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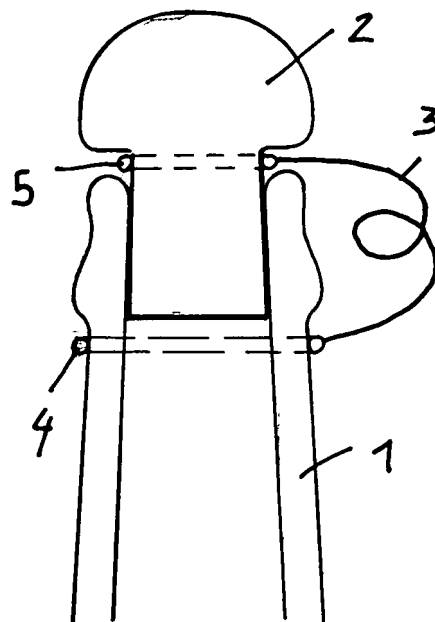
(71) Applicants:  
• **Bertelloni, Pietro**  
**54037 Marina di Massa (Massa) (IT)**  
• **Bertelloni, Dante**  
**54039 Ronchi, Massa (MASSA) (IT)**

(72) Inventors:  
• **Bertelloni, Pietro**  
**54037 Marina di Massa (Massa) (IT)**  
• **Bertelloni, Dante**  
**54039 Ronchi, Massa (MASSA) (IT)**

(74) Representative: **Cicogna, Franco**  
**Ufficio Internazionale Brevetti**  
**Dott.Prof. Franco Cicogna**  
**Via Visconti di Modrone, 14/A**  
**20122 Milano (IT)**

(54) **Safety device for closing vessels for fizzy drinks, in particular sparkling wine bottles and the like**

(57) A safety device, for closing a fizzy drink bottle, such as a bottle of a sparkling wine or the like, characterized in that said safety device comprises at least an elongated flexible element (3) having an end portion thereof coupled to a movable element of the bottle closure (2) and the other end portion thereof coupled to the bottle body (1), thereby holding the movable element near the bottle body, while preventing said movable element from being uncontrollably launched as said bottle is uncorked.



**FIG. 1**

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## Description

### BACKGROUND OF THE INVENTION

[0001] The present invention relates to a safety device, which has been specifically designed for closing a vessel for fizzy or aerated drinks or beverages, such as sparkling wine bottles and the like.

[0002] As is known, a sparkling wine plug, as the bottle is opened, can be ejected as a projectile.

[0003] A lot of serious accidents occurring as sparkling wine bottles are uncorked have been previously reported.

[0004] Actually, a high and uncontrolled ejection speed of the plug caused, and continuous to cause, great damages, mainly to the eyes of the users, up to a full loss of the view.

### SUMMARY OF THE INVENTION

[0005] Accordingly, the aim of the present invention is to provide such a safety device, to be applied to a sparkling wine vessel or bottle, adapted to prevent the plug from being abruptly ejected from the bottle.

[0006] Within the above mentioned aim, a main object of the invention is to provide such a safety device allowing to uncork a sparkling wine bottle in a conventional manner, that is with the production of the so called "bang" noise, but safely operating to prevent the plug from being uncontrollably launched or ejected.

[0007] Another object of the present invention is to provide such a safety device having very good aesthetic and promotional properties.

[0008] According to one aspect of the present invention, the above mentioned aim and objects, as well as yet other objects, which will become more apparent hereinafter, are achieved by a safety device, specifically designed for closing a fizzy or aerated drink vessel or bottle, such as a bottle for sparkling wine, characterized in that said safety device comprises at least an elongated flexible element, having an end portion thereof coupled to a movable element of the bottle closure and the other end portion thereof coupled to the body of the bottle, thereby holding the movable element at a region near the bottle body, and preventing said movable element from being uncontrollably launched.

### BRIEF DESCRIPTION OF THE DRAWINGS

[0009] Further characteristics and advantages of the present invention will become more apparent hereinafter from the following detailed disclosure of a preferred, though not exclusive, embodiment of the invention, which is illustrated, by way of an indicative, but not limitative, example in the accompanying drawings, where:

Figure 1 is a schematic elevation view of the neck portion of a sparkling wine bottle, including a sparkling wine bottle plug and a safety device according

to the present invention;

Figure 2 is a schematic view similar to figure 1, but showing a safety device according to a further aspect of the present invention;

Figure 3 shows a further embodiment of the safety device according to the present invention;

Figure 4 shows yet another embodiment of the safety device according to the present invention;

Figure 5 shows yet another embodiment of the safety device according to the present invention;

Figure 6 shows yet another embodiment of the safety device according to the present invention;

Figure 7 shows yet another embodiment of the safety device according to the present invention;

Figure 8 shows yet another embodiment of the safety device according to the present invention;

Figure 9 shows yet another embodiment of the safety device according to the present invention;

Figure 10 shows yet another embodiment of the safety device according to the present invention;

Figure 11 shows yet another embodiment of the safety device according to the present invention;

Figure 12 shows yet another embodiment of the safety device according to the present invention;

and

Figure 13 shows a key element, with a key slot or hole, to be applied to the safety device shown in figure 12.

### DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0010] With reference to the number references of the above mentioned figures, the safety device according to the present invention will be hereinbelow disclosed by way of some preferred embodiments thereof.

[0011] According to the embodiment shown in figure 1, the sparkling bottle plug 2 is affixed, by binding it at a position 5, to the neck portion of the bottle 1, by means of one or more cords 3 which, in turn, will be bound to the neck portion of said bottle 1 at the binding point 4.

[0012] More specifically, the above mentioned binding cords are so designed that, depending on their number and length, they will compel the plug to exit with a set arrangement, to be properly wound and arranged about the bottle neck, so as not to disturb the pouring of the sparkling wine.

[0013] The above mentioned cords can be coupled either to the body of the plug, or to a lateral portion thereof, or to any other suitable locations of said plug.

[0014] According to the embodiment shown in figure 2, the safety device herein shown is similar to that of figure 1, and is differentiated therefrom due to the fact that this second safety device comprises, instead of the above mentioned binding cords, one or more strips, made of a fabric material, or any other suitable material, which would also represent an aesthetic and advertising element, to be provided with a trademark of the sparkling

wine maker, or other wordings.

**[0015]** The operation of the safety device shown in figure 2 is similar to that of the safety device of figure 1: in other words, the plug 2, bound at a binding position 5 or at any other suitable binding position, is coupled to one or more fabric strips.

**[0016]** Said fabric strips, in particular, are in turn bound or affixed, in any desired suitable manners, and at the other portions thereof, to the neck portion of the bottle 1 at a coupling region 4 or other connection point of suitable length, thereby allowing the sparkling wine bottle to be easily uncorked without uncontrollably launching the plug.

**[0017]** In particular, said plug may be coupled by using either one or more fabric strips which, depending on their number and length, will compel the plug to exit the bottle neck with a set arrangement, and being then properly wound and located about the bottle neck, so as not to disturb the pouring of the sparkling wine into glasses or the like.

**[0018]** By using a strip 3, or, in cooperation therewith, a resilient element, and by optionally downward displacing the bottle binding point, the ejected plug will be recovered or caused to return along the sparking plug bottle body, while allowing the sparkling wine to be properly poured or delivered.

**[0019]** According to the embodiment shown in figure 3, the plug 2 is affixed by a die-cast ring element 5 to said strip 3 which is in turn fixed or clamped, by a further ring element 4, to the neck portion of the bottle 1.

**[0020]** According to a preferred embodiment, the two ring elements 4 and 5 are formed, together with the strip 3, by die-casting a high strength and undeformable plastic material, by optionally applying a torque directed in an opposite direction, thereby causing the plug, upon ejecting, to be arranged along the neck of the bottle, in order not to disturb the delivery of the sparking wine.

**[0021]** According to the embodiment shown in figure 4, the plug 2 is restrained on the neck of the bottle 1 by a clamping element 3, in turn fixed to the ring element 4, by a tearing removable band 5.

**[0022]** The clamping element 3, at the rear portion thereof, is firmly coupled to the ring element 4, whereas, at the front portion thereof, is fixedly coupled to the ring element 4 by the removable band 5.

**[0023]** Said band 3, moreover, is firmly anchored to the plug by the clamping element 8, thereby, after having removed the tearing band 5, by pulling on the tongue 6, it will be possible to uncork the bottle, without uncontrollably launching the plug, since the latter will be held by the clamping element 8 coupled to the band 3.

**[0024]** In particular, said clamping element or band 8 may be coupled to the plug even by binding means, or by a further ring element, or in any other suitable manners.

**[0025]** The subject device can be made of a die-cast plastics material, of a iron material or any other suitable materials.

**[0026]** The removable band 5 may be also be replaced by other mechanically removable devices, or a simple iron wire, adapted to meet a same binding function.

**[0027]** According to the embodiment shown in figure 5, the plug 2 is held onto the neck portion of the bottle 1, since it is made rigid or integral with a precut body 3-4-5 made by die casting a plastics material.

**[0028]** Said body, in particular, is pre-grooved according to a coil configuration, thereby, by pulling on the tongue 6, it will be possible to remove the strip 5 leaving a further spiral coil 3, having a length sufficient to uncork the bottle, while holding the plug coupled to the bottle neck.

**[0029]** According to the embodiment shown in figure 6, the plug 2 is held onto the neck portion of the bottle 1 by a small cable 3.

**[0030]** This small cable, as shown, passes through the plug body and is affixed, on the rear portion of the latter, to the ring element 4, by possibly using a binding hook element which will be disclosed in a more detailed manner hereinafter and which is shown in figure 8.

**[0031]** At its front portion, said small cable 3 is clamped to the ring element 4 by a clamping hook element 5, or any other suitable clamping means, of a type disclosed with reference to the device shown in figure 7.

**[0032]** It is also possible to use any other easily removable affixing member, thereby, by pulling on the ring element 6, the small cable 3 will be disengaged to allow the bottle to be uncorked, while holding the plug clamped at the end portion of the small cable 3.

**[0033]** In the embodiment of the safety device shown in figure 6, said cable traverses two holes formed in the plug body.

**[0034]** In this connection, a parameter to be also considered in such an embodiment, is the hardness of the plug: in fact, under a very high pressure, if the plug is made of a soft material, then it could be deformed.

**[0035]** In such a case, it would be possible to use stronger materials, or protective means of the type shown in figure 7, such as a small cover 5.

**[0036]** The embodiment of the safety device shown in figure 7 is similar to that shown in figure 6.

**[0037]** In this embodiment, the plug 2 is held on the neck portion of the bottle 1 by the small cable 3.

**[0038]** This small cable passes through the body of the plug in cooperation with a cover 5 integral with the plug, therein are provided two holes or ring elements therein said cable 3 can freely slide.

**[0039]** In particular, said cables 3 constitute an extension of the ring element 4.

**[0040]** Said cables are knotted or otherwise coupled on the rear of the neck of the bottle and are upwardly directed by passing through the two mentioned holes.

**[0041]** In particular, said cable are entrained about the front portion of the ring element 4 and then are clamped to the latter by merely bending them, if, in particular, they are made of a metal wire or knotted, or by other suitable coupling system.

**[0042]** In this embodiment, the small cable comprises a conventional iron wire, which is caused to pass on the rear of the ring element 4 and so bent that, by operating on the end portion 6, it will be possible to free said cable and disengage it from the rear, so as to cause the cable to be stopped against the cover 5, to allow the bottle to be easily uncorked while holding the plug restrained on the bottle neck.

**[0043]** According to the embodiment shown in figure 8, the subject safety device comprises a hook element, to be applied near the ring element 4, operating to restrain the wire or cable 3, to allow the uncorked plug to be easily removed from the bottle, by merely pulling it downward.

**[0044]** According to the embodiment shown in figure 9, the safety device according to the present invention comprises an additional lateral supporting element 6, designed for meeting several operating functions, such as, for example, that of stopping and housing the plug, after ejection, to better handle the bottle, properly protect the user hand, and facilitate the transportation of the bottle.

**[0045]** It should be apparent that the supporting element or hook 6 may have any desired configurations and starting from any suitable materials, such as iron, plastics wires and so on.

**[0046]** Figure 10 shows a safety device analogous to that disclosed with reference to figure 2, which has the binding band 3 bound to the bottle neck, both at the front and at the rear portion thereof, by means of a wire or ring element 4, and then being clamped to the top portion of the plug.

**[0047]** The length, type, shape and size of this band element can be any depending on requirements, provided that they are suitable to allow the band to be easily clamped to both the bottle and the plug.

**[0048]** According to the embodiment shown in figure 11, the plug 2 is held by a pin 4 passing through the neck of the bottle and said plug, to prevent the latter from being ejected.

**[0049]** In order to uncork the bottle, in such a case, it will be sufficient to remove the pin 4, by subjecting the ring element 3 to a pulling force.

**[0050]** Thus, even if a very high pressure would be present in the bottle, susceptible to abruptly eject the plug, upon ejecting, said plug, after having arrived at the holes left free from the pin, will cause a pressure loss or drop, preventing the plug from being actually ejected or reducing the ejection speed thereof.

**[0051]** To provide an optimum balance between the pressure drop and plug ejection force, it is possible to properly select the diameters of the pin and holes, while applying calibrated gaskets in the housing 5 to cause excess air from exiting.

**[0052]** According to a further aspect of the present invention, figure 12 shows a clamping device, for clamping the plug, and limiting its ejection stroke.

**[0053]** This is obtained by a proper binding arrangement, which has been shown in a separated condition, to better illustrate its operation.

**[0054]** In this connection, however, it should be pointed out that binding arrangement should be properly tensioned.

**[0055]** In actual practice, said binding arrangement comprises a strip or wire 3 forming a ring element having a preset length, which is clamped to the plug at a clamping point 5 and affixed to the bottle neck by an iron wire 4 or other binding system preventing the strip from sliding. In order to uncork the bottle it will be sufficient, in such a case, to laterally pull on the point 6 the portion of the strip 3, thereby allowing the plug to be properly ejected at a low ejection speed.

**[0056]** Several systems and combinations of wires or strips and binding arrangements may be used to provide a safety device designed for holding the plug while limiting the ejection stroke thereof, which systems and combinations would come within the scope of the invention.

**[0057]** Figure 13 schematically shows a key of a key-slot to be applied to a plug clamping device, of the type shown in figure 12.

**[0058]** The strip herein shown, having a length sufficient to allow the plug to exit from the bottle, is threaded in the key, which, as it is would, will tension the strip, while clamping the plug.

**[0059]** After having achieved a set tension or pulling force, said key will be clamped in a clamping manner which can be easily unbound.

**[0060]** In particular, for uncorking the bottle, it will be sufficient to make the key free and turn it in a reverse direction, thereby allowing the plug to be ejected.

**[0061]** In particular, said key and strip may have any desired shape and may be made of any desired materials.

**[0062]** It has been found that the invention fully achieves the intended aim and objects.

**[0063]** In fact, the invention provides a safety device adapted to prevent a plug from being abruptly ejected as a sparkling wine bottle is uncorked.

**[0064]** In particular, the device according to the present invention allows the plug to be safely held by using holding systems different from conventional metal cages, and it can be made, as above disclosed, in a very simple manner.

**[0065]** The device according to the present invention allows the bottle to be always held in a plugged or corked condition, without using the above mentioned metal cages, while properly controlling the plug ejection.

**[0066]** The above disclosed ring element 4, cable 3 and ring element 5 may be made in several configurations and starting from a lot of suitable materials such as plastics material, steel, composite materials, Kevlar, nylon and so on.

**[0067]** For clamping the cables or strips 3 to the neck portion of the bottle or to the plug, it is possible to use holes, rings, nails, cords made of any suitable materials such as metal materials, plastics materials, composite materials, Kevlar, nylon and so on, to be properly affixed, bound, sealed or glued to the plug or the bottle neck by

any desired suitable systems, and they can also be cast or introduced inside the plug, during the making of the latter, or by latching means to be associated to the bottle during its making.

[0068] An important advantage of the invention is that, by applying a preset torque to the holding strips, the plug, upon ejection, will be arranged on a side of the bottle, without hindering the delivery of the sparkling wine.

[0069] This advantage is also achieved owing to a small hook element or adhesive fabric material with a tearable closure, to be applied to the bottle neck and to the plug, or by a folding system, if a metal cable would be used.

[0070] A further advantage of the invention is that it is herein possible to use the strip elements 3 of figure 2, which allow trademarks and advertising wordings to be applied thereto.

[0071] The subject safety device provides moreover the possibility of using the mentioned strips, cables and so on, shown by the reference number 3, to transport and hang the bottle, both in a corked and in an uncorked condition thereof.

[0072] A further advantage of the subject device is that it is possible to properly recycle the materials forming both the plug and the components of the safety device, since they are always held coupled to the bottle, to be disposed of together with the latter.

[0073] Furthermore, the device may use several shapes of the bottle neck such as projections, latching arrangements, holes or other elements to provide latching, binding or clamping functions for clamping to the bottle the restraining devices and/or for limiting the ejection stroke of the plug.

[0074] It should be apparent that the hereinabove disclosed embodiments are susceptible to several modifications and variations, all of which will come within the scope of the invention.

[0075] In practicing the invention, the used materials, provided that they are compatible to the intended application, could be any, depending on requirements.

## Claims

1. A safety device, for closing a fuzzy drink bottle, such as a bottle of a sparkling wine or the like, **characterized in that** said safety device comprises at least an elongated flexible element having an end portion thereof coupled to a movable element of the bottle closure and the other end portion thereof coupled to the bottle body, thereby holding the movable element near the bottle body, while preventing said movable element from being uncontrollably launched as said bottle is uncorked.
2. A safety device, according to claim 1, **characterized in that** said plug comprises binding means for coupling to the neck of the bottle, said binding means

including one or more cords which, in turn, are coupled to said neck of said bottle, said plug being further clamped by one or more cords which, depending on their number and length, cause said plug to be ejected with a set ejection arrangement, to be wound and arranged about said neck of said bottle, while allowing the sparkling wine to be properly delivered, said cords being clamped to the neck portion of the plug or to a lateral portion of the latter or to a top portion thereof.

3. A safety device, according to claim 1, **characterized in that** said safety device comprises one or more strips made of a fabric material, also forming an aesthetic and advertising element for bearing a company trademark or other advertising wording, said plug being clamped to one or more of said fabric material strips, said fabric material strips being bound or clamped, at an end portion thereof to the neck of the bottle, and having a length so designed as to allow the bottle to be uncorked without abruptly ejecting said plug, said plug being clamped by one or more of said strips, which, depending on their number and length, will cause said plug to be ejected to assume a set position and be wound and arranged about the neck of the bottle, while allowing the sparkling wine to be properly delivered.
4. A safety device, according to claim 3, **characterized in that**, by using as a cord or strip element, or in addition thereto, a resilient element, and by possibly downward displacing the clamping point of the plug to the bottle, said bottle, upon ejection, is recovered along the body of the bottle, so as not to disturb the pouring of the sparkling wine.
5. A safety device, according to claim 1, **characterized in that** said plug is clamped by a die-casting element to a strip which is in turn clamped by another ring element to the neck of the bottle, said two ring elements being made together with said strip by die-casting a high resistance and undeformable plastic material, while applying a contrary torque thereby the plug, upon ejection, is arranged along the neck of the bottle, without hindering the delivery of the sparkling wine therefrom.
6. A safety device, according to claim 1, **characterized in that** said plug is held onto said neck of said bottle by a band in turn clamped to a ring element by a tearable removable strip, said strip being affixed, at a rear portion thereof, to said ring element whereas, at the front portion thereof being affixed to said ring element by said removable band or clamping element, said band being rigidly anchored to said plug by said strip thereby, upon removing said tearing removable band, by pulling a tongue thereof, the bottle can be uncorked while preventing the plug from be-

ing uncontrollably ejected.

7. A safety device, according to claim 6, **characterized in that** said clamping band is affixed to said plug by binding means or ring element, to be connected to the body of said plug. 5
8. A safety device, according to claim 6, **characterized in that** said safety device is made of a die-cast plastics material or an iron or other material. 10
9. A safety device, according to claim 6, **characterized in that** said removable band element may be replaced by another mechanically removable device or by an iron wire. 15
10. A safety device, according to claim 1, **characterized in that** said plug is held to said neck of said bottle since it is rigid with a pre-cut body made by die-casting a plastics material, said body being spirally pre-cut, thereby, by pulling a tongue, it is possible to remove a strip leaving another strip having a length sufficient to allow the bottle to be uncorked while preventing said plug from being abruptly ejected. 20
11. A safety device, according to claim 1, **characterized in that** said plug is held to the neck of said bottle by a holding cable, which passes through said plug and being clamped on the rear to said ring element, by a clamping hook element whereas, at a front portion thereof, said cable is clamped to said ring element by a clamping hook or easily removable clamping element thereby, by pulling said ring, said cable is unlatched thereby allowing a tearing thereof, while preventing said plug from being abruptly ejected. 25 30 35
12. A safety device, according to claim 1, **characterized in that** a said cable is caused to pass through said plug by providing through the latter two holes and a related cover, if the plug is made of a comparatively soft material. 40
13. A safety device, according to claim 1, **characterized in that** said plug is held on said bottle neck by a holding cable which passes through said plug and cooperates with a cover rigid with said plug, two holes or ring elements being formed through said plug wherein said cables may freely slide, said cable constituting an extension of said ring element, and being knotted on the rear of the bottle neck, thereby upward extending passing through said two holes, said cables being entrained about a front portion of said ring element and being clamped to said ring element by bending said cables, said cables being made of an iron wire or knotted or applied by any other suitable applying system. 45 50 55
14. A safety device, according to claim 13, **character-**

**ized in that** said cable comprises an iron wire, which is entrained on the rear of the ring element and is bent, thereby, by operating on an end portion thereof, said cable may be disengaged and withdrawn from the rear to cause said cable to abut against said cover, thereby allowing the bottle to be uncorked without abruptly ejecting the plug.

15. A safety device, according to claim 1, **characterized in that** said safety device comprises a hook element to be applied at a ring element operating for holding said wire or cable, to allow the plug, upon uncorking the bottle, to be removed from the bottle by downward pulling said plug.
16. A safety device, according to claim 1, **characterized in that** said safety device comprises an additional side supporting element for stopping and housing the plug after having uncorked the bottle, in order to better grip said bottle, and protect the hand, thereby facilitating a transporting or hanging operation of said bottle.
17. A safety device, according to claim 1, **characterized in that** said safety device comprises a band bound to said neck of said bottle, both on the front portion and rear portion thereof, by said wire or ring element, and then being affixed or clamped to the plug at the top portion thereof.
18. A safety device, according to claim 1, **characterized in that** said plug is restrained by a pin which transversely passes through the neck portion of the bottle and the plug, thereby preventing said plug from being abruptly ejected as the bottle is uncorked, by removing said pin and upward pulling said ring element.
19. A safety device, according to claim 18, **characterized in that** said safety device comprises calibrated gaskets in the housing for allowing excess air to exit therefrom, while preventing the sparkling wine from exiting the bottle.
20. A safety device, according to claim 1, **characterized in that** said safety device comprises a binding arrangement including a strip or wire forming a ring element having a preset length, which is clamped to said plug and bottle neck by an iron wire or other clamping systems allowing the strip to slide, said bottle being uncorked by laterally pulling a top portion of said strip, thereby releasing said plug.
21. A safety device, according to claim 20, **characterized in that** said safety device comprises a key having a slot, to be applied to the plug clamping device, thereby causing said strip, having a length sufficient to allow said plug to exit, is introduced into said key to be wind up and tensioned, thereby stopping the

plug, after having achieved said tension, said key being stopped in an easy to be released manner, said bottle being uncorked by freeing or disengaging said key and turning it in an opposite direction.

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22. A safety device, according to one or more of the preceding claims, **characterized in that** said safety device comprises a plurality of cables having a different length and/or being resilient thereby allowing said plug, after having uncorked said bottle, to be arranged along the neck of the bottle, in order not to disturb the delivery of the sparkling wine. 10
23. A safety device, according to one or more of the preceding claims, **characterized in that** said plug is restrained by a restraining pin transversely passing through the neck of the bottle, or passing through said plug at another position, even arranged above the neck of the bottle. 15
24. A safety device, according to one or more of the preceding claims, **characterized in that** said holes for receiving said pin are so sized that, before an ejection of said plug, a part of the pressure inside said bottle is released, thereby dampening the ejection of said plug. 20 25
25. A safety device, according to one or more of the preceding claims, **characterized in that** said safety device comprises gaskets, seals, silicone and other elements operating as a membrane, applied to said holes to provide a pressure balancing and/or for preventing sparkling wine from exiting said bottle. 30

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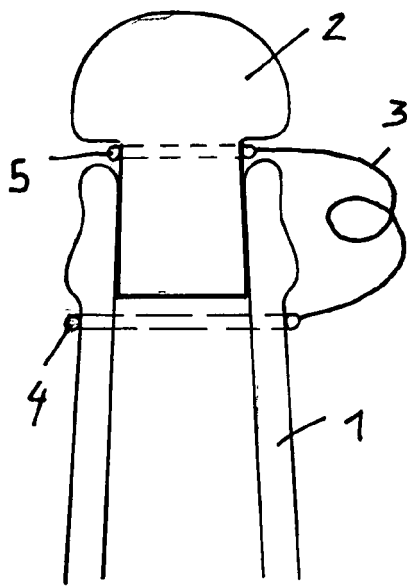


FIG. 1

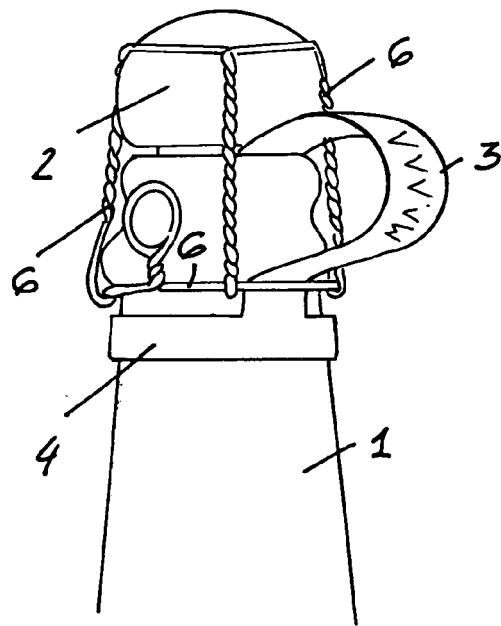


FIG. 2

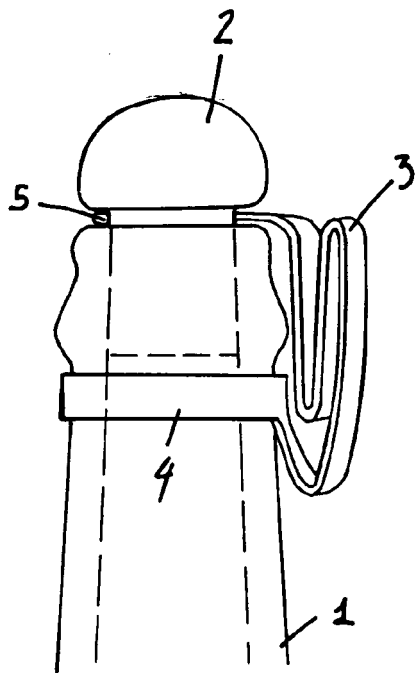


FIG. 3

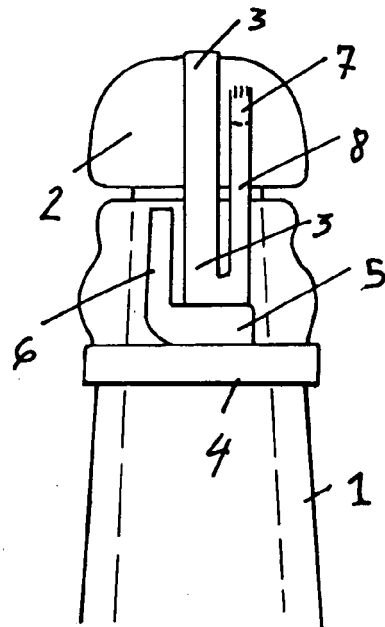


FIG. 4



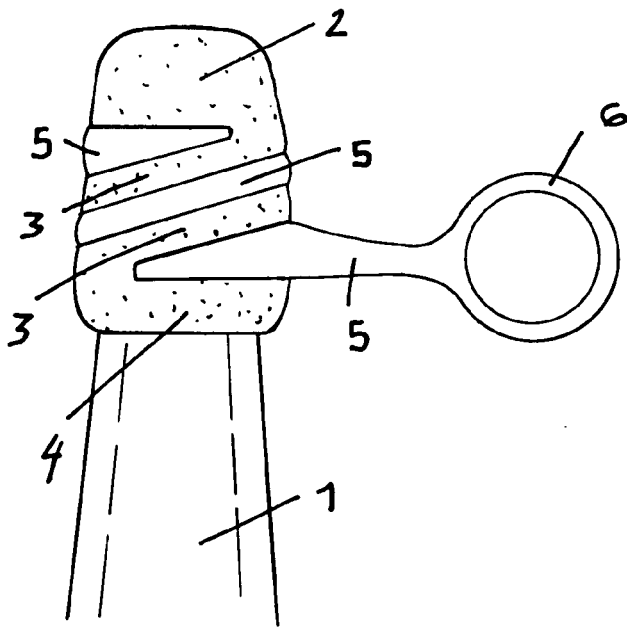


FIG. 5

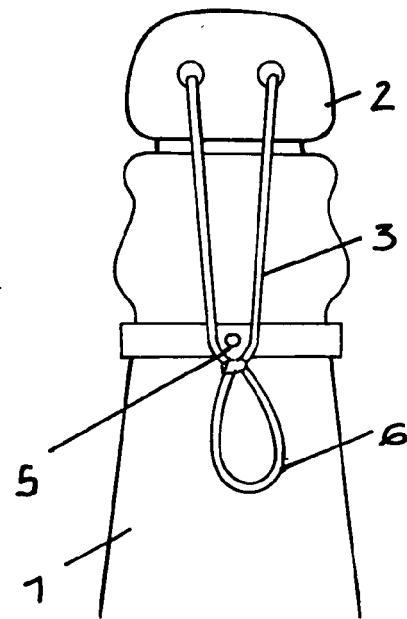


FIG. 6

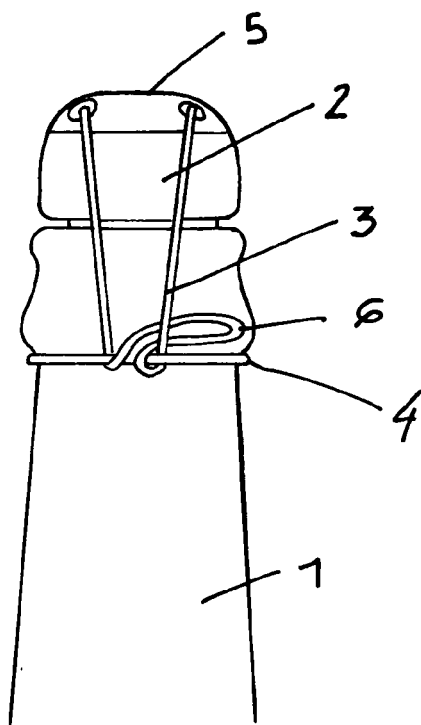


FIG. 7

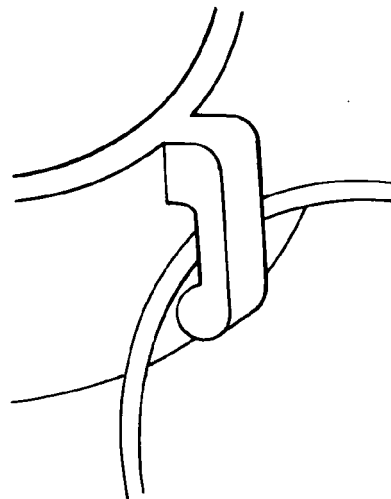


FIG. 8

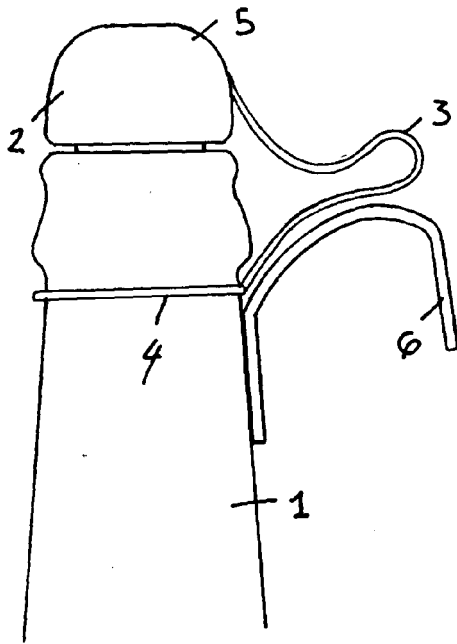


FIG. 9

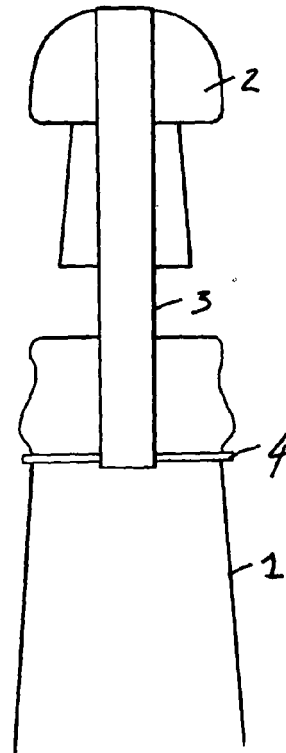


FIG. 10

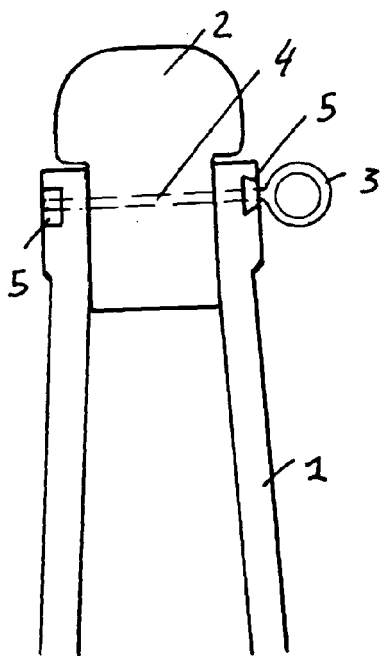


FIG. 11

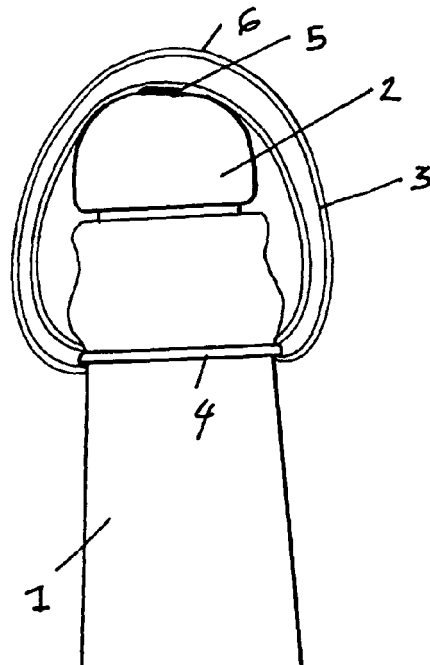


FIG. 12

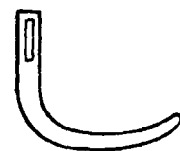


FIG. 13



European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 07 00 9269

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 4 564 114 A (COLE HAROLD E [US]) 14 January 1986 (1986-01-14) * column 1, lines 4-7 * * column 2, line 28 - column 5, line 17 * * figures 1-4 *	1,2,6-9	INV. B65D55/16 B65D39/00
X	US 4 513 870 A (ZALTSMAN EFIM [US]) 30 April 1985 (1985-04-30) * column 1, lines 20-26 * * column 4, lines 1-24 * * column 8, lines 10-20 * * column 9, line 10 - column 11, line 11 * * column 17, line 2 - column 18, line 10 * * figures 2-4,10-17 *	1,2,22	
X	DE 41 19 804 A1 (SCHUMACHER ELMAR [DE]) 17 December 1992 (1992-12-17) * column 5, lines 5-55; figures 5-8 *	1,17,23	
A		18	
X	FR 2 794 438 A (SOUCHKO ALEXANDRE [FR]) 8 December 2000 (2000-12-08) * page 1, lines 1-10 * * page 3, line 28 - page 4, line 33; figures 1-6 *	1,2,17	TECHNICAL FIELDS SEARCHED (IPC)
A		3	B65D
X	FR 2 772 726 A (GRENIER MICHEL [FR]) 25 June 1999 (1999-06-25) * the whole document *	1,2	
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X	DE 198 09 615 A1 (MOIN LAALI [DE]) 20 January 2000 (2000-01-20) * the whole document *	1,2	
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X	DE 22 00 857 A1 (WEINZIERL RUDOLF DR DR; SCHREIBELMAYER PETER) 12 July 1973 (1973-07-12) * the whole document *	1,2	
	-/-		
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 28 August 2007	Examiner Leijten, René
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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EPO FORM 1503 03.82 (P04C01)



European Patent  
Office

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Application Number  
EP 07 00 9269

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 4 583 652 A (GOLDBERG JAMES R [US]) 22 April 1986 (1986-04-22)	1	
A	* column 3, lines 18-57; figures 1,2 * -----	10	
			TECHNICAL FIELDS SEARCHED (IPC)
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 28 August 2007	Examiner Leijten, René
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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  .....  &amp; : member of the same patent family, corresponding document</p>			

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EPO FORM 1503 03/82 (P04C01)

**CLAIMS INCURRING FEES**

The present European patent application comprised at the time of filing more than ten claims.

- ☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
- ☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.

**LACK OF UNITY OF INVENTION**

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

- ☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- ☒ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
- ☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
- ☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claim: 1

Safety device for avoiding corks from being uncontrollably launched.

1.1. claim: 1 and 2

1.2. claims: 1, 3 and 4

1.3. claim: 1 and 5

1.4. claims: 1 and 6-9

1.5. claim: 1 and 10

1.6. claim: 1 and 1

1.7. claim: 1 and 12

1.8. claims: 1, 13 and 14

1.9. claim: 1 and 15

1.10. claim: 1 and 16

1.11. claim: 1 and 17

1.12. claims: 1, 18 and 19

1.13. claims: 1, 20 and 21

1.14. claim: 1 and 22

1.15. claim: 1 and 23

1.16. claim: 1 and 24



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**LACK OF UNITY OF INVENTION  
SHEET B**

Application Number  
EP 07 00 9269

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1.17. claim: 1 and 25

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Please note that all inventions mentioned under item 1, although not necessarily linked by a common inventive concept, could be searched without effort justifying an additional fee.

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

EP 07 00 9269

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  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

28-08-2007

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			EP 0207143 A1 07-01-1987
			WO 8603727 A1 03-07-1986
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FR 2772726	A	25-06-1999	NONE
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