A disposable package for storing and transporting a liquid or viscous product.

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Description

The invention relates to a disposable package for storing and transporting a liquid or viscous product such as for instance a chocolate concentrate and for dispensing said product in portions through a dispenser, said package comprising a rigid and load bearing outer cover, a flexible and tight bag situated within said cover, and a stub provided with a valve system which stub is connected to the bag and is engageable with an opening in said cover for fixing the position of the valve system with respect to said cover.

Such a disposable package is known from US patent no. 4,375,864. In the apparatus described in said US patent, use is made of a probe 66 which has a snap fitting with the plug 56. The probe and the plug are mutually engaged before the seal provided by the cap 56 is broken. Further in the apparatus according to said US patent the valve is not fully closed before use. Also the known valve is not coupled with the bag before use, but has to be coupled by the user. Further the apparatus according to the US patent can be timely closed, but then there are contamination problems. During said releasing there is a risk that also the plug will be pulled out instead of only the probe. From the foregoing it will be clear that in this U.S. patent a very complicated construction has been described, which need several accurate handlings before the apparatus is ready for use. This means that there are also a lot of leakage possibilities.

The object of the invention is to provide a disposable package of the above type which is very simple and which can protect the packed product against bumps and impacts without leaking, and which can be opened and subsequently mounted in a dispenser for dispensing the packed product in portions in an easier and more hygienic manner than previously, and which also closes automatically in such a manner that the product is ensured a long storability in the dispenser after the package has been opened, and which furthermore can be almost completely emptied, which minimizes the waste.

The disposable package for storing and transporting a liquid or viscous product according to the invention is characterized in that the valve system comprises a cap-shaped nozzle made of a resilient material, preferably rubber or plastics projecting from said stub, such that it can be fitted tightly into a filling opening in the dispenser, said nozzle comprising at its upper end a nozzle slit which may be formed by the local cutting up of an initially tight nozzle and which is defined by two opposing lips which are normally closed by the inherent resilience of the nozzle, and the product being dispensable from the inner bag through said nozzle when the package is positioned in the dispenser in such a manner that the nozzle engages the filling opening correctly.

In this way there is created a very simple disposable package from which liquid or viscous product can be discharged by creating a low pressure at the side of the filling opening and which nozzle automatically closes at ambient pressure.

In a further elaboration of the invention, the two opposing lips are formed on two opposing mouth members, said mouth members being of such a thickness and formed in such a manner that the lips are pressed together by a closing force which is so insignificant that the nozzle slit is opened when the nozzle is subjected to a low pressure at the activation of the dispenser in its filling opening, while the closing force, however, is so great that the nozzle slit is maintained tightly closed without leaking when the nozzle is subjected to atmospheric pressure.

Moreover according to the invention the fixing means may be provided on the inner bag preferably on or at the stub so as to ensure the correct position of the nozzle relative to the outer cover and consequently so as to ensure a correct engagement between the nozzle and the filling opening, whereby these fixing means can be made engaging guiding recesses in the outer cover. During the storage and transport the valve system can therefore be completely packed in the outer cover so as to be taken out and fixed on the outer cover when the package is to be used. The mounting of the package in the dispenser can subsequently be carried out in a very easy manner, viz. merely by positioning the package with the nozzle facing downwards on a ledge in the dispenser.

Furthermore according to the invention the fixing means on the inner bag may be formed by two radially projecting flanges situated on the stub and fixing the nozzle vertically relative to the outer cover, as well as by the preferably cylindrical part provided between said flanges of the stub and fixing the nozzle horizontally relative to the outer cover. In this manner a particularly simple and advantageous embodiment of the fixing means is obtained at the same time as these fixing means are reliably connected to the inner bag.

In addition according to the invention the guiding recesses in the outer cover may be shaped in at least one bottom panel, preferably a first, a second, and a third bottom panel initially folded about 180° inwards along a first set of folding lines at the rim of the cover and subsequently about 90° in opposite direction along a second set of folding lines, and these two sets of folding lines may be interspaced in such a manner that the nozzle engages the filling opening of the dispenser correctly when the fixing means on the inner bag engage the guiding recesses on the outer cover and said cover is situated in the dispenser. As a result, the valve system can easily be situated in the outer cover, the bottom panels being opened and the valve system being pulled out of the cover, whereafter the bottom panels are closed again in such a manner that their guiding recesses close about the stub. The vertical position of the nozzle in the outer cover is simultaneously determined in a simple and advantageous manner through a suitable choice of the distance between the two sets of folding lines.
Moreover according to the invention the guiding recesses in the outer cover may be formed substantially as a keyhole, the greatest width of which at least corresponds to the projecting flange of the stub, and the stub may thus be inserted on the broadest location of the keyhole-shaped recess and subsequently displaced into the fixing position at the narrowest location of the keyhole-shaped recess, the width of the recess corresponding to the outer diameter of the stub between the projecting flanges thereof on said narrowest location. In this manner the nozzle can be positioned quickly and easily in the correct position relative to the outer cover.

Furthermore according to the invention the keyhole-shaped guiding recess in the third bottom panel may be adapted in such a manner that a locking flap is left at the recess, which preferably perpendicular to the longitudinal axis of the recess can be folded upwards about a folding line at the broadest portion of the recess, whereby the stub can be inserted into the recess and the locking flap subsequently can be folded downwards into the plane of the bottom panel in such a manner that the stub is locked therein by the locking flap when it is displaced into its fixing position. As a result, the nozzle can in a simple and advantageous manner be fixed and retained in the correct position within the outer cover.

In addition according to the invention the inner bag may be made of a preferably airtight sheet laminate for instance made of metal and plastics and being heat-resistant and of a permanent shape up to 90°C, and the stub may be hermetically connected to said sheet laminate through heat contact welding, heat electro-magnetic percussion welding or other joining methods. In this manner for instance hot chocolate concentrate can be filled into the inner bag, and the packed product be protected against the influence of the air, whereby said product does not lose its storability for instance through rancidification. As the inner bag is flexible it can collapse about the packed product when the nozzle is subjected to a low pressure in the filling opening of the dispenser, whereby said packed product is pressed out completely and the waste is minimized.

Moreover according to the invention the nozzle may initially be provided with a nozzle slit, and said nozzle slit may be tightly closed by means of a closing means such as a cap or a tape during the storing and the transport of the package. This embodiment comprises the advantage that the nozzle slit can be shaped simultaneously with the manufacturing of the nozzle in such a manner that the slit is not infected later on through cutting by means of for instance a non-sterile knife.

Finally according to the invention the nozzle may be made of a resilient material standing up to radiation sterilization and being resistant to foodstuffs, the material hardness being in the range of 40—70 shore, preferably 50—60 shore. In this manner the nozzle can pack tightly in the filling opening of the dispenser when the package is situated in the dispenser. Furthermore the slit can open and close resiliently, and foodstuffs stored in the inner bag obtain a long storability because the nozzle can be completely sterilized through radiation sterilization.

The invention will be described below with reference to the accompanying drawing, in which Figure 1 illustrates an embodiment of a disposable package according to the invention situated in a dispenser partly in section,

Figure 2 is a perspective view of the disposable package of Figure 1, whereby the dispensing nozzle has been cut up,

Figure 3 is on a larger scale an axial sectional view of an embodiment of a dispensing nozzle for the disposable package according to the invention,

Figure 4 is a side view of the embodiment of Figure 3,

Figure 5 is a top view of the embodiment of Figure 3,

Figure 6 is a sectional view taken along the line VI—VI of Figure 3,

Figure 7 is a top view of the disposable package according to the invention with the third bottom panel folded horizontally outwards,

Figure 8 corresponds to Figure 7, the third bottom panel, however, being folded into its position and the valve system being inserted into a first position in guiding recesses in the bottom panels, and

Figure 9 corresponds to Figure 8, the valve system being displaced into the fixing position and here locked by a locking flap folded downwards.

Figures 1 and 2 illustrate a disposable package 1 comprising an outer, rigid cover 2 and a flexible and tight bag 3 situated within the cover. A stub 4 provided with a valve system 5 is secured on the bag.

The outer cover 2 is made of a sheet material such as for instance fiberboard, cardboard or plastics cut into shape, whereafter the cover 2 is formed through folding about a plurality of folding lines. In the embodiment of Figures 1 and 2, the cover 2 comprises four horizontal side panels 6 forming a rectangular tube member, as well as four rectangular bottom panels situated at each opening of said tube member. The bottom panels can be folded inwards about folding lines along the rim portions of the side panels in such a manner that the cover is closed. The four lowermost bottom panels 7 form the bottom of the cover 2 and are secured when folded into their position against one another, e.g. by means of tape. The four uppermost bottom panels 8, 9, 10, and 11 can be folded outwards about folding lines along the uppermost rim portions of the side panels 6 in such a manner that the inner bag 3 can be inserted in the cover 2 whereafter the bottom panels 8, 9, 10, and 11 can be folded inwards so as to close the cover. One of the uppermost bottom panels is formed as a cover 11 forming the uppermost defining surface of the package when closed. The cover comprises a cover fold 12 in which a slit 13 is cut. When the cover 12 is closed
a locking panel 14 cut out at the top of the side panel 6 opposing the folding line of the cover 11 can be folded upwards in such a manner that a locking panel fold 15 engages the slit 13 in the cover fold 12. In this manner the cover 11 is locked and the package 1 is ready for storing and transporting purposes.

The inner bag 3 is made of a flexible and tight laminate of sheet of for instance metal and plastics or of paper. The bag serves to store the product such as for instance chocolate concentrate to be packed. The product is filled in through the stub 4, whereafter the bag is closed by means of the valve system 5. The filled inner bag is subsequently inserted in the outer cover which is closed and locked as explained above.

The stub 4 is preferably made of plastics and is in the embodiment of Figures 1 and 2 of a circular cross section with a substantially cylindrical opening. The opening can be closed by means of the valve system which in the embodiment of Figures 1 and 2 is a plug member 16 preferably made of rubber or plastics, and a cover-shaped body 17 also preferably made of rubber or plastics. The inner bag 3 is closed by the plug member 16 and the associated cover-shaped body 17 being pressed tightly downwards into the opening of the stub 4.

When the filled package is to be used, i.e. used in a dispenser, the locking panel fold 15 is pulled out of the slit 13, a flap 18 on the locking panel 14 being subjected to a pull. Subsequently, the cover 11 is opened, and both the cover and the locking panel 14 are folded downwards along the side panels 6 of the outer cover 2 or carefully torn off. Subsequently, the stub 4 and the associated valve system 5 is pulled out of the outer cover 2 and secured to said cover by means of fixing means 19, 20, 21 engaging guiding recesses 22, 23, 24 in the bottom panels 8, 9, 10. The bottom wall of the cover-shaped body is cut through by means of a knife which for instance comprises a blade of a knife displaceable in a key-shaped handle. As a result, the cover-shaped body is converted into a nozzle 17 with a nozzle slit 29 allowing dispensing of the packed product from the inner bag.

The bag opened in the above manner forms now a unit which can be used directly in a dispenser 25 merely by turning the package and positioning said package with the nozzle facing downwards on a ledge 26 on the dispenser, i.e. without necessitating a decanting of any kind or a mounting of further members. The fixing means 19, 20, 21 engaging the guiding recesses 22, 23, 24 allow such a positioning of the nozzle 17 in the outer cover that said nozzle engages the filling opening 27 of the dispenser 25, said filling opening being adapted to be connectable to the nozzle.

The disposable package according to the invention is therefore easier to use than the previous packages, and as the packed product does not touch non-sterile equipment, the highest degree of hygiene is obtained.

The activation of the dispenser 25 causes a low pressure in its filling opening 27, said low pressure opening the nozzle slit 29. This low pressure propagates to the interior of the bag 3 in such a manner that under the influence of the ambient atmospheric pressure the bag is pressed together about the packed product which is thereby pressed out through the open nozzle slit 29 of the nozzle 17 and downwards into the filling opening 27 of the dispenser 25.

Figures 3 to 6 illustrate the cover-shaped body 17. Initially this body serves to close the filled inner bag 3. Upon cutting up in the bottom of a groove 30 this body can be converted into a nozzle 17 with the nozzle slit 29 defined by two opposing lips 31 on two opposing mouth members 32. The groove 30 serves partly to guide the knife used for cutting the nozzle slit 29 in such a manner that this operation can be performed in the easiest possible manner, and partly to lower the nozzle slit 29 a distance downwards into the surrounding mouth members 32. Each mouth member comprises a bevelling 33 extending parallel to the groove 30 and determining the thickness of the mouth members. This bevelling has been chosen in such a manner that the mouth members press the lips 31 together about the nozzle 29 by a closing force which is so insignificant that the nozzle slit 29 is opened when the nozzle 17 in the filling opening 27 of the dispenser 25 is subjected to a low pressure, while the closing force, however, is sufficiently great for keeping the slit tightly closed when the nozzle is subjected to atmospheric pressure. As the nozzle consequently opens at activation of the dispenser and closes again immediately upon deactivation of the dispenser, the disposable package according to the invention can be used for dispensing of the packed product in portions. At the same time a long storability in the dispenser is obtained as the nozzle 17 closes immediately upon removal of the low pressure, whereby it is avoided that air is sucked into the inner bag. Such air might otherwise influence the packed product and thereby limit the storability thereof, e.g. through rancidity.

The cover-shaped body 17 comprises a preferably cylindrical recess 34, the diameter of which is slightly smaller than the outer diameter of an inner upright stub member (not shown) on the plug member 16. The cover-shaped body 17 is assembled with the plug member 16 by the stub member thereof being pressed into the recess of the cover-shaped body. In this manner the valve system of Figures 1 and 2 appear. As long as the cover-shaped body 17 is not cut up, this valve system serves to close the filled inner bag, said valve system being pressed into the stub 4 in a tight and solid connection. As mentioned above, the cover-shaped body is converted into a nozzle 17 through cutting, and this nozzle is thus situated in a solid connection with the stub 4 from the beginning.

The stub 4 comprises two projecting flanges 19 and 21, cf. Figures 1 and 2. These flanges fix the nozzle 17 vertically in the outer cover 2, the stub 4 being situated in the guiding recesses 22, 23, 24.
with the flange 19 on the inner side of the bottom panels 8, 9, 10 and the flange 21 on the outer side of these bottom panels. The cylindrical part 20 on the stub 4 between the flanges 19 and 21 fixes thereby the nozzle 17 horizontally in the outer cover 2.

Initially the bottom panels 8, 9, 10 are folded about 180° inwards along a first set of folding lines 35, 36, 37, cf. Figures 1, 2, and 7, and subsequently about 90° in opposite direction along a second set of folding lines 38, 39, 40. Through this folding the bottom panels 8, 9, 10 are lowered into the outer cover 2 at a distance corresponding to the distance between the two sets of folding lines. When the package is positioned in the dispenser, cf. Figure 1, it stands therefore reliably by only the rim portions of the cover 2 resting on the ledge of the dispenser. The latter is due to the fact that the two sets of folding lines are interspaced in such a manner that the stub 4 and the plug member 16 do not project so far from the bottom panels that they touch the ledge 26 of the dispenser 25, whereas the nozzle 17 projects so far that it engages the filling opening 27 correctly. This engagement connecting the package to the dispenser is therefore established quite simply merely by placing the opened package on the ledge 26 of the dispenser 25 with the nozzle facing downwards.

Figures 7, 8, and 9 show how the fixing means 19, 20, and 21 are situated in a particularly advantageous keyhole shaped embodiment of the guiding recesses 22, 23 and 24. Figure 7 shows the guiding recesses 22, 23 in the first and the second bottom panel 8, 9, respectively, both folded into their position, and the guiding recess 24 in the third bottom panel 10 folded horizontally outwards. In Figures 8 and 9 this bottom panel 10 is folded about the folding lines 37, 40 into its position above the bottom panels 8, 9. Then the guiding recesses 22, 23, 24 act as a keyhole-shaped guide 41 for the valve system 5. A locking flap 42 is furthermore left in the recess 24 of the bottom panel 10, said locking flap being upwardly foldable about a folding line 23 at the broadest end of the recess 24.

The width of the guide 41 is at its broadest end greater than the diameter of the flange 21 of the stub 4. Consequently, when the valve system 5 is to be positioned in the keyhole-shaped guide 41, the locking flap 42 is initially folded upwards about the folding line 43, and the stub 4 with the associated valve system 5 is then inserted upwards through the guide 41 on the broadest location thereof with the flange 19 of the stub 4 on the inner side of the bottom panels 8, 9, 10 and the flange 21 of the stub 4 on the outer side thereof. Now the stub 4 is in the first position shown in Figure 8 in the keyhole-shaped guide 41. Subsequently, the stub 4 is displaced from this position into the fixing position in the opposite end of the keyhole-shaped guide 41, where the width of the guide corresponds to the outer diameter of the cylindrical part 20 of the stub 4. Finally, the locking flap 42 is folded downwards into the plane of the bottom panel 10 whereby the stub 4 is locked in the fixing position shown in Figure 9. Instead of pulling the valve system upwards through the keyhole-shaped guide 41, the bottom panels can initially be opened in such a manner that it is easy to take out the valve system from the cover 2. Subsequently, the bottom panels can be folded again into their position with the guiding recesses 22, 23, 24 engaging the fixing means 19, 20, 21 of the stub 4. The third bottom panel 10 appears in the outermost position relative to the bottom panels 8, 9 in Figures 1, 2, 7, 8, and 9. The bottom panel may, however, also be positioned in the innermost position without thereby changing the effect of the guiding recesses 22, 23, 24.

The inner bag 3 is made of a preferably airtight, flexible sheet laminate, which in sequence from the inside and out may comprise for instance a plastic film of a thickness of 70 μ, a plastic film of a thickness of 12 μ, an aluminium film of a thickness of 9 μ, and a plastic film of a thickness of 40 μ, and whereby the plastic film used is heat resistant and of a permanent shape up to 90°C. In this manner the inner bag 3 can stand filling of for instance hot chocolate concentrate up to this temperature. The flexibility of the sheet laminate allows the inner bag 3 to collapse completely about the packed product when the package is used in the dispenser, and it can therefore be completely emptied almost without waste.

According to an advantageous embodiment according to the invention the nozzle 17 is initially provided with a nozzle slit 29. During the storage and the transport this slit is closed by a cap or a tape which is removed when the package is to be used in the dispenser. As materials standing radiation sterilization are used for the nozzle, the nozzle slit 29 can be sterilized simultaneously with the nozzle 17 in such a manner that the nozzle slit 29 too is completely sterile when the package is used in the dispenser. Care should be taken that it is not infected at a cutting up by means of a non-sterile knife.

The nozzle 17 is made of a flexible material of a hardness in the range of 40—70 shore, preferably 50—60 shore. This hardness allows at a suitable thickness of the material of the mouth members 32 of the nozzle 17 an opening of the nozzle slit 29 when the nozzle 17 is subjected to a low pressure in the filling opening 27 of the dispenser 25. Simultaneously the hardness allows a closing of the slit without a leak when the nozzle 17 is subjected to atmospheric pressure. Furthermore the nozzle 17 can tightly abut the walls of the dispenser opening 27 through resilient deformation, when the package is positioned in the dispenser though the dispenser openings are not completely identical.

The invention is not limited to the above embodiments. Thus the outer cover may for instance be hexagonal or round, and the nozzle and the fixing means 19, 20, 21 and the guiding recesses in the bottom panels may be formed in many other ways without thereby deviating from the scope of the invention.
Claims

1. A disposable package for storing and transporting a liquid or viscous product such as for instance a chocolate concentrate and for dispensing said product in portions through a dispenser (25), said package (1) comprising a rigid and load bearing outer cover (2), a flexible and tight bag (3) situated within said cover, and a stub (4) provided with a valve system (5) which stub (4) is connected to the bag (3) and is engageable with an opening (22, 23, 24) in said cover (6, 8, 10) for fixing the position of the valve system with respect to said cover, characterized in that the valve system (5) comprises a cap-shaped nozzle (17) made of a resilient material, preferably rubber or plastics projecting from said stub, such that it can be fitted tightly into a filling opening (27) in the dispenser (25), said nozzle (17) comprising at its upper end a nozzle slit (29) which may be formed by the local cutting up of an initially tight nozzle and which is defined by two opposing lips (31) which are normally closed by the inherent resilience of the nozzle, and the product being dispensable from the inner bag (3) through said nozzle when the package (1) is positioned in the dispenser (25) in such a manner that the nozzle (17) engages the filling opening (27) correctly.

2. A disposable package as claimed in claim 1, characterized in that the two opposing lips (31) are formed on two opposing mouth members (32), said mouth members (32) being of such a thickness and formed in such a manner that the lips (31) are pressed together by a closing force which is so insignificant that the nozzle slit (29) is opened when the nozzle (17) is subjected to a low pressure at the activation of the dispenser in its filling opening (27), while the closing force, however, is so great that the nozzle slit (29) is maintained tightly closed without leaking when the nozzle (17) is subjected to atmospheric pressure.

3. A disposable package as claimed in claim 1 or 2, characterized in that fixing means (19, 20, 21) on the inner bag (3) engage the guiding recesses (22, 23, 24) in the outer cover, characterized in that the fixing means (19, 20, 21) are formed substantially as a keyhole (41), the greatest width of which at least corresponds to the projecting flange (21) of the stub (4), and that the stub (4) thus can be inserted into the recess and the locking flap (42) located at the recess, which preferably can be folded upwards about a folding line (43) perpendicularly to the longitudinal axis of the recess at the broadest portion of the recess, whereby the stub (4) can be inserted into the recess and the locking flap subsequently can be folded downwards into the plane of the bottom panel in such a manner that is locked therein by the locking flap (42) when it is displaced into its fixing position.

4. A disposable package as claimed in claim 1, characterized in that the fixing means (19, 20, 21) on the inner bag (3) are formed by two radially projecting flanges (19 and 21) situated on the stub (4) and fixing the nozzle (17) vertically relative to the outer cover (2), as well as by the preferably cylindrical part (20) provided between said flanges (19 and 21) of the stub (4) and fixing the nozzle (17) horizontally relative to the outer cover (2).

5. A disposable package as claimed in one or more of the preceding claims 3 or 4, characterized in that the guiding recesses (22, 23, 24) in the outer cover (2) are shaped in at least one bottom panel, preferably a first (8), a second (9), and a third (10) bottom panel initially folded about 180° inwards along a first set of folding lines (35, 36, 37) at the rim of the cover (2) and subsequently about 90° in opposite direction along a second set of folding lines (38, 39, 40), and that these two sets of folding lines are interspaced in such a manner that the nozzle (17) engages the filling opening (27) of the dispenser (25) correctly when the fixing means (19, 20, 21) on the inner bag (3) engage the guiding recesses (22, 23, 24) on the outer cover (2) and said cover is situated in the dispenser (25).

6. A disposable package as claimed in one or more of the preceding claims 3 to 5, characterized in that the guiding recesses (22, 23, 24) in the outer cover (2) are formed substantially as a keyhole (41), the greatest width of which at least corresponds to the projecting flange (21) of the stub (4), and that the stub (4) can be inserted into the recess and the locking flap (42) located at the recess, which preferably can be folded upwards about a folding line (43) perpendicularly to the longitudinal axis of the recess at the broadest portion of the recess, whereby the stub (4) can be inserted into the recess and the locking flap subsequently can be folded downwards into the plane of the bottom panel in such a manner that the stub (4) is locked therein by the locking flap (42) when it is displaced into its fixing position.

7. A disposable package as claimed in claim 6, characterized in that the nozzle (17) is made of a resilient material such as a cap or a tape during the storing and the transport of the package (1).

8. A disposable package as claimed in one or more of the preceding claims 1 to 7, characterized in that the inner bag (3) is made of a preferably air-tight sheet laminate for instance made of metal and plastics and being heat-resistant and of a permanent shape up to 90°C, and that the stub (4) is hermetically connected with said sheet laminate through heat contact welding, heat electro-magnetic percussion welding or any other joining method.

9. A disposable package as claimed in claim 1, characterized in that the nozzle (17) initially is provided with a nozzle slit (29), and that said nozzle slit (29) is tightly closed by means of a closing means such as a cap or a tape during the storing and the transport of the package (1).

10. A disposable package as claimed in one or more of the preceding claims 1 to 9, characterized in that the nozzle (17) is made of a resilient material standing up to radiation sterilization and being resistant to foodstuffs, the material hardness being in the range of 40—70 shore, preferably 50—60 shore.
Patentansprüche

1. Eine Einwegverpackung zum Lagern und Transportieren eines flüssigen oder viskosen Produktes, wie z.B. eines Schokoladenkonzentrates und zur Ausgabe dieses Produktes in Portionen durch einen Spender (25), wobei diese Verpackung (1) eine feste und lastaufnehmende äußere Umhüllung (2), einen flexiblen und dichten Beutel (3), der innerhalb dieser Umhüllung angeordnet ist, und einen Stümmel (4), der mit einem Ventilsystem (5) ausgestattet ist, enthält, welcher Stümmel (4) mit dem Beutel (3) verbunden ist und mit einer Öffnung (22, 23, 24) in dieser Umhüllung (8, 9, 10) in Eingriff bringbar ist um die Lage des Ventilsystems relativ zur Umhüllung festzulegen, dadurch gekennzeichnet, daß das Ventilsystem (5) eine aus elastischem Material, vorzugsweise Gummi oder Kunststoff hergestellte kappenförmige Düse (17) aufweist, die von diesem Stümmel weggetragen, so daß sie nicht in eine Füllöffnung (27) im Spender (25) eingesetzt werden kann, wobei diese Düse (17) an ihrem oberen Ende einen Düsenanschlag (29) aufweist, der durch örtliches Aufschneiden einer ursprünglich dichten Düse gebildet werden kann und welcher durch zwei gegenüberliegende Lippen (31) bestimmt wird, welche normalerweise durch die innere Elastizität der Düse geschlossen sind und wobei das Produkt aus dem inneren Beutel (3) durch diese Düse ausgebahbar ist, wenn die Verpackung (1) im Spender (25) so angeordnet ist, daß die Düse (17) in die Einfüllöffnung (27) richtig eingeht.

2. Einwegverpackung nach Anspruch 1, dadurch gekennzeichnet, daß die zwei einander gegenüberliegenden Lippen (31) an zwei einander gegenüberliegenden Mundelementen (32) ausgebildet sind, wobei die Muldelemente (32) eine solche Dicke aufweisen und so geformt sind, daß die Lippen (31) durch eine Schließkraft zusammengepreßt werden, welche so gering ist, daß der Düsenanschlag (29) geöffnet wird, wenn die Düse (17) bei Betätigung des Spenders einem Unterdruck in seiner Füllöffnung (27) ausgesetzt wird, wogegen die Schließkraft jedoch so groß ist, daß der Düsenanschlag (29) ohne Lecken dicht geschlossen bleibt, wenn die Düse (17) dem Atmosphärendruck ausgesetzt ist.

3. Einwegverpackung nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß die Befestigungsmittel (19, 20, 21) am inneren Beutel (3), vorzugsweise an oder beim Stümmel (4) vorgesehen sind, um die richtige Lage der Düse (17) relativ zur äußeren Umhüllung sicherzustellen und um folglich einen richtigen Eingriff zwischen der Düse (17) und der Füllöffnung (27) sicherzustellen, wobei diese Befestigungsmittel (19, 20, 21) in Eingriff in die Öffnung oder die Führungsausnehmungen (22, 23, 24) in der äußeren Umhüllung gebracht werden können.

4. Einwegverpackung nach Anspruch 3, dadurch gekennzeichnet, daß die Befestigungsmittel (19, 20, 21) am inneren Beutel (3) durch zwei radial abstehende Flansche (19 und 21), die am Stümmel (4) angeordnet sind und die Düse (17) vertikal relativ zur äußeren Umhüllung (2) festlegen, ebenso wie durch den vorzugsweise zylindrischen Teil (20) gebildet werden, der zwischen diesen Flanschen (19 und 21) des Stümmels (4) vorgesehen ist und die Düse (17) horizontal relativ zur äußeren Umhüllung (2) festlegt.

5. Einwegverpackung nach einem oder mehreren der vorhergehenden Ansprüche 3 oder 4, dadurch gekennzeichnet, daß die Führungsausnehmungen (22, 23, 24) in der äußeren Umhüllung (2) in wenigstens einer Bodenplatte, vorzugsweise einer ersten (8), einer zweiten (9) und einer dritten (10) Bodenplatte ausgebildet sind, die anfanglich um 180° nach innen entlang einer ersten Gruppe von Faltlinien (35, 36, 37) am Rand der Umhüllung (2) und anschließend um 90° in die entgegengesetzte Richtung entlang einer zweiten Gruppe von Faltlinien (38, 39, 40) gefaltet sind und daß diese zwei Gruppen von Faltlinien so voneinander beabstandet sind, daß die Düse (17) in die Einfüllöffnung (27) des Spenders (25) richtig eingeht, wenn die Befestigungsmittel (19, 20, 21) am inneren Beutel (3) in die Führungsausnehmungen (22, 23, 24) der äußeren Umhüllung (2) eingelegt und diese Umhüllung im Spender (25) angeordnet ist.

6. Einwegverpackung nach einem oder mehreren der vorhergehenden Ansprüche 3 bis 5, dadurch gekennzeichnet, daß die Führungsausnehmungen (22, 23, 24) im äußeren Umhüllung (2) im wesentlichen als Schlüsselloch (41) ausgebildet sind, dessen größte Weite wenigstens dem abstehenden Flansch (21) des Stümmels (4) entspricht und daß der Stümmel (4) so an der breitesten Stelle der schlüssellochförmigen Ausnehmung (41) eingeschoben und dann in die Feststelllage an der schmalsten Stelle der schlüssellochförmigen Ausnehmung (41) verschoben werden kann, wobei die Weite der Ausnehmung an ihrer schmalsten Stelle dem äußeren Durchmesser des Stümmels (4) zwischen seinen abstehenden Flanschen (19 und 21) an einer schmalsten Stelle entspricht.

7. Einwegverpackung nach Anspruch 6, dadurch gekennzeichnet, daß die schlüssellochförmige Führungsausnehmung (24) in der dritten Bodenplatte (10) so adaptiert ist, daß eine Sperrklappe (42) an der Ausnehmung bleibt, welche vorzugsweise um eine zur Längsachse der Ausnehmung rechtwinklige Faltpalten an der breitesten Stelle der Ausnehmung nach oben gefaltet werden kann, wobei der Stümmel (4) in die Ausnehmung eingesetzt werden kann und die Sperrklappe dann so nach unten in die Ebene der Bodenplatte gefaltet werden kann, daß der Stümmel (1) darin durch die Sperrklappe (42) festgelegt ist, wenn er in die Feststellstange verschoben worden ist.

8. Einwegverpackung nach einem oder mehreren der vorhergehenden Ansprüche 1 bis 7, dadurch gekennzeichnet, daß der innere Beutel (3) aus vorzugsweise luftdichtem Blattlaminat hergestellt ist, das z.B. aus Metall und Kunststoff hergestellt ist und das bis 90° wärmebeständig ist.
und formbeständig ist, und daß der Stummel (4) hermetisch mit diesem Blattlaminat durch Heiß-
kontaktschweißen, hitzelektromagnetischem Schlagschweißen oder irgendeine andere Verbin-
dungsmethode verbunden ist.

9. Einwegverpackung nach Anspruch 1, da-
durch gekennzeichnet, daß die Düse (17) ursprünglich mit einem Düenschlitz (29) ausge-
stattet ist und daß der Düenschlitz (23) während der Lagerung und des Transportes der Verpak-
ung (1) mittels eines Verschlüsselelementes, wie einer Kappe oder einem Band dicht verschlossen ist.

10. Einwegverpackung nach einem oder mehr-
eren der vorhergehenden Ansprüche 1 bis 9, dadurch gekennzeichnet, daß die Düse (17) aus elastischem Material hergestellt ist, das Hitze-
ersterilisation aushält und gegen Nahrungsmittel beständig ist, wobei die Materialhärte im Bereich von 40 bis 70 Shore, vorzugsweise 50 bis 60 Shore liegt.

Revendications

1. Emballage à jeter pour la conservation et le transport d’un produit liquide ou visqueux, tel que, par exemple, un chocolat concentré, et pour la distribution dudit produit en doses, au moyen d’un distributeur (25), ledit emballage (1) compren-
nant une enveloppe extérieure (2) rigide support de charge, un sac (3) hermetique et souple placé dans ladite enveloppe, et un tube court (4) muni d’un système de soupape (5), dont le tube court (4) est relié au sac (3) et peut pénétrer dans un orifice (22, 23, 24) de ladite enveloppe, pour fixer la position du système de soupape par rapport à ladite enveloppe, caractérisé par le fait que le système de soupape (5) comprend une busette (17) en forme de coiffe, faite d’un matériau élasti-
que, de préférence caoutchouc ou matière plastique, faisant saillie sur ledit tube court, de manière à pouvoir s’ajuster étroitement dans un orifice de remplissage (27) du distributeur (25), ladite busette (17) comprenant à son extrémité supérieure une fente (29) de busette qui peut être obtenue par le découpage sur place d’une busette initialement hermétique et qui est définie par deux lèvres (31) opposées, normalement closes sous l’effet de l’élasticité propre de la busette, et le produit pouvant être distribué à partir du sac intérieur (3) en passant par ladite busette, lorsque l’emballage (1) est mis en place dans le distributeur (25), de telle manière que la busette (17) pénètre correctement dans l’orifice de remplissage (27).

2. Emballage à jeter selon la revendication 1, caractérisé par le fait que les deux lèvres oppo-
sées (31) sont formées sur deux éléments d’em-
bouchure (32) opposés, lesdits éléments d’em-
bouchure (32) ayant une épaisseur telle et étant conformes de telle sorte que les lèvres (31) sont jointes l’une à l’autre par une force de fermeture qui est suffisamment faible pour que la fente (29) de la busette s’ouvre lorsque la busette (17) est soumise à une dépression dans son orifice de remplissage (27) lorsque le distributeur est actionné, tout en étant suffisamment grande pour que la fente (29) de la busette demeure hermétique-ment close sans fuite lorsque la busette (17) est soumise à la pression atmosphérique.

3. Emballage à jeter selon revendication 1 ou 2, caractérisé par le fait que des moyens de fixation (19, 20, 21) sont prévus sur le sac intérieur (3) de préférence sur le tube court (4) ou près de ce tube, de manière à assurer la position correcte de la busette (17) par rapport à l’enveloppe extérieure et par conséquent de manière à assurer une bonne liaison entre la busette (17) et l’orifice de remplissage (27), ces moyens de fixation (19, 20, 21) pouvant être faits pour pénétrer dans ladite ouverture ou dans des cavités de guidage (22, 23, 24) de l’enveloppe extérieure.

4. Emballage à jeter selon la revendication 3, caractérisé par le fait que les moyens de fixation (19, 20, 21) du sac intérieur (3) sont formés par deux brides (19 et 21) se projetant radialement, placées sur le tube court (4) et fixant la busette (17) verticalement par rapport à l’enveloppe extérieure (2), ainsi que par la partie (20) de préfé-
rence cylindrique prévue entre lesdites brides (19 et 21) du tube court (4) et fixant la busette (17) horizontalement par rapport à l’enveloppe extérieure (2).

5. Emballage à jeter selon une ou plusieurs des revendications précédentes 3 ou 4, caractérisé par le fait que les cavités de guidage (22, 23, 24) de l’enveloppe extérieure (2) sont ménagées dans au moins un panneau de fond, de préférence un premier (8), un deuxième (9) et un troisième (10) panneau de fond, tout d’abord repliés à environ 180° sur l’intérieur le long d’un premier jeu de lignes de pliage (35, 36, 37) sur le rebord de l’enveloppe (2) et ensuite à environ 90° dans la direction opposée, le long d’un deuxième jeu de lignes de pliage (38, 39, 40), et que ces deux jeux de lignes de pliage sont espacés entre eux de telle sorte que la busette (17) pénètre correctement dans l’orifice de remplissage (27) du distributeur (25) lorsque les moyens de fixation (22, 23, 24) du sac intérieur (3) pénètrent dans les cavités de guidage (22, 23, 24) de l’enveloppe extérieure (2) et ladite enveloppe est placée à l’intérieur du distributeur (25).

6. Emballage à jeter selon une ou plusieurs des revendications précédentes 3 à 5, caractérisé par le fait que les cavités de guidage (22, 23, 24) de l’enveloppe extérieure sont formées sensiblement en trou de serrure (41), dont la plus grande largeur correspond au moins à la bride saillante (21) du tube court (4) et que le tube court (4) peut ainsi être inséré sur l’emplacement le plus large de la cavité (41) en forme de trou de serrure, puis être amené à la position de fixation à l’emplace-
ment le plus étroit de la cavité (41) en forme de trou de serrure, la largeur de la cavité, en son emplacement le plus étroit correspondant au diamètre extérieur du tube court (4) entre les brides saillantes (19 et 21) dudit tube à ledit emplacement le plus étroit.

7. Emballage à jeter selon la revendication 6, caractérisé par le fait que la cavité de guidage (24)
en forme de trou de serrure du troisième panneau de fond (10) est adaptée de telle façon qu'il reste une patte de fermeture sur la cavité, qui, de préférence, peut être pliée vers le haut autour d'une ligne de pliage (43) perpendiculairement à l'axe longitudinal de la cavité, à la partie la plus large de la cavité, le tube court (4) pouvant être inséré dans la cavité et la patte de fermeture pouvant être ensuite pliée vers le bas dans le plan du panneau de fond, de telle sorte que le tube court (4) y soit bloqué par la patte de fermeture (42) lorsqu'elle est amenée à sa position de fixation.

8. Emballage à jeter selon une ou plusieurs des revendications précédentes 1 à 7, caractérisé par le fait que le sac intérieur (3) est de préférence fait d'un stratifié en feuille, imperméable à l'air, par exemple, de métal et de matière plastique, qui soit résistant à la chaleur et indéformable jusqu'à 90° et que le tube court (4) est joint hermétiquement audit stratifié en feuille, par soudage par contact thermique, soudage par percussions électro-magnétique ou tout autre méthode de liaison.

9. Emballage à jeter selon revendication 1, caractérisé par le fait que la busette (17) est à l'origine pourvue d'une fente (29) de busette, et que ladite fente (29) est close hermétiquement par des moyens de fermeture tels que chapeau ou bande pendant la conservation et le transport de l'emballage (1).

10. Emballage à jeter selon une ou plusieurs des revendications précédentes 1 à 9, caractérisé par le fait que la busette (17) est faite d'un matériau élastique supportant la stérilisation par radiation et résistant aux produits alimentaires, la dureté du matériau étant comprise entre 40 et 70 Shore, de préférence entre 50 et 60 Shore.