

(19)



Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

EP 1 027 263 B1

(12)

EUROPEAN PATENT SPECIFICATION

(45) Date of publication and mention
of the grant of the patent:
24.04.2002 Bulletin 2002/17

(51) Int Cl.7: **B65D 17/00**, B65D 41/32,
B65D 49/04

(21) Application number: **98954335.0**

(86) International application number:
PCT/EP98/06313

(22) Date of filing: **05.10.1998**

(87) International publication number:
WO 99/21773 (06.05.1999 Gazette 1999/18)

(54) **BOTTLE CLOSURE WITH A GUARANTEE SEAL, ESPECIALLY FOR BOTTLES CONTAINING
QUALITY DRINKS**

FLASCHENVERSCHLUSS MIT GARANTIESIEGEL, INSBESONDERE FÜR HOCHWERTIGE
GETRÄNKE ENTHALTENDE FLASCHEN

FERMETURE DE BOUTEILLE AVEC JOINT D'ÉTANCHEITÉ GARANTI, NOTAMMENT POUR DES
BOUTEILLES CONTENANT DES BOISSONS DE QUALITÉ

(84) Designated Contracting States:
ES FR GB IT

(74) Representative: **Perani, Aurelio et al**
Perani Mezzanotte & Partners
Piazza San Babila 5
20122 Milano (IT)

(30) Priority: **28.10.1997 IT MI972423**

(43) Date of publication of application:
16.08.2000 Bulletin 2000/33

(56) References cited:

WO-A-85/01271	WO-A-94/18087
WO-A-97/06072	GB-A- 2 124 599
GB-A- 2 285 623	GB-A- 2 302 867
LU-A- 88 851	US-A- 4 474 302
US-A- 5 544 770	

(73) Proprietor: **GUALA CLOSURES S.P.A.**
15100 Alessandria (IT)

(72) Inventor: **BATTEGAZZORE, Piero**
I-15100 Alessandria (IT)

Note: Within nine months from the publication of the mention of the grant of the European patent, any person may give notice to the European Patent Office of opposition to the European patent granted. Notice of opposition shall be filed in a written reasoned statement. It shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

EP 1 027 263 B1

Description

[0001] The present invention relates to an improved bottle closure with a guarantee seal, especially for bottles containing quality drinks such as, for example, matured spirits.

[0002] A bottle closure is known from EP-A-0502379, which substantially comprises a pouring assembly for fixing to the neck of a bottle and a stopper which removably engages the pouring assembly; an outer tubular cap is fixed to the stopper and bears against a projecting annular portion of a collar of the pouring assembly. A seal is constituted by a breakable outer ring joining the cap and the projecting annular portion of the collar to each other.

[0003] The cap covers the stopper and the pouring assembly and its outer surface is smooth so that it can be suitably decorated. This ensures that the closure is aesthetically pleasing.

[0004] In order to break the seal, the outer breakable ring is torn by means of a special tab, thus releasing the cap from the outer portion of the collar and enabling the cap to be removed along with the stopper of the pouring assembly.

[0005] The seal prevents any counterfeit operation, which would consist in recovering an empty, used bottle with an opened seal, filling it with an equivalent drink of cheaper quality, reclosing the bottle and reconstructing the seal.

[0006] The object of the present invention is to provide a bottle closure comprising a pouring assembly, a stopper and a cap fixed to this stopper, which has a seal which is more economical to manufacture than that described above and even more effective.

[0007] This object is achieved by providing a bottle closure with a guarantee seal, especially for bottles containing quality drinks, comprising a pouring assembly for fixing to the neck of a bottle and a stopper which removably engages the pouring assembly, an outer, tubular cap being fixed to the stopper so as to cover the stopper and the pouring assembly, an upper portion of the cap being fixed to the stopper and the cap also being secured to the pouring assembly with a breakable seal, characterised in that it includes means for anchoring the cap to the pouring assembly both axially and rotationally by a lower portion of the cap and in that between the said upper portion and the said lower portion of the cap is interposed a breakable intermediate annular strip formed integrally with the said portions of the cap.

[0008] In order better to understand the invention one embodiment thereof is described herewith by way of non-limitative example, illustrated in the appended drawings, in which:

Figure 1 is an enlarged, partially sectioned elevational view of a bottle closure according to the invention;

Figure 2 is an elevational view of a component of

the closure of Figure 1;

Figure 3 shows the component of Figure 2 rotated 180° about its own longitudinal axis;

Figure 4 is an enlarged partial section of the component of Figure 2, taken on the line IV-IV;

Figure 5 is a perspective view of the bottle closure of Figure 1;

Figure 6 shows the seal being broken on the said closure; and

Figure 7 shows the said bottle closure with the seal broken.

[0009] With reference to Figure 1, a closure according to the invention is indicated 10, while a bottle, of which only the upper portion is shown, is indicated 11.

[0010] The bottle 11, in itself conventional, has a substantially cylindrical neck 12 with a mouth 13 and a body 14 joined to the neck 12.

[0011] The closure 10 includes a pouring assembly 15 of a known type and therefore not described in detail here but simply broken down into its main parts. The pouring assembly 15 includes a ball valve member 16 which is inserted into the neck 12 of the bottle and prevents fraudulent refilling of the bottle. A pouring unit 17 is mounted on the valve member 16. A collar 18 is fixed to the pouring unit 17 and surrounds the outside of the bottle neck 12. All the components described above of the pouring assembly 15 are securely fixed to each other. The pouring assembly 15 is fixed to the neck 12 of the bottle both axially and rotationally in a known manner.

[0012] A stopper 19 is screwed onto the pouring unit 17. An outer tubular cap 20, of plastics material, is mounted on the stopper 19 so as totally to cover the stopper 19 and the collar 18 of the pouring assembly 15. In an upper portion 26 of the cap 20, the stopper 19 and the cap 20 are fixed against rotation by two respective knurlings 21 and 22 engaged with one another. In addition, again in the upper portion 26 of the cap 20, the stopper 19 and the cap 20 are fixed to each other axially by means of an annular projection 23 inside the cap which bears against the lower portion of the stopper. In addition, the cap 20 is also fixed, at a lower portion 31, for rotation with the collar 18 again by means of respective annular knurlings 24 and 25 engaged with one another. Still at its lower portion 31, the cap 20 is also axially fixed to the collar 18 by means of two series of annular projections 27 and 28 of the cap which engage two respective grooves 29 and 30 in the collar.

[0013] An intermediate breakable annular strip 32 is interposed between the upper portion 26 and the lower portion 31 of the cap 20. This strip 32 includes a first section which acts as a tab 32A, from which extends a second section 32B for a portion of the circumference and which is followed by a descending section 32C, a further section 32D which extends for a further portion of the circumference and a final, wider section 32E which extends for a further portion of the circumference

and ends at the descending section 32C. The tab 32A is housed in a cutout 33 formed in the upper portion 26 of the cap 20. The annular strip 32 is only connected to the upper portion 26 and to the lower portion 31 of the cap 20 by small bridge elements 34. The final section 32E is also connected to the tab 32A, to the following section 32B and to the descending section 32C by bridge elements 34. One corner of the tab 32A is held slightly detached from the surface of the cap 20 by means of a projection 35 on the tab itself. A metal band 36 is also provided which tightly encircles the cap 20 at the site of the breakable annular strip 32. In order to hold it securely on the cap 20, the upper portion of the metal band 36 grips over an annular projection 37 and an annular groove 38 formed in the cap itself. The lower portion of the metal band 36, on the other hand, closes inwardly around the bottom end of the cap 20 and the collar 18. This metal band 36 can be fitted onto the cap 20 by rolling.

[0014] Because of the mutual coupling of the knurlings 24 and 25 and that of the projections 27 and 28 with the grooves 29, 30, the cap 20 is securely fixed to the collar 18 and therefore to the bottle, thus forming a guarantee seal in itself.

[0015] As an additional security measure, a symbol 39 is inscribed by laser on the metal band 36, the strip 32, the collar 18 and the upper portion 26 of the cap 20. The chromatic change produced by the laser varies according to the material constituting the surface it is directed at.

[0016] The seal on the bottle closure 10 is broken as shown in Figure 6. The tab 32A is gripped and pulled outwardly around the bottle, so as to break the bridge elements 34 and unwind the annular strip 32, breaking and unwinding the metal strip 36 along with it.

[0017] Figure 7 shows the closure 10 once the annular strip 32 and the metal band 36 have been removed. It can be seen that only the upper portion 26 of the cap 20 remains, which appears undone, and the lower portion 31, fixed axially to the collar 18 owing to the engagement of the projections 28 with the groove 30 but free to rotate and separated from the said upper portion 26 of the cap 20.

[0018] In addition, the only portion of the symbol 39 which remains is that on the collar 18 and the upper portion 26 of the cap 20. This means that it is clear at a glance that the bottle closure 10 has been unsealed. As an additional guarantee, a message 40 is printed all round the collar 18 on the portion which was covered by the now removed strip 32, announcing that the closure 10 has been unsealed.

[0019] An advantage of the closure 10 is that the guarantee seal is substantially constituted by the cap itself, and not by a breakable external ring holding the cap to the collar as in the prior art closure described in EP-A-0502379. In this way, when assembling the closure 10 there is no need to make and mount the ring required by the prior art bottle closure, thus saving time and cut-

ting production costs.

[0020] A further advantage is provided by the fact that the closure 10 is even more difficult to reconstruct than the previously-mentioned closure, since the cap 20 is broken and would be very difficult and expensive to reconstruct compared to the ring of the prior art closure.

[0021] Clearly, the metal band 36 and the symbol 39 make any reconstruction of the bottle closure 10 even more difficult and expensive.

[0022] The outward angle of the tab 32A makes it easy to grasp.

[0023] It is clear that variations and/or additions may be made to the invention as described and illustrated.

[0024] A simplified version could be manufactured without the metal band and/or the symbol.

[0025] The configuration of the elements of the bottle closure could vary. Generally speaking, the annular strip could have any helical development. The shape of the tab could also vary. The tab could be held slightly raised by projections of any shape either on it or on the surface of the collar, or in fact by any other means.

[0026] The knurlings, projections and grooves may be replaced by any type of functionally equivalent lock, for example spot welding.

[0027] The outer band, forming an additional seal, could be made of a material other than metal, although the arrangement described by way of example is particularly effective.

[0028] The laser-inscribed symbol is also especially effective but a symbol could be inscribed by other means.

Claims

1. A bottle closure (10) with a guarantee seal, especially for bottles containing quality drinks, which includes a pouring assembly (15) for fixing to the neck (12) of a bottle (11) and a stopper (19) removably engaged in the pouring assembly (15), an outer tubular cap (20) being fixed to the stopper (19) so as to cover the stopper (19) and the pouring assembly (15), the upper portion (26) of the cap (20) being fixed to the stopper (19) and the cap (20) also being secured to the pouring assembly (15) with a breakable seal, **characterised in that** it includes means (24,25,27-30) fixing the cap (20) to the pouring assembly (15) both axially and rotationally by a lower portion (31) of the cap (20) and **in that** an intermediate breakable strip (32) is interposed between the said upper portion (26) and the said lower portion (31) of the cap (20) integrally formed with the two said portions (26,31) of the cap (20).
2. A bottle closure according to Claim 1, wherein the intermediate annular strip (32) has a substantially helical development.

3. A bottle closure according to Claim 2, wherein the intermediate annular strip (32) is connected to the said upper (26) and lower (31) portions of the cap (20) only by bridge elements (34).
4. A bottle closure according to Claim 3, wherein the superimposed sections (32A,32B,32E) of the intermediate annular strip (32) are also joined to each other only by bridge elements (34).
5. A bottle closure according to Claim 1, wherein the intermediate annular strip (32) includes an initial section serving as a tab (32A) for grasping and tearing the strip.
6. A bottle closure according to Claim 4, wherein the intermediate annular strip (32) includes an initial section shaped like a tab (32A) from which a further section (32B) extends for a portion of the circumference, and from which extends a descending section (32C), a further section (32D) which extends for a further portion of the circumference and a final, wider section (32E) which extends for a portion of the circumference and ends at the descending portion (32C).
7. A bottle closure according to Claim 5 or Claim 6, wherein the tab-shape section (32A) is housed in a cut-out (33) in the cap (20).
8. A bottle closure according to Claim 7, wherein means (35) are provided to hold the tab (32A) away from the surface of the cap (20).
9. A bottle closure according to Claim 8, wherein the said means are constituted by a projection (35) on the tab (32A).
10. A bottle closure according to any one of the preceding Claims, wherein a breakable annular band (36) is provided around the intermediate annular strip (32).
11. A bottle closure according to Claim 10, wherein the cap (20) has at least one annular projection (37) and one annular groove (38) for holding the annular band (36) onto the cap (20).
12. A bottle closure according to Claims 10 or 11, wherein the said annular band (36) is made of metal and is tightened around the intermediate annular strip (32) by rolling.
13. A bottle closure according to any one of the preceding Claims, wherein a symbol (39) is inscribed on at least the intermediate annular strip (32) and the upper portion (26) of the cap (20).

14. A bottle closure according to Claim 13, wherein the said symbol (39) is inscribed by laser.

15. A bottle closure according to Claim 1, wherein the axial locking means are constituted by annular projections (27,28) inside the cap (20) which engage grooves (29,30) in the collar (18) at the site of the lower portion (31) of the cap (20), and in that the rotational locking means comprise respective annular knurlings (24,25) in the cap (20) and the collar (18) which engage each other.

16. A bottle closure according to any one of the preceding Claims, wherein one or more messages (40) are inscribed on the collar (18) at the site of the intermediate annular strip (32) warning that the seal of the closure has been broken.

Patentansprüche

1. Flaschenverschluss (10) mit einem Garantiesiegel, insbesondere für hochwertige Getränke enthaltende Flaschen, der einen Ausgießaufbau (15) zum Befestigen an dem Hals (12) einer Flasche (11) und eine Sperre (19), die entferntbar in Eingriff mit dem Ausgießaufbau (15) steht, sowie eine äußere rohrförmige Kappe (20) enthält, die an der Sperre (19) befestigt ist, um die Sperre (19) und den Ausgießaufbau (15) abzudecken, wobei der obere Teil (26) der Kappe (20) an der Sperre (19) befestigt ist und die Kappe (20) außerdem mit einem zerbrechbaren Verschluss an dem Ausgießaufbau (15) befestigt ist, **dadurch gekennzeichnet, dass** er Mittel (24, 25, 27 - 30) enthält, welche die Kappe (20) sowohl axial als auch drehungsmäßig durch einen unteren Teil (31) der Kappe (20) fest mit dem Ausgießaufbau (15) verbinden, und dass ein zwischenliegender zerbrechbarer Streifen (32) zwischen dem oberen Teil (26) und dem unteren Teil (31) der Kappe (20) angeordnet ist, der in Einheit mit den zwei Teilen (26, 31) der Kappe (20) ausgebildet ist.
2. Flaschenverschluss nach Anspruch 1, wobei der zwischenliegende ringförmige Streifen (32) einen im wesentlichen wendelförmigen Fortsatz hat.
3. Flaschenverschluss nach Anspruch 2, wobei der zwischenliegende ringförmige Streifen (32) nur durch Brückenelemente (34) mit den oberen (26) und unteren (31) Teilen der Kappe (20) verbunden ist.
4. Flaschenverschluss nach Anspruch 3, wobei übereinandergelegte Abschnitte (32A, 32B, 32E) des zwischenliegenden ringförmigen Streifens (32) ebenfalls nur durch Brückenelemente (34) miteinander

ander verbunden sind.

5. Flaschenverschluss nach Anspruch 1, wobei der zwischenliegende ringförmige Streifen (32) einen Anfangsabschnitt enthält, der als eine Lasche (32A) zum Ergreifen und Aufreißen des Streifens dient. 5
6. Flaschenverschluss nach Anspruch 4, wobei der zwischenliegende ringförmige Streifen (32) einen Anfangsabschnitt wie eine Lasche (32A) enthält, von dem aus sich ein weiterer Abschnitt (32B) über einen Teil des Umfangs erstreckt, von dem aus sich ein absteigender Abschnitt (32C) erstreckt, von dem aus sich ein weiterer Abschnitt (32D) über einen weiteren Teil des Umfangs erstreckt und von dem aus sich ein abschließender, breiterer Abschnitt (32E) über einen Teil des Umfangs erstreckt und an dem absteigenden Teil (32C) endet. 10 15
7. Flaschenverschluss nach Anspruch 5 oder 6, wobei der laschenförmige Abschnitt (32A) in einem Abschnitt (33) in der Kappe (20) untergebracht ist. 20
8. Flaschenverschluss nach Anspruch 7, wobei Mittel (35) vorgesehen sind, um den laschenförmigen Abschnitt (32A) von der Oberfläche der Kappe (20) fernzuhalten. 25
9. Flaschenverschluss nach Anspruch 8, wobei die Mittel durch einen Vorsprung (35) auf dem laschenförmigen Abschnitt (32A) gebildet sind. 30
10. Flaschenverschluss nach einem der vorhergehenden Ansprüche, wobei ein zerbrechbares ringförmiges Band (36) um den zwischenliegenden ringförmigen Streifen (32) verlaufend vorgesehen ist. 35
11. Flaschenverschluss nach Anspruch 10, wobei die Kappe (20) zumindest einen ringförmigen Vorsprung (37) und eine ringförmige Nut (38) zum Halten des ringförmigen Bandes (36) auf der Kappe (20) hat. 40
12. Flaschenverschluss nach Anspruch 10 oder 11, wobei das ringförmige Band (36) aus Metall hergestellt und durch Rollen um den zwischenliegenden ringförmigen Streifen (32) festgezogen ist. 45
13. Flaschenverschluss nach einem der vorhergehenden Ansprüche, wobei auf zumindest dem zwischenliegenden ringförmigen Streifen (32) und dem oberen Teil (26) der Kappe (20) eine Beschriftung in Form eines Symbols (39) vorgesehen ist. 50
14. Flaschenverschluss nach Anspruch 13, wobei das Symbol (39) durch Lasergravur gebildet ist. 55
15. Flaschenverschluss nach Anspruch 1, wobei die

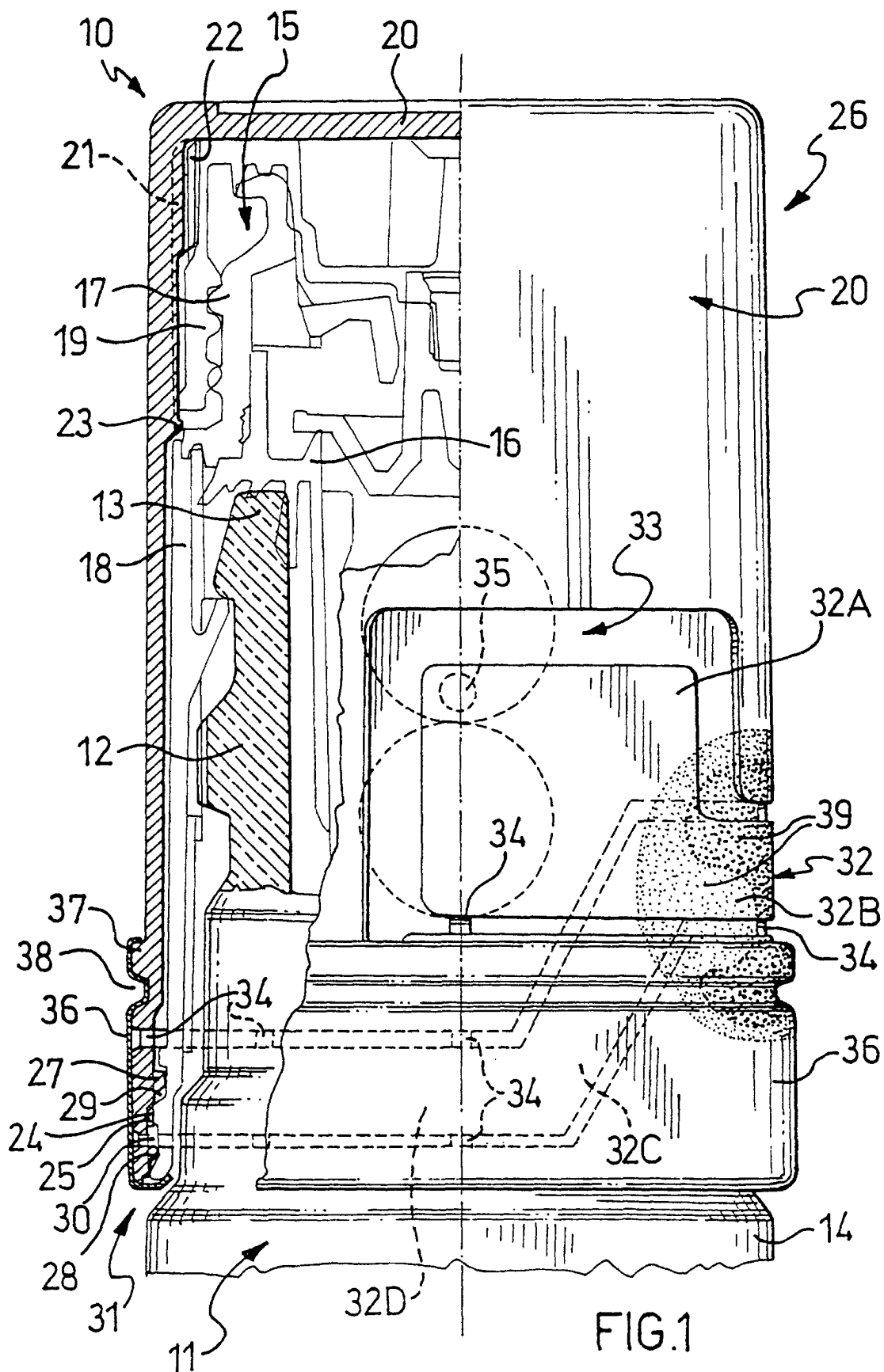
Axialsperrmittel durch ringförmige Vorsprünge (27, 28) innerhalb der Kappe (20) gebildet sind, die in Nuten (29, 30) in einem Kragen (18) an der Stelle des unteren Teils (31) der Kappe (20) eingreifen, und wobei die Drehungssperrmittel aus jeweiligen Rändelungsteilen (24, 25) in der Kappe (20) und dem Kragen (18) bestehen, die ineinandergreifen.

16. Flaschenverschluss nach einem der vorhergehenden Ansprüche, wobei eine Beschriftung in Form eines oder mehrerer Hinweise (40) an der Stelle des zwischenliegenden ringförmigen Streifens (32) auf dem Kragen (18) vorgesehen ist, die davor warnt, dass das Siegel des Verschlusses zerbrochen worden ist.

Revendications

1. Obturateur de bouteille (10) avec un sceau de garantie, en particulier, pour des bouteilles contenant des boissons de qualité, qui comprend un ensemble verseur (15) destiné à être fixé sur le goulot (12) d'une bouteille (11) et une butée (19) assemblée de manière amovible dans l'ensemble verseur (15), un couvercle tubulaire externe (20) étant fixé sur la butée (19) de manière à recouvrir la butée (19) et l'ensemble verseur (15), la partie supérieure (26) du couvercle (20) étant fixée sur la butée (19) et le couvercle (20) étant aussi fixé sur l'ensemble verseur (15) avec un sceau à rompre, **caractérisé en ce qu'il** comprend des moyens (24, 25, 27 à 30) destinés à immobiliser le couvercle (20) sur l'ensemble verseur (15) à la fois axialement et en rotation par une partie inférieure (31) du couvercle (20) et **en ce qu'une** bande intermédiaire pouvant être rompue (32) est interposée entre ladite partie supérieure (26) et ladite partie inférieure (31) du couvercle (20) formant une seule pièce avec lesdites deux parties (26, 31) du couvercle (20).
2. Obturateur de bouteille selon la revendication 1, dans lequel la bande annulaire intermédiaire (32) présente un développement sensiblement hélicoïdal.
3. Obturateur de bouteille selon la revendication 2, dans lequel la bande annulaire intermédiaire (32) est raccordée auxdites parties supérieure (26) et inférieure (31) du couvercle (20) seulement par des éléments de jonction (34).
4. Obturateur de bouteille selon la revendication 3, dans lequel les sections superposées (32A, 32B, 32E) de la bande annulaire intermédiaire (32) sont aussi reliées l'une à l'autre seulement par des éléments de jonction (34).

5. Obturateur de bouteille selon la revendication 1, dans lequel la bande annulaire intermédiaire (32) comprend une section initiale servant de patte (32A) afin de saisir et d'arracher la bande. 5
6. Obturateur de bouteille selon la revendication 4, dans lequel la bande annulaire intermédiaire (32) comprend une section initiale en forme de patte (32A) à partir de laquelle une autre section (32B) s'étend sur une partie de la circonférence, et à partir de laquelle s'étend une section descendante (32C), une autre section (32D) qui s'étend sur une autre partie de la circonférence et une autre section finale plus large (32E) qui s'étend sur une partie de la circonférence et s'achève sur la partie descendante (32C). 10 15
7. Obturateur de bouteille selon la revendication 5, ou la revendication 6, dans lequel la section en forme de patte (32A) est contenue dans une encoche (33) du couvercle (20). 20
8. Obturateur de bouteille selon la revendication 7, dans lequel des moyens (35) sont formés de manière à maintenir la patte (32A) écartée de la surface du couvercle (20). 25
9. Obturateur de bouteille selon la revendication 8, dans lequel lesdits moyens sont constitués par une saillie (35) sur la patte (32A). 30
10. Obturateur de bouteille selon l'une quelconque des revendications précédentes, dans lequel la bande annulaire pouvant être rompue (36) est formée autour de la bande annulaire intermédiaire (32). 35
11. Obturateur de bouteille selon la revendication 10, dans lequel l'obturateur (20) comporte au moins une saillie annulaire (37) et une rainure annulaire (38) afin de supporter la bande annulaire (36) sur le couvercle (20). 40
12. Obturateur de bouteille selon la revendication 10 ou 11, dans lequel ladite bande annulaire (36) est réalisée en métal et est serrée autour de la bande annulaire intermédiaire (32) par laminage. 45
13. Obturateur de bouteille selon l'une quelconque des revendications précédentes, dans lequel un symbole (39) est inscrit sur au moins la bande annulaire intermédiaire (32) et la partie supérieure (26) du couvercle (20). 50
14. Obturateur de bouteille selon la revendication 13, dans lequel ledit symbole (39) est inscrit par laser. 55
15. Obturateur selon la revendication 1, dans lequel les moyens de verrouillage axial sont constitués par des saillies annulaires (27, 28) à l'intérieur du couvercle (20) qui s'assemblent sur des rainures (29, 30) dans la bague (18) au niveau de la partie inférieure (31) du couvercle (20), et dans lequel les moyens de verrouillage en rotation comprennent des pal- ties annulaires moletées (24, 25) respectives sur le couvercle (20) et la bague (18) qui s'assemblent l'une sur l'autre.
16. Obturateur de bouteille selon l'une quelconque des revendications précédentes, dans lequel un ou plu- sieurs messages (40) sont inscrits sur la bague (18) au niveau de la bande annulaire intermédiaire (32), afin d'informer de la rupture du sceau de l'obtura- teur.



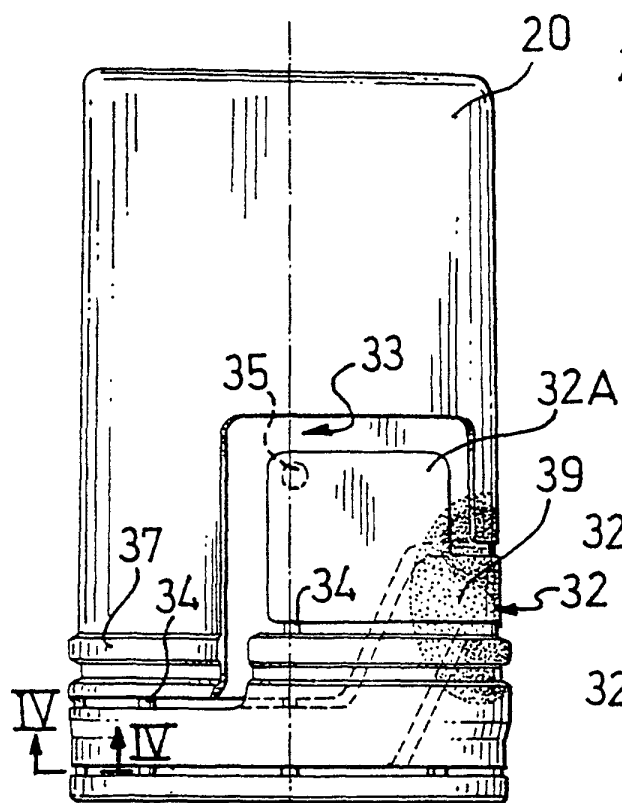


FIG. 2

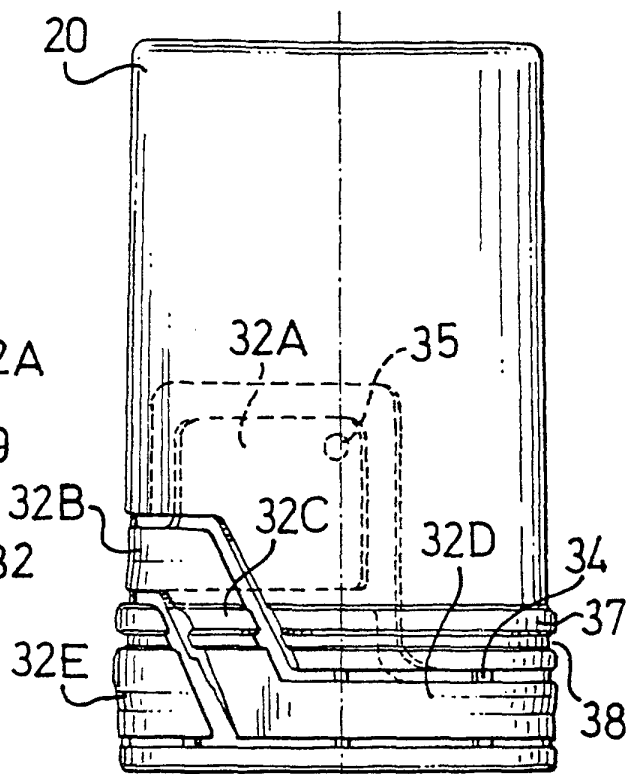


FIG. 3

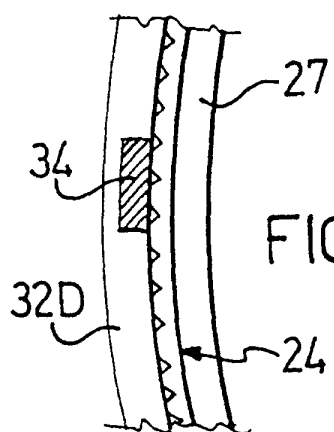


FIG. 4

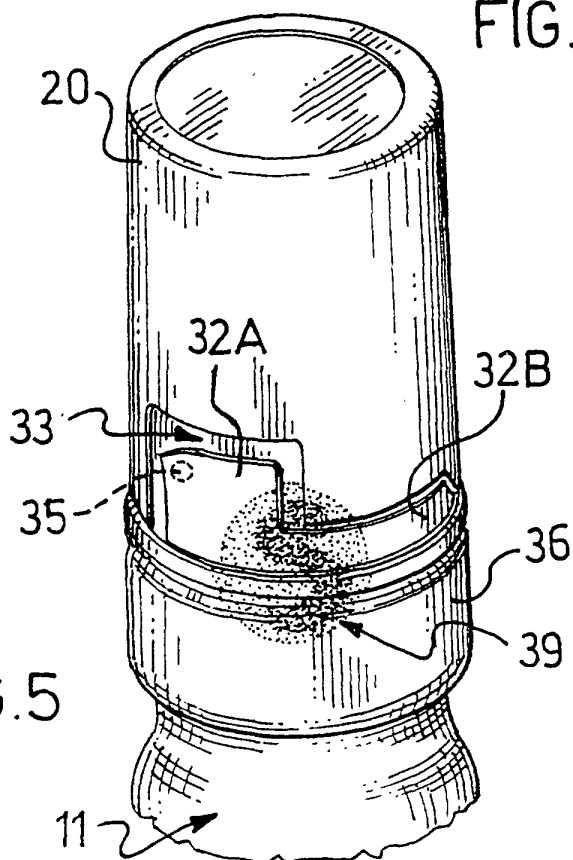


FIG. 5

