EUROPEAN PATENT SPECIFICATION

CAPSULE FOR A FLUID CONTAINER

KAPSEL FÜR EINEN FLUIDBEHÄLTER

CAPSULE POUR RECIPIENT DE LIQUIDE

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Description

[0001] The present invention relates to a capsule for a fluid container, and in particular a capsule for a bottle containing a drink.

[0002] A problem often encountered when pouring a liquid from a container is that a small amount of the liquid drips or runs from the outlet of the container down the exterior of the container after pouring is stopped. This can lead to a number of problems such as damage to labels on the container, which could have particularly harmful effects in the case of a medicine. Furthermore, the presence of fluid on the outside of the container can be dangerous as it may lead to handling accidents. Also, leakage of the fluid onto other objects and surfaces can cause further damage and accidents. Particular problems are encountered with glass bottles containing wine, and in particular red wine, which can easily cause stains.

[0003] This problem has been addressed in two main ways in the past. Firstly, the drips of fluid which are formed when pouring is terminated can be stopped from running down the exterior of the container. These prior art devices often comprise an absorbent material and are attached to or around the container hear the outlet. For example, it is common to use an absorbent ring placed around the neck of a wine bottle to soak up drops of wine as they run down the bottle. However, these solutions merely address the results, rather than the cause, of the drips of fluid.

[0004] Secondly, there have been attempts at preventing the formation of the drops of fluid. The first general approach in this area is to install some sort of funnel shaped outlet into the liquid container. The funnel shaped outlet often has an edge or rim which helps to quickly terminate the flow of liquid when pouring is stopped. However, this solution adds to the cost of the container as it involves both an additional component and an additional process step to successfully incorporate the funnel shaped member into the container. Furthermore, there is strong consumer resistance to the use of such an outlet in many areas, such as in wine bottles.

[0005] An alternative solution is the provision of a separate device for insertion into the outlet of a liquid container which again serves to prevent the formation of drops when pouring of the liquid is stopped. A commercially available device is described in EP 0 560 777. The device in EP 0 560 777 comprises a circular disc of elastic material which may be rolled up and inserted into the open neck of a wine bottle. The elastic nature of the material causes the disc to expand and grip the interior surface of the neck of the bottle. EP 0 560 777 indicates that the sharp edge of the rolled up disc serves to prevent the formation of drops upon termination of pouring.

[0006] Similar devices are disclosed in WO 95/19917, CA 2 347 311, US 5 979 718, and FR 1 9198 362. All of these documents disclose devices for preventing drip formation which comprise a piece of planar elastic material of various shapes and configurations which may be rolled up and inserted into the open neck of a wine bottle or other container. However, each of these devices have various disadvantages such as a tendency to be pushed inside the wine bottle. Also, the small devices are easily lost and must also be cleaned after each time that they are used.

[0007] US 5,924,739 discloses a capsule circumferentially around the neck of a wine bottle, which has an information panel on its inner side.

[0008] There exists a need therefore for a convenient and effective solution to the problem of unwanted drip formation when pouring a fluid from a container.

[0009] The present invention seeks to provide an improved fluid container.

[0010] According to one aspect of the present invention there is provided a capsule for a fluid container having an outlet, the capsule having at least one predetermined line of weakness defining a resilient of the capsule which is adapted to be inserted into the outlet and exert a force on the inner surface of the outlet to form a spout for the fluid container. Preferably, the fluid container is a bottle.

[0011] Conveniently, the fluid container is a wine bottle.

[0012] Advantageously, the capsule comprises plastic material.

[0013] Preferably, the capsule comprises PVC.

[0014] Conveniently, the capsule comprises PET.

[0015] Advantageously, the capsule comprises a metal.

[0016] Preferably, the capsule comprises aluminium.

[0017] Conveniently, the capsule comprises tin.

[0018] Advantageously, the capsule comprises two lines of weakness.

[0019] Preferably, the capsule comprises three lines of weakness.

[0020] Conveniently, the at least one predetermined line of weakness comprises a tear strip.

[0021] Advantageously, the at least one predetermined line of weakness comprises perforations.

[0022] Preferably, the at least one predetermined line of weakness comprises a scored line.

[0023] Conveniently, the capsule is for a wine bottle.

[0024] Advantageously, the portion of the capsule which is adapted to form a spout for the fluid container is provided with indicia.

[0025] Preferably, the indicia comprises promotional information.

[0026] Conveniently, the indicia comprises information in machine-readable form.

[0027] According to another aspect of the present invention there is provided a fluid container comprising a capsule as defined above.

[0028] According to a further aspect of the present invention, there is provided a method of forming a packaged fluid container comprising of the steps of providing a capsule as defined above, providing a fluid container, and attaching the capsule to the fluid container.
Preferably, the capsule is attached to the fluid container by heat shrinking.

Conveniently, the capsule is attached to the container by rolling.

According to yet another aspect of the present invention, there is provided a method of forming a spout for a fluid container comprising the steps of providing a container as defined above; breaking the capsule along at least one of the predetermined lines of weakness to remove a portion of the capsule; and inserting the removed portion of capsule into an outlet of the fluid container whereby the removed portion of the capsule is resilient and exerts a force on the inner surface of the outlet of the fluid container to form the spout.

Preferably, the removed portion of capsule is compressed inserted into the outlet of the container and released.

The present invention will now be described, by way of example, with reference to the accompanying drawings in which:

- Figure 1 is a front view of a bottle of wine in accordance with the present invention;
- Figure 2 is a close up view of the top of the wine bottle shown in Figure 1;
- Figure 3 is a perspective view of the capsule removed from the wine bottle shown in Figure 1;
- Figure 4 shows the capsule shown in Figure 3 in a compressed configuration;
- Figure 5 shows the capsule removed from the wine bottle in Figure 1 inserted into the neck of the wine bottle;
- Figure 6 is a partial view of the top of another wine bottle in accordance with the present invention;
- Figure 7 is a perspective view of the capsule removed from the wine bottle shown in Figure 6;
- Figure 8 is a partial view of another wine bottle in accordance with the present invention;
- Figure 9 shows a plan view of the capsule removed from the wine bottle shown in Figure 8;
- Figure 10 is a perspective view of the capsule of Figure 9 inserted into the open neck of the wine bottle shown in Figure 8;
- Figure 11 is a partial view of the top of another wine bottle in accordance with the present invention;
- Figure 12 is a plan view of the capsule removed from the wine bottle shown in Figure 11;
- Figure 13 is a partial perspective view of the capsule of Figure 12 inserted into the open neck of the wine bottle shown in Figure 11;
- Figure 14 is a partial view of the top of another wine bottle in accordance with the present invention;
- Figure 15 is a plan view of the capsule removed from the wine bottle of Figure 14;
- Figure 16 is a partial view of the top of another wine bottle in accordance with the present invention;
- Figure 17 is a plan view of the capsule removed from the wine bottle shown in Figure 16;
- Figure 18 is a partial perspective view of the inner layer of the capsule of Figure 17 inserted into the open neck of the wine bottle of Figure 16;
- Figure 19 is a partial perspective view of the top of another wine bottle in accordance with the present invention;
- Figure 20 is a plan view of the capsule removed from the wine bottle of Figure 19;
- Figure 21 is a partial perspective view of the top of a further wine bottle in accordance with the present invention; and
- Figure 22 is a plan view of the capsule removed from the wine bottle of Figure 21.

Turning to Figure 1, a wine bottle is shown generally at 10, which is sealed with a cork. The cork and the neck 12 of the bottle 10 are covered with a unitary piece of packaging 14 otherwise known as a capsule. The capsule provides a hygienic seal to prevent contamination of the bottle 10 and its contents. It also serves a number of other functions such as providing indicia regarding the contents of the bottle 10, and, where appropriate, information concerning the payment of excise duty. Also, capsule 14 provides a tamper evident seal so that consumers are confident that the contents of the bottle 10 are genuine and untainted. The capsule 14 is made from PVC and is heat-shrunk onto the bottle 10. The capsule may also be made from other plastics such as PET. The capsules may also be made from various metal foils such as tin or aluminium. Such metal foils may also be laminated or coated with plastic material, including plastic-aluminium laminates using, for example, PVC or PET. Metal-containing capsules are typically attached to wine bottles in a rolling step, rather than by heat-shrinking.

Figure 2 shows the neck 12 of the bottle 10 in more detail. The capsule 14 comprises a single heat-shrunk piece of PVC which covers the opening of the neck 12 and the cork contained therein. The capsule 14 extends down the neck 12 of the bottle 10. The capsule may be considered to comprise two portions; firstly, a substantially cylindrical portion 16 around the neck 12, and secondly, a bowl-shaped end cap portion 18 covering the cork.

A tear strip 20 is provided which extends coaxially with the neck 12 from the lower edge of the capsule 14 towards the end cap 18. A second tear strip 22 is provided around the circumference of the neck 12 at the upper end of the first tear strip 20 at a location relatively close to the top of the bottle 10. The second tear strip 22 divides the cylindrical portion 16 of the capsule from the end cap portion 18.

In use, a consumer would pull the first tear strip 20 upwards to form a slit in the lower portion 16 of the capsule. The second tear strip 22 would then be pulled around the circumference of the neck, thus severing the end cap 18 from the lower portion 16 of the capsule 14. This would have two results. Firstly, the capsule 14 would
be completely removed from the bottle 10 thus exposing the cork ready for removal. Secondly, the lower portion 16 of the capsule 14 would be ready to use in the formation of a drip prevention device as described below.

[0038] Figure 3 shows the configuration of the lower portion 16 of the capsule 14 immediately after removal from the bottle 10. The portion 16 assumes a generally cylindrical configuration with an axially extending gap caused by the removal of the tear strip 20. The portion 16 may be radially compressed into a spiral configuration as shown in Figure 4. The diameter of the compressed configuration of the portion 16 is less than that of the internal diameter of the open neck 12 of the wine bottle 10.

[0039] Turning to Figure 5, the compressed portion 16 has been inserted into the open neck or outlet 24 of the wine bottle 10 and then allowed to radially expand. The resilient nature of the portion 16 forces it to expand radially to abut the interior surface of the neck 24. The consumer may then pour the contents of the bottle 10 out of the neck 24 via the member 16. The nature of the material of the member 16 and its sharp terminal edge forms a spout which ensures that drop formation upon termination of pouring is minimized. When the bottle is tilted upright to terminate pouring, the rolled spout formed by the portion 16 causes the flow of wine to stop quickly. This abrupt termination in flow minimizes or prevents the formation of drops which would otherwise run down the outside of the bottle 10.

[0040] Although the above embodiment has been described with reference to a capsule which incorporates tear strips, the present invention is also applicable to other methods of defining the portion of the capsule to be used as a pouring spout. Figure 6 shows the top of a wine bottle 30 having a neck 32. The neck 32 on the bottle 30 is sealed by a plastic laminated aluminium (poly-lam) capsule 34. In a similar way to the capsule shown in Figure 2 above, the capsule 34 is divided into a lower substantially cylindrical portion 36 and an upper inverted bowl shaped portion 38 covering the cork. In place of the tear strips discussed above, the portions 36 and 38 of the capsule 34 are divided and defined by a first vertical line of perforations 40 meeting an upper circumferential circle of perforations 42. The perforations define predetermined lines of weakness in the capsule 34. A consumer may easily tear along the vertical row of perforations 40 and then around the neck 32 of the bottle 30 using the circle of perforations 42. This will result in the bowl-shaped cap 38 and the rolled rectangular portion 36 of the capsule 34 being separated from each other and from the neck 32 of the bottle 30. The cork may then be removed from the bottle 30 in the normal way.

[0041] Figure 7 shows the lower portion 36 of the capsule 34 after being removed from the bottle 30. Because of the springy nature of the poly-lam material, the portion 36 retains a substantially tubular shape. However, as described above and shown in Figures 4 and 5, the lower portion 36 may be spirally compressed, inserted into the open neck of the wine bottle 30 and then released. The portion 36 will then expand to grip the inner surface of the open neck of the bottle 30 and will act as a drip preventing pouring spout when the wine is poured from the bottle 30.

[0042] Figure 8 shows the top of a wine 50 with some features shown in phantom. The bottle 50 has a neck 52 which is sealed by a PVC capsule 54. The capsule 54 is provided with three tear strips. A first tear strip 62 extends from the lower edge of the capsule 54 upwards in a spiral configuration towards the top of the wine bottle 50. In a similar way to the embodiments described above, the tear strip 62 extends upwards to meet a circumferential third tear strip 66 around the upper part of the neck 52 of the bottle 50. The first tear strip 62 extends less than 180° around the circumference of the neck 52. A second tear strip 64 extends upwardly from the lower edge of the capsule 54 to meet the third circular tear strip 66. Again, the second tear strip 64 extends less than 180° around the neck 52. The lower ends of the first and second tear strips 62 and 64 do not meet but are spaced apart on the lower edge of the capsule 54.

[0043] Thus, when the first, second, and third tear strips 62, 64 and 66 are removed by the consumer the capsule 54 is divided into three pieces. Firstly, there is the end cap piece 60 covering the cork. Secondly, a substantially triangular portion 56 and a trapezoid shaped portion 58 are obtained.

[0044] A plan view of the trapezoid shaped portion 58 in a flattened configuration is shown in Figure 9. The portion 58 may be wound up in a spiral configuration and then inserted into the open neck of the wine bottle 60, with the wider edge (which was defined by the third tear strip 66) inserted into the bottle. The resulting situation (with the rolled up portion 58 inserted into the neck of the wine bottle 50) is shown in Figure 10. The portion 58 thus defines a pouring spout which minimizes the formation of drops upon termination on pouring wine.

[0045] It is evident to a person skilled in the art that there are a number of possible configurations in which a capsule or other packaging may be divided in order to give a suitable portion to use as a drip preventing spout to be inserted into the container. Figure 11 shows the top of a wine bottle 70 having a neck 72 sealed by a capsule 74. A single tear strip 76 extends in an arc upwards from the lower edge of the capsule 74 to an apex below the top of the bottle 70, and then curves back down again to meet the lower edge of the capsule 74 further around the neck 72 of the bottle 70.

[0046] The tear strip 76 extends around about 270° about the circumference of the neck 72. The tear strip 76 divides and defines two separate portions of the capsule 74, namely a lower portion 78 and an upper portion 80. When the tear strip is removed, the upper portion 80 may be removed to expose the cork in the neck 72 of the bottle 70. The lower portion 78 is shown in a flattened configuration in Figure 12 having a substantially parabolic shape. In a similar way to the embodiments described
above, the portion 78 may be rolled up and inserted into the open neck 72 of the bottle 70 to define a drip-preventing pouring spout, as shown in Figure 13.

[0047] In some instances it may be preferable to avoid the use of the potentially unclean outer surface of the capsule when pouring the contents of a container. Figure 14 shows an alternative embodiment which addresses this point. The top of a wine bottle 80 is shown having a neck 82 sealed by a capsule 84. In this case, the capsule 84 is manufactured from a laminated material having a lower aluminium layer and an upper plastic layer. The capsule 84 is divided into a lower substantially rectangular portion 86 in an upper cap-like portion 88 by an upwardly extending first tear strip 90 and an upper circumferential second tear strip 92. This is similar to the situation shown in Figure 2. Removal of the tear strips 90 and 92 allows the cap portion 88 to be removed from the bottle and provides the lower portion 86 ready for use as a pouring spout.

[0048] Figure 15 shows the lower portion 86 of the capsule 84 after removal from the bottle 80. The outer plastic layer 92 may be peeled away to reveal the lower metal layer 94. After the removal of the plastic layer 92, the remaining metal layer 94 may be rolled up and inserted into the neck 82 of the bottle 80 for use as a pouring spout in a similar way to that described above. Multilayered plastic materials (i.e. without metal layers) could also be used in a similar way.

[0049] Figure 16 shows a further embodiment of the invention. A wine bottle 100 is shown having a neck 102 sealed by a capsule 104. The capsule 104 is divided into a lower substantially rectangular portion 106 and an upper cap like portion 108 by a first upwardly extending tear strip 110 and an upper circumferential tear strip 112.

[0050] Figure 17 shows the underside of lower portion 106 of the capsule 104 after removal from the neck 102. Again, the capsule 104 comprises a layered material, in this case comprising an upper layer of a first plastic material and a lower layer of a second plastic material. Also, in this case the lower layer has a specific shape rather than merely being a planar multi-layered sheet of material. The outer layer 114 has a substantially rectangular shape. However, the inner layer 116 has a pre-defined semi-circular shape. The upper layer 114 may be peeled away from the inner layer 116, which may then be rolled up and inserted into the neck 102 of the bottle 100 to form a drip preventing pouring spout as shown in Figure 18.

[0051] It is evident to a person skilled in the art that there are numerous techniques which may be used to pre-define the portion of the capsule or other packaging material to be used as a pouring spout. For example, tear strips, and perforations, and other pre-defined lines of weakness may be formed in the capsule or other packaging.

[0052] Figure 19 shows the top of a wine bottle 120 having a neck 122 sealed by a capsule 124. Again, the capsule 124 is divided into a lower cylindrical portion 126 and an upper cap-like portion 128. The portions 126 and 128 are defined by two pre-defined lines of weakness in the capsule 124 formed by scores in the surface of the material. There is a first upwardly extending line 130 extending from the lower edge of the capsule 124 upwards towards the top of the neck 122. The first line 130 terminates at an upper circumferential line of weakness 132 formed near the top of the neck 122. A notch 134 is defined at the lower edge of the line 130 for ease of use. A consumer may tear the capsule 124 along the first and second lines of weakness 130 and 132 to form and remove the lower portion 126 and the upper portion 128 of the capsule 124 from the neck 122.

[0053] Figure 20 shows the substantially rectangular shape of the lower portion 126 in a flattened configuration, after being removed from the neck 122 of the bottle 120. As described above, the lower portion 126 may then be rolled up and inserted into the open neck 122 of the bottle 120 to form a drip preventing pouring spout.

[0054] Figure 21 shows the top of a wine bottle 140 having a neck 142 sealed by a PVC capsule 144. The capsule 144 is divided into two portions by a line of perforations 150. The line of perforations 150 has a lower pair of substantially vertical lines 152 and an upper ring 154. The perforations extend from the lower edge of capsule 144 upwards towards the top of the bottle 140. As the perforations near the top of the bottle, they turn to define a ring extending most of the way around the neck 152 and then extend downwards to reach the bottom edge of the capsule 144.

[0055] The perforations 150 thus divide the capsule into a lower substantially cylindrical portion 146 and an upper cap-like portion 148 (having a downwardly extending tab 154). The tab 154 is defined by the portion of the capsule 144 between the lower lines of perforations 152.

[0056] A user may grasp the tab 154 and pull upwards, tearing the capsule along the perforations 150.

[0057] The portion 146 of the capsule 146 is then freed from the bottle 140 ready for use as a pouring spout. Figure 22 shows the general shape of 146 of a rectangle with rounded corners. The portion 146 may be rolled up and inserted into the neck 152 of the bottle 150 in a similar way to that described above.

[0058] An important aspect of the invention relates to the provision of indicia on the packaging, and in particular on the portion of the packaging that is adapted to form a spout. For example, the spout portion may be provided with promotional information either relating to the product itself or to a different product, service or offer etc. Preferably, the spout portion contains information about special offers relating to the product. More preferably, the spout portion forms a voucher which is redeemable at stores. Also, the indicia could comprise information in machine readable form, such as a bar code. The indicia could be provided on the external and/or the internal surface of the packaging, for example, it may be desired to provide indicia on the internal surface of the packaging to prevent it from being viewed before the product is pur-
Although the invention has been described with reference to bottle having corks, it is also applicable to other types of sealed container, such as screw top bottles. As described above, the packaging could extend over the top of the bottle, covering the screw top. Alternatively, the packaging could extend over the lower portion of the screw top, leaving the top of the screw top uncovered. Also, the portion of the packaging to be used as a pouring spout could be removed as a result of the top being unscrewed from the bottle. Alternatively, the packaging could be adapted to be broken by the consumer as a separate step to the unscrewing of the screw top.

**Claims**

1. A capsule (14) for a fluid container (10) having an outlet (24), the capsule (14) having at least one predetermined line of weakness (20, 22) defining a resilient portion (16) of the capsule (14) which is adapted to be inserted into the outlet (24) and exert a force on the inner surface of the outlet (24) to form a spout for the fluid container (10).

2. A capsule (14) according to Claim 1 which is a capsule for a bottle.

3. A capsule (14) according to Claim 1 or 2 which is a capsule for a wine bottle.

4. A capsule (14) according to Claim 1, 2 or 3 which comprises plastics material.

5. A capsule (14) according to any preceding claim which comprises PVC.

6. A capsule (14) according to any preceding claim which comprises PET.

7. A capsule (14) according to any preceding claim which comprises a metal.

8. A capsule (14) according to any preceding claim which comprises aluminium.

9. A capsule (14) according to any preceding claim which comprises tin.

10. A capsule (14) according to any preceding claim which comprises two lines of weakness.

11. A capsule (14) according to any Claims 1 to 9 which comprises three lines of weakness.

12. A capsule (14) according to any preceding claim wherein the at least one predetermined line of weakness comprises a tear strip.

13. A capsule (14) according to any preceding claim wherein the at least one predetermined line of weakness comprises perforations.

14. A capsule (14) according to any preceding claim wherein the at least one predetermined line of weakness comprises a scored line.

15. A capsule (14) according to any preceding claim which is a capsule for a wine bottle.

16. A capsule (14) according to any preceding claim wherein the portion of the capsule which is adapted to form a spout for the fluid container is provided with indicia.

17. A capsule (14) according to Claim 16 wherein the indicia comprises promotional information.

18. A capsule (14) according to Claim 16 or 17 wherein the indicia comprises information in machine-readable form.

19. A fluid container (10) comprising a capsule (14) as defined in any preceding claim.

20. A method of forming a packaged fluid container (10) comprising the steps of providing a capsule (14) as defined in any of Claims 1 to 18; providing a fluid container (10), and attaching the capsule (14) to the fluid container (10).

21. A method according to Claim 20 wherein the capsule (14) is attached to the fluid container (10) by heat shrinking.

22. A method according to Claim 20 wherein the capsule (14) is attached to the container (10) by rolling.

23. A method of forming a spout for a fluid container (10) comprising the steps of providing a container (10) as defined in Claim 19; breaking the capsule (14) along at least one of the predetermined lines of weakness (20, 22) to remove a resilient portion (16) of the capsule (14); and inserting the removed portion (16) of the capsule (14) into an outlet (24) of the fluid container (10) whereby the removed portion (16) of the capsule (14) exerts a force on the inner surface of the outlet (24) of the fluid container (10) to form the spout.

24. A method according to Claim 23 wherein the removed portion (16) of the capsule (14) is compressed, inserted into the outlet (24) of the container (10) and released.
Patentansprüche

1. Kappe (14) für einen Fluidbehälter (10) mit einem Auslaß (24), wobei die Kappe (14) zumindest eine vorgegebene Schwachstellenlinie (20,22) hat, die einen elastischen Abschnitt (16) der Kappe (14) festlegt, der ausgestaltet ist, um in den Auslaß (24) eingeführt zu werden, und der eine Kraft auf die innere Oberfläche des Auslasses (14) ausübt, um einen Ausguß für den Fluidbehälter (10) zu bilden.

2. Kappe (14) nach Anspruch 1, die eine Kappe für eine Flasche ist.

3. Kappe (14) nach Anspruch 1 oder 2, die eine Kappe für eine Weinflasche ist.

4. Kappe (14) nach Anspruch 1, 2 oder 3, die Kunststoffmaterial aufweist.

5. Kappe (14) nach einem der vorangehenden Ansprüche, die PVC aufweist.

6. Kappe (14) nach einem der vorangehenden Ansprüche, die PET aufweist.

7. Kappe (14) nach einem der vorangehenden Ansprüche, die ein Metall aufweist.

8. Kappe (14) nach einem der vorangehenden Ansprüche, die Aluminium aufweist.


10. Kappe (14) nach einem der vorangehenden Ansprüche, die zwei Schwachstellenlinien aufweist.

11. Kappe (14) nach einem der vorangehenden Ansprüche 1 bis 9, die drei Schwachstellenlinien aufweist.

12. Kappe (14) nach einem der vorangehenden Ansprüche, bei der zumindest eine der vorgegebenen Schwachstellenlinien einen Zugstreifen aufweist.


15. Kappe (14) nach einem der vorangehenden Ansprüche, die eine Kappe für eine Weinflasche ist.

16. Kappe (14) nach einem der vorangehenden Ansprüche, bei der der Abschnitt der Kappe, der ausgestal-
2. Capsule (14) selon la revendication 1, qui est une capsule pour une bouteille.

3. Capsule (14) selon la revendication 1 ou 2, qui est une capsule pour une bouteille de vin.

4. Capsule (14) selon la revendication 1, 2, ou 3, qui comprend une matière plastique.

5. Capsule (14) selon l’une quelconque des revendications précédentes, qui comprend du PVC.

6. Capsule (14) selon l’une quelconque des revendications précédentes, qui comprend du PET.

7. Capsule (14) selon l’une quelconque des revendications précédentes, qui comprend un métal.


10. Capsule (14) selon l’une quelconque des revendications précédentes, qui comprend deux lignes de faiblesse.

11. Capsule (14) selon l’une quelconque des revendications 1 à 9, qui comprend trois lignes de faiblesse.

12. Capsule (14) selon l’une quelconque des revendications précédentes, dans laquelle la au moins une ligne de faiblesse prédéterminée comprend une bande de déchirement.

13. Capsule (14) selon l’une quelconque des revendications précédentes, dans laquelle la au moins une ligne de faiblesse prédéterminée comprend des perforations.

14. Capsule (14) selon l’une quelconque des revendications précédentes, dans laquelle la au moins une ligne de faiblesse prédéterminée comprend une ligne prédécoupée.

15. Capsule (14) selon l’une quelconque des revendications précédentes, qui est une capsule pour une bouteille de vin.

16. Capsule (14) selon l’une quelconque des revendications précédentes, dans laquelle la partie de la capsule qui est adaptée pour former un bec verseur pour le récipient de fluide est prévue avec des indices.

17. Capsule (14) selon la revendication 16, dans laquelle l’indice comprend une information promotionnelle.

18. Capsule (14) selon la revendication 16 ou 17, dans laquelle l’indice comprend l’information sous une forme lisible par une machine.

19. Récipient de fluide (10) comprenant une capsule (14) selon l’une quelconque des revendications précédentes.

20. Procédé pour former un récipient de fluide (10) emballé comprenant les étapes consistant à prévoir une capsule (14) selon l’une quelconque des revendications 1 à 18 ; prévoir un récipient de fluide (10) et fixer la capsule (14) sur le récipient de fluide (10).

21. Procédé selon la revendication 20, dans lequel la capsule (14) est fixée sur le récipient de fluide (10) par rétrécissement thermique.

22. Procédé selon la revendication 20, dans lequel la capsule (14) est fixée sur le récipient (10) par roulage.

23. Procédé pour former un bec verseur pour un récipient de fluide (10) comprenant les étapes consistant à prévoir un récipient (10) selon la revendication 19 ; casser la capsule (14) le long d’au moins l’une des lignes de faiblesse (20, 22) prédéterminées afin de retirer une partie élastique (16) de la capsule (14) ; et insérer la partie retirée (16) de la capsule (14) dans une sortie (24) du récipient de fluide (10) moyennant quoi la partie retirée (16) de la capsule (14) exerce une force sur la surface interne de la sortie (24) du récipient de fluide (10) pour former le bec verseur.

24. Procédé selon la revendication 23, dans lequel la partie retirée (16) de la capsule (14) est comprimée, insérée dans la sortie (24) du récipient (10) et libérée.
REFERENCES CITED IN THE DESCRIPTION

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