lacks the referred lower skirt, but has a shorter one, and the middle notch in this case is replaced by mortise 19 that affixes the assembly to the mouth of the bottle.

[0017] The design illustrated by Figure 6 is similar to the previous one, although in this case the body in cover 11 has a series of threads 20 that define frangible bridges 21, which guarantee the safety of the stopper.

[0018] Finally, Figure 7 shows another design similar to the previous one, although in this case the shape of cover 11 has a convexity that provides it with an adequate appearance for it to be used on champagne, cider, sparkling wine bottles, etc.

[0019] It should be noted that the surface on cover 11 may be fully printed, whether it be by painting it in different colors, lacquering or polishing it, printing relieves, etc.

[0020] Finally, it is worth mentioning that, when the stopper is used on champagne bottles, it may be given the shape illustrated by Figure 7 so as to resemble traditional stoppers, whereas in the case of sodas, beer, and the like, the designs of Figures 5 and 6 may be used because the external appearance of the stopper is similar to that of traditional ones.

[0021] It may be concluded from the foregoing that by means of an ingenious combination of elements it is achieved a highly functional and inexpensive stopper, allowing for minor alterations to be made on it without deviating from the invention, as defined by the claims attached hereto.

Claims

1. A bottle stopper, **characterized by** the fact that it comprises:
 - a metallic cap (2);
 - a plastic block (6) that holds the metallic cap (2); and
 - an external aluminum cover (11).
2. A bottle stopper according to claim 1, **characterized by** the fact that the said metallic cap (2) is a crown cap or similar metallic one with screwed threads.
3. A bottle stopper according to claim 1, **characterized by** the fact that the said metallic cap (2) incorporates a "twist-off" opening mechanism with screwed threads.
4. A bottle stopper according to claim 1, **characterized by** the fact that the referred metallic cap (2) presents an internal plastic plastering (3) intended to achieve airtight closure.
5. A bottle stopper according to claim 1, **characterized by** the fact that the referred plastic block (6) has adequate hardness, having negative impressions or locks that hold and coincide with the external locks in the metallic cap (2), and the external diameter of which has vertical grooves, which allow for an anti-turn locking mechanism when placed inside the external cover (11).
6. A bottle stopper according to claim 1, **characterized by** the fact that the said external aluminum cover (11) has an internal diameter that locks with the outside of the plastic block (6), in a cylinder-like and closed manner on one end on which are set the two parts indicated above.
7. A bottle stopper according to claim 1, **characterized by** the fact that the referred external aluminum cover has a lower skirt on which are found a series of anti-turn locks which prevent the cap from being turned in respect of the bottle.
8. A bottle stopper according to claim 1, **characterized by** the fact that the said external cover has a series of aligned threads that define pull-off frangible bridges which guarantee the safety of the content.
9. A bottle stopper according to claim 1, **characterized by** the fact that the said external cover (11) has two threaded parallel lines that define a stripe of a certain material that includes a protruding tear tab, for guaranteeing the safety of the content.
10. A bottle stopper according to claim 1, **characterized by** the fact that the said external cover (11) has a convex external shape which makes it resemble traditional champagne stoppers.

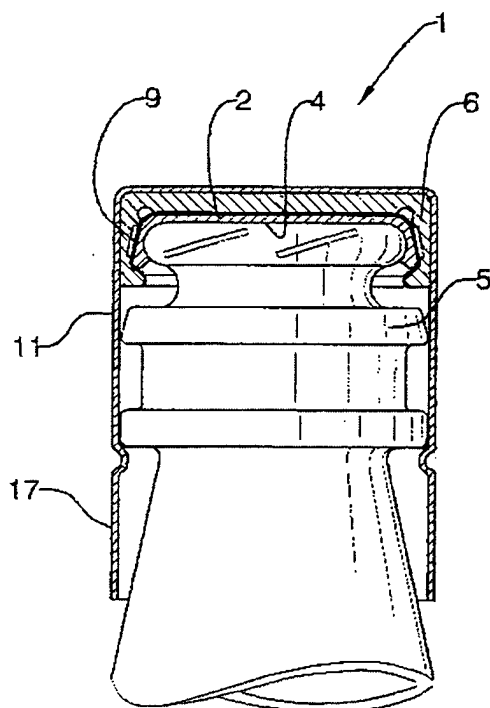


Fig.1

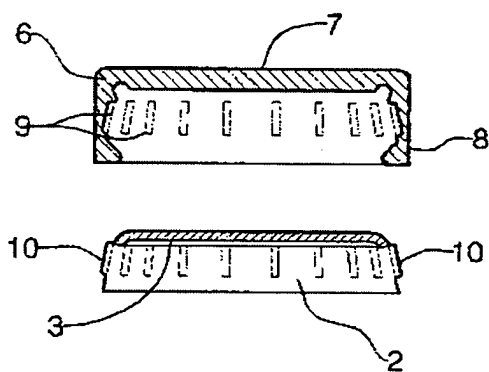
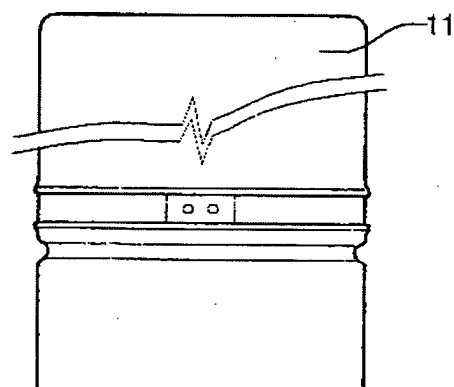


Fig.2

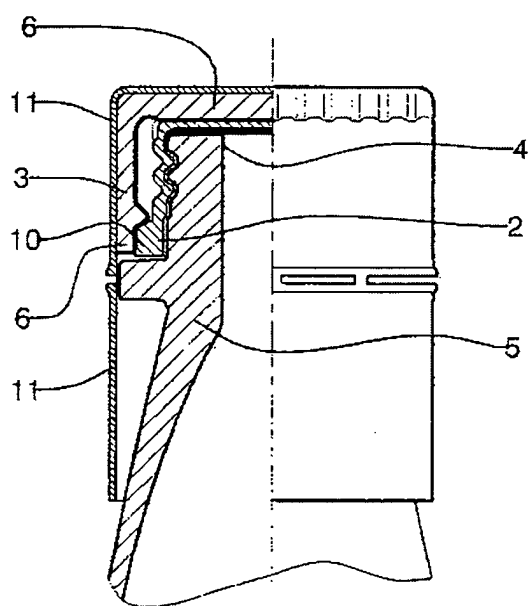


Fig.1A

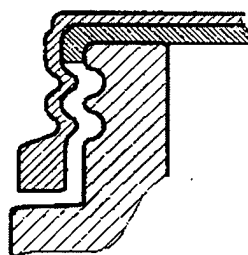


Fig.2A

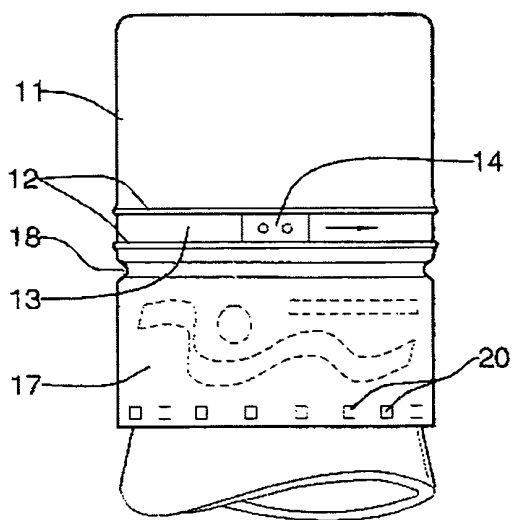


Fig.3

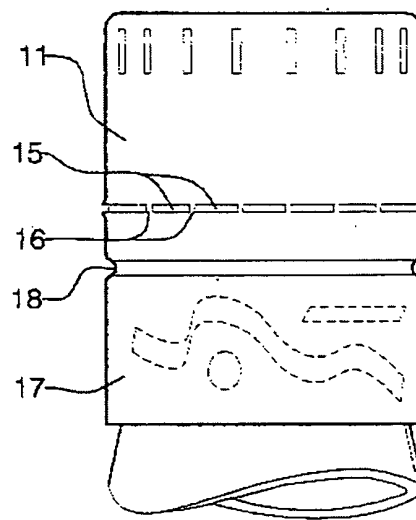


Fig.4

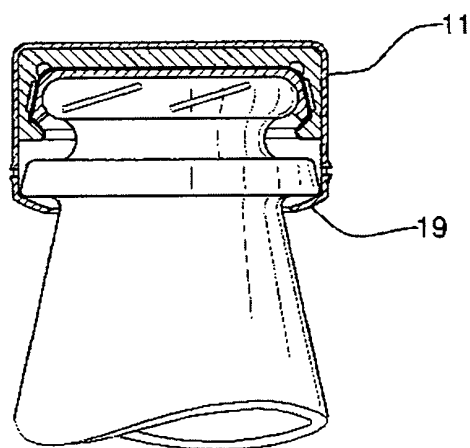


Fig.5

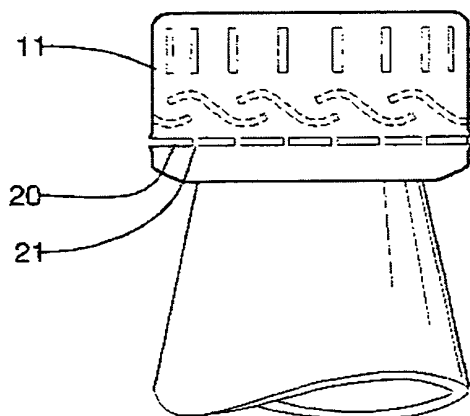


Fig.6

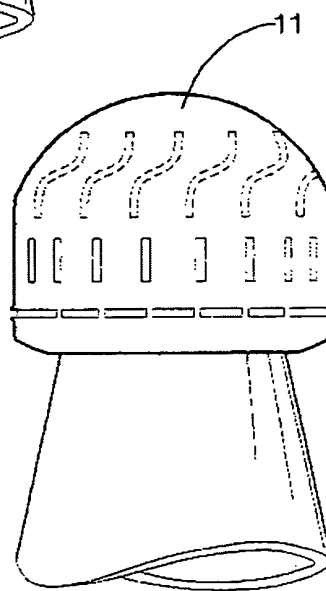


Fig.7



European Patent
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Application Number
EP 03 02 3427

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The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 19 April 2004	Examiner Schultz, 0
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**ANNEX TO THE EUROPEAN SEARCH REPORT
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