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(54) **WRAPPING METHOD AND WRAPPER**

UMHÜLLUNGSVERFAHREN UND EINSCHLAG

PROCÉDÉ D'EMBALLAGE ET EMBALLAGE

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Description

Technical field

[0001] This invention relates to a wrapping method and in particular to a method of wrapping confectionery products such as chocolates and the like of a preferably frustoconical shape or also with a square or rectangular base, that is, parallelepiped in shape, having a bottom end or base and a top end or head, to obtain a wrapper, hermetically sealed, of the "top-twist" type.

Background art

[0002] The prior art methods for wrapping in a "top-twist" fashion schematically comprise the coupling of a sheet of wrapping material to the product, suitably retained, wrapping the sheet on the lateral surface of the product, to define a tubular housing extending in a cantilever manner from the ends of the product, folding, according to a sequence of folds substantially known, the portion of the tubular housing at the bottom of the product, and also the lateral surface, and wrapping the end of the tubular housing, opposite the bottom of the product relative to the product, to form a bow. An example of such prior art methods can be found in patent document DE102008019605A1.

[0003] One drawback of the above-mentioned method derives from the fact that a wrapper obtained in this way does not guarantee a hermetic seal to protect the product, which may, over time, lose its organoleptic properties. In general, for preserving these products, groups of them wrapped in this way are in turn inserted in a hermetically sealed outer package which, however, once open loses its sealing characteristics.

[0004] More specifically, a critical area of the wrapper is at the bottom and the lateral surface of the product where the sequences of known folds determine the formation of channels which adversely affect the seal of the wrapper.

[0005] The so-called "hermetic" wrappers have been developed in this field, designed for example for "double twist" wrappers, and the relative forming methods such as, for example, those described in patent documents EP0929467 and EP1515892.

[0006] In these methods, strips of glue are provided suitably positioned on the sheet of wrapping material which guarantee the sealed closure of the corresponding wrapping material, in particular at the bows.

[0007] The prior art methods are not suitable for the making wrappers of the "top-twist" type or at least the wrappers obtained with the above-mentioned methods do not resemble "top-twist" wrapper which is particularly distinctive also of the corresponding product packaged inside it.

[0008] In this context, the main technical purpose of this invention is to propose a wrapping method and a wrapper preferably obtained with this method, which are

free of the above-mentioned drawbacks.

Disclosure of the invention

[0009] The aim of the invention is to propose a wrapping method which allows a wrapper to be obtained.

[0010] The technical purpose and aims specified are achieved by wrapping method according to claim 1 and a wrapper according to claim 6.

Brief description of drawings

[0011] Further features and advantages of the invention are more apparent in the non-limiting description below with reference to preferred but non-exclusive embodiments of a wrapping method as illustrated in the accompanying drawings, in which:

- Figures 1 to 7 illustrate schematic perspective views of a sequence of steps of a wrapping method according to this invention.

Detailed description of preferred embodiments of the invention

[0012] With reference to the accompanying drawings, the numeral 100 denotes a confectionery product illustrated with a dashed line.

[0013] The product 100, for example a chocolate to which reference is hereinafter made without limiting the scope of the invention, has a bottom end or base 101 which is substantially flat, a top end 102, a lateral surface 103 and a main axis D, extending between the bottom end 101 and the top end 102.

[0014] Preferably, the product 100 has a substantially truncated cone shape, to which reference is hereinafter made without limiting the scope of the invention but it may also have a square or rectangular base and have a preferably parallelepiped shape.

[0015] With reference to Figure 7, the numeral 1 denotes a wrapper of the "top-twist" type for the product 100.

[0016] The wrapper 1 is formed by a sheet 2 of wrapping material folded in such a way as to have a bottom portion 3, at the bottom 101 of the product 100, and a bow 4 extending from the opposite side to the bottom portion 3, that is, from the part of the top end 102 of the product 100.

[0017] As will become clearer below, the wrapper 1 is of the sealed type to guarantee, advantageously, that the organoleptic properties of the product 100 are maintained.

[0018] With reference to Figure 1, the method comprises a step of preparing the sheet 2 of wrapping material.

[0019] The sheet 2 of wrapping material is quadrangular in shape and has a first and a second longitudinal edge 105, 106 and a first and a second transversal edge 107, 108.

[0020] The method comprises a step of preparing

bonding means which can be activated on the sheet 2 of wrapping material to allow, as explained in more detail below, a hermetic sealing of the wrapper 1.

[0021] The bonding means which can be activated comprise a plurality of sections of bonding material which can be activated of substantially known type.

[0022] In one embodiment, the bonding material which can be activated comprises so-called "re-activatable" glue, for example by pressure or heat.

[0023] If the product 100 tolerates temperature increases, the bonding material which can be activated comprises material which can be sealed or heat sealed, which allows, in known way, sealing of the wrapper 1.

[0024] With reference to Figure 7, the bonding means which can be activated comprise a first stretch 109, a second stretch 110, a third stretch 111 and a fourth stretch 112 of bonding material which can be activated of substantially known type.

[0025] For descriptive simplicity, generic reference will be made below to "bonding" for the stretches 109, 110, 111, 112 without limiting the scope of the invention.

[0026] The first and second stretches 109, 110 extend parallel to the first and second longitudinal edges 105, 106 whilst the third and the fourth stretches 111, 112 extend parallel to the transversal edges 107 and 108.

[0027] The first and second stretches 109, 110 extend substantially at the longitudinal edges 105 and 106.

[0028] The stretch 111 extends at the edge 107, whilst the stretch 112 extends between the stretches 109 and 110 parallel to the stretch 111.

[0029] In an alternative embodiment, the bonding means which can be activated comprise a stretch 112a of bonding material which can be activated of substantially known type, in addition to or alternatively to the stretch 112, positioned at the edge 108.

[0030] For descriptive simplicity, reference is made below to the embodiment wherein the stretch 112a is not provided in the sheet 2.

[0031] The stretches 109, 110, 111 and 112 delimit a zone 113 of the sheet 2 of wrapping material, which is preferably off centre in the sheet 2 of wrapping material, for positioning the product 100.

[0032] The stretches 109, 110, 111 and 112 are provided in the sheet 2 on the same side as the zone 113 and in particular on the same side for positioning the product 100.

[0033] More specifically, the zone 113 is moved towards the edge 107 and moved away from the edge 108 between the edges 105 and 106.

[0034] The stretch 112 is positioned on the opposite side of stretch 111 relative to the zone 113 for positioning the product 100.

[0035] A zone 114 is defined between the zone 113 and the edge 108 designed, as explained below, for the formation of the bow 4.

[0036] The wrapping method comprises positioning the product 100 in the zone 113 in a substantially central position.

[0037] In particular, the product 100 is positioned with the bottom end 101 facing towards the edge 107 and the lateral surface 103 engaged with the sheet 2.

[0038] The chocolate 100 is therefore positioned with the main axis D substantially parallel to the sheet 2, in particular to the edges 105, 106.

[0039] The method comprises a plurality of steps of folding the sheet 2 of wrapping material for defining the housing 15, illustrated in Figures 3 and 4 substantially tubular, in particular substantially cylindrical, around the product 100.

[0040] The housing 15 has the end portion 16 which extends along the axis D from the top end 102 of the product 100.

[0041] The method comprises a step of twisting, in a twisting direction V, in a clockwise direction with reference Figures 6 and 7 of the end portion 16 to define the above-mentioned bow 4.

[0042] More specifically, the above-mentioned sections of bonding means 109, 110, 111, 112 which can be activated allow, as described in more detail below, the wrapper 1, and in particular the bottom portion 3 and the bow 4, closed in a sealed fashion, to be obtained.

[0043] More specifically, as illustrated for example in Figure 6, the stretch 112, is positioned, after defining the housing 15, as described below, at the bow 4 in such a way that the corresponding material is activated in known manner to close the bow 4.

[0044] The method comprises a step of preparing sealing means at the bottom end 101 of the product 100 to define the bottom portion 3 of the sealed wrapper.

[0045] As illustrated in Figures 2 to 4, the method comprises, to obtain the housing 15, a step of wrapping the sheet 2 of wrapping material about the main axis D of the product 100 or around the lateral surface 103 of the product 100.

[0046] The wrapping terminates abutting the longitudinal edges 105, 106 and in particular the first and the second stretch 109, 110 of adhesive in such a way as to join them, in substantially known manner not described, in a step of longitudinal closing of the housing 15.

[0047] The winding step, together with the longitudinal closing step, determines the formation of a rib or fin 115 extending radially from the housing 15 and extending along the main axis D.

[0048] The rib 115 is formed by the edges 105, 106 superposed and joined together; the method comprises a step of folding the rib 115 on the tubular housing 15 as illustrated in Figure 4.

[0049] Preferably, the rib 115 is folded on the housing 15 in the above-mentioned twisting direction V.

[0050] With reference to Figures 5 and 6, it may be noted that the method comprises a step of sealing the housing 15 using the bonding means which can be activated at least at the transversal edge 107, obtaining a transversal fin or rib 116 which is substantially flat.

[0051] More specifically, the housing 15 has an end portion 117 extending from opposite the portion 16 rela-

tive to the zone 113 and, more specifically, from opposite the portion 16 relative to the product 100.

[0052] The portion 117 suitably closed and folded is designed to define the above-mentioned sealing means at the bottom 101 of the product 100.

[0053] The method comprises a step of closing and folding the end portion 117 of the tubular housing 15 against the bottom 101 of the product 100 to define the bottom portion 3 of the wrapper 1 at the bottom 101 of the product 100.

[0054] The bottom portion 3 of the wrapper 1 is substantially planar and parallel with the bottom 101 of the product 100 and comprises a plurality of flaps or wings which are superposed over each other.

[0055] The portion 117 comprises the edge 107, the closing of which, using the stretch 111 of adhesive material, determines the formation of the fin 116.

[0056] A preferred method of closing the portion 117, of substantially known type, is described for example in patent document US4617782 in the name of the same Applicant.

[0057] In short, for preparing the sealing means at the bottom 101 of the product 100 and defining the bottom portion 3 of the wrapper 1, the fin 116 is folded against the bottom of the product 100 resulting in the formation of two lateral flaps 118 and 119 extending along the main axis D.

[0058] The method for closing the end 117 comprises folding the flaps 118 and 119 against the bottom 101 of the product 100, for example, as illustrated, folding first the flap 119 and then the flap 118 on the flap 119. Preferably, the method comprises a step of locking the fin 116 to a portion of the sheet 2 of wrapping material at the bottom end 101 of the product 100 in a substantially known manner, for example, by means of adhesive or sealing.

[0059] Preferably, the method comprises a step of locking the flaps 118 and 119 to a portion of the sheet 2 of wrapping material at the bottom end 101 of the product 100 in a substantially known manner, for example, by means of adhesive or sealing.

[0060] Regarding the end portion 16 of the housing positioned on the side opposite the portion 117 relative to the product 100, the method preferably comprises a step of flattening or widening the portion until obtaining a top flap 120 which is substantially flat.

[0061] The housing 15 is sealed at the flap 120 by the stretch 112 of adhesive material or the stretch 112a, if present. The step of twisting the end portion 16 comprises a step of gripping and twisting the top flap 120 to obtain the bow 4.

[0062] In a preferred embodiment, the step of folding and closing the portion 117 is performed before the step of twisting the end portion 16 of the housing 15.

[0063] In a second embodiment, the step of folding and closing the portion 117 is performed after the step of twisting the end portion 16 of the housing 15.

[0064] In a third embodiment, the step of folding and

closing the portion 117 is performed simultaneously with the step of twisting the end portion 16 of the housing 15.

[0065] In a preferred embodiment, the step of twisting the flap 120 determines the bonding of the stretch 112 of adhesive material and the sealing of the bow 4.

[0066] Advantageously, the method makes it possible to obtain a sealed wrapper 1; at the bottom 101 of the product 100 the wrapper 1 comprises the bottom portion 3 folded and sealed, the flap 120 is sealed or glued or in any case the bow 4 is sealed and glued.

Claims

1. A wrapping method to form a "top-twist" type wrapper (1) of a product (100) having a bottom end (101), a top end (102), a lateral surface (103) and a main axis (D), extending between the bottom end (101) and the top end (102), the method comprising:

a step of preparing at least one sheet (2) of wrapping material;

a step of preparing bonding means (109, 110, 111, 112) which can be activated on the sheet (2) of wrapping material comprising a first and a second stretch (109, 110) of bonding material which can be activated positioned on a first and a second longitudinal edge (105, 106) of the sheet (2) of wrapping material, a third stretch (111) of bonding material which can be activated positioned on a transversal edge (107) of the sheet (2) of wrapping material, a fourth stretch (112, 112a) of bonding material which can be activated positioned transversely between the first and second stretches (109, 110) and parallel to the third stretch (111) and delimiting with the first, second and third stretches (109, 110, 111) a zone (113) for positioning the product (100), the wrapping method comprising at least one step of folding the sheet (2) of wrapping material to form a tubular housing (15) having at least one end portion (16) extending along the main axis (D), from the top end (102) of the product, the step of folding of the sheet (2) of wrapping material comprising:

a step of positioning the product (100) in the positioning zone (113) joining the sheet (2) of wrapping material with the lateral surface (103) of the product (100) with the bottom end (101) facing towards the transversal edge (107),

a step of wrapping the sheet (2) of wrapping material around the main axis (D) of the product (100), abutting the longitudinal edges (105, 106) and in particular the first and the second stretches (109, 110) of bonding material which can be activated to obtain

the tubular housing (15);
the method comprising:

a step of setting up means (116, 118, 119) for sealing at least at the bottom end (101) of the product;
a step of twisting, in a direction (V) for twisting the end portion (16) of the tubular housing (15) to form a bow (4);
the bonding means (109, 110, 111, 112) which can be activated being provided at least at the bow (4), wherein the step of preparing sealing means (116, 118, 119) comprises a sealing step, by activating at least part of the bonding means (9, 10, 11, 12, 109, 110, 111, 112) which can be activated, of an end portion (117) of the tubular housing (15) extending from the bottom end (101), the sealing step comprising a step of forming at least one fin (116) transversal to the main axis (D), the method comprising a step of forming a top flap (120) from the end portion (16) of the tubular housing (15) extending from the top end (102) of the product (100), the twisting step comprising a step of gripping and twisting the top flap (120).

2. The method according to claim 1, wherein the step of wrapping the sheet (2) of wrapping material around the main axis (D) of the product (100) forms a longitudinal fin (115) comprising the first and second longitudinal edges (105, 106), the step of folding the sheet (2) of wrapping material comprising a step of folding the longitudinal fin (115) on the tubular housing (15) preferably in the twisting direction (V).
3. The method according to claim 1, wherein the step of preparing sealing means (116, 118, 119) comprises a step of locking at least the folded transversal fin (116) to a portion of the sheet (2) of wrapping material at the bottom end (101) of the product.
4. The method according to claim 3, wherein the step of preparing sealing means (116, 118, 119) comprises a step of folding the transversal fin (116) against the bottom end (101) of the product (100).
5. The method according to any one of preceedings claims, wherein the twisting step comprises a step of activating the bonding material which can be activated of the fourth stretch (112, 112a) of the bonding means which can be activated to obtain a sealed closure of the bow (4).
6. A wrapper of a "top-twist" type containing a product

(100) having a bottom end (101), a top end (102), a lateral surface (103) and a main axis (D) extending between the bottom end (101) and the top end (102), the wrapper comprising a bottom portion (3), at the bottom end (101) of the product (100) and a bow (4) extending from the top end (102) of the product (100), the wrapper being **characterised in that** the bow (4) is closed in a sealed fashion and the bottom portion (3) comprises sealing means (14, 116, 118, 119) in such a way as to be, at the bottom end (101) of the product (100), closed in a sealed fashion, the sealing means of the bottom portion (3) is a transversal fin (116) for closing the sheet (2) of wrapping material, the sheet (2) of wrapping material being wrapped around the product (100) to form a substantially tubular housing (15), the transversal fin (116) closing the first end portion (117) of the tubular housing (15), the bow (4) being formed by a sealed twisted top flap (120) at a second end portion (16) of the tubular housing (15) positioned on the side opposite the first end portion (117) relative to the product (100).

7. The wrapper according to claim 6, wherein the sealing means (116, 118, 119) comprise bonding means (109, 110, 111, 112) which can be activated to close in a sealed fashion the sheet (2) of wrapping material at the bottom portion (3).
8. The wrapper according to claim 6 or 7, wherein the bonding means (109, 110, 111, 112) which can be activated comprise at least one stretch (112, 112a) of bonding material which can be activated at the bow (4) to close the bow in a sealed fashion.

Patentansprüche

1. Umhüllungsverfahren, um einen Einschlag (1) vom "oberseitig verflochtenen" Typ eines Produkts (100) zu formen, aufweisend ein unterseitiges Ende (101), ein oberseitiges Ende (102), eine seitliche Oberfläche (103) und eine Hauptachse (D), die sich zwischen dem unterseitigen Ende (101) und dem oberseitigen Ende (102) erstreckt, wobei das Verfahren umfasst:

einen Schritt zum Vorbereiten von mindestens einem Blatt (2) Umhüllungsmaterial;
einen Schritt zum Vorbereiten von Bindemitteln (109, 110, 111, 112), die auf dem Blatt (2) Umhüllungsmaterial aktiviert werden können, umfassend ein erstes und ein zweites Teilstück (109, 110) von Bindematerial, die an einer ersten und einer zweiten Längskante (105, 106) des Blatts (2) Umhüllungsmaterial positioniert aktiviert werden können, ein drittes Teilstück (111) von Bindematerial, das an einer Querkan-

te (107) des Blatts (2) Umhüllungsmaterial positioniert aktiviert werden kann, ein viertes Teilstück (112, 112a) von Bindematerial, das quer zwischen dem ersten und dem zweiten Teilstück (109, 110) und parallel zum dritten Teilstück (111) positioniert aktiviert werden kann und mit dem ersten, zweiten und dritten Teilstück (109, 110, 111) eine Zone (113) zum Positionieren des Produkts (100) begrenzt, wobei das Umhüllungsverfahren mindestens einen Schritt zum Falten des Blatts (2) Umhüllungsmaterial umfasst, um eine rohrförmige Aufnahme (15) zu formen, aufweisend mindestens einen ersten Endabschnitt (16), der sich entlang der Hauptachse (D) vom oberseitigen Ende (102) des Produkts erstreckt, wobei der Schritt zum Falten des Blatts (2) Umhüllungsmaterial umfasst:

einen Schritt zum Positionieren des Produkts (100) in der Positionierungszone (113), wobei das Blatt (2) Umhüllungsmaterial mit der seitlichen Oberfläche (103) des Produkts (100) zusammengefügt ist, wobei das unterseitige Ende (101) der Querkante (107) zugewandt ist;
einen Schritt zum Hüllen des Blatts (2) Umhüllungsmaterial rund um die Hauptachse (D) des Produkts (100), anschlagend an die Längskanten (105, 106) und insbesondere an das erste und das zweite Teilstück (109, 110) aus Bindematerial, die aktiviert werden können, um die rohrförmige Aufnahme (15) zu erhalten,
wobei das Verfahren umfasst:

einen Schritt zum Einrichten von Mitteln (116, 118, 119) zum Versiegeln von mindestens des unterseitigen Endes (101) des Produkts;
einen Schritt zum Verflechten in einer Richtung (V) zum Verflechten des Endabschnitts (16) der rohrförmigen Aufnahme (15), um eine Schleife (4) zu formen,
wobei die Bindemittel (109, 110, 111, 112), die aktiviert werden können, zumindest an der Schleife (4) bereitgestellt sind, wobei
der Schritt zum Vorbereiten der Versiegelungsmittel (116, 118, 119) einen Versiegelungsschritt umfasst, indem mindestens ein Teil der Bindemittel (9, 10, 11, 12, 109, 110, 111, 112), die aktiviert werden können, eines Endabschnitts (117) der rohrförmigen Aufnahme (15), sich erstreckend vom unterseitigen Ende (101), aktiviert wird, wobei der Versiegelungsschritt einen

Schritt zum Formen von mindestens einer Rippe (116) umfasst, die quer zur Hauptachse (D) angeordnet ist, wobei das Verfahren einen Schritt zum Formen einer oberseitigen Klappe (120) vom Endabschnitt (16) der rohrförmigen Aufnahme (15), sich erstreckend vom oberseitigen Ende (102) des Produkts (100) umfasst, wobei der Schritt zum Verflechten einen Schritt zum Greifen und Verflechten der oberseitigen Klappe (120) umfasst.

2. Verfahren nach Anspruch 1, wobei der Schritt zum Hüllen des Blatts (2) Umhüllungsmaterial rund um die Hauptachse (D) des Produkts (100) eine Längsrippe (115) formt, umfassend die erste und die zweite Längskante (105, 106), wobei der Schritt zum Falten des Blatts (2) Umhüllungsmaterial einen Schritt zum Falten der Längsrippe (115) auf der rohrförmigen Aufnahme (15), vorzugsweise in der Verflechtungsrichtung (V), umfasst.
3. Verfahren nach Anspruch 1, wobei der Schritt zum Vorbereiten von Versiegelungsmitteln (116, 118, 119) einen Schritt zum Festspannen von mindestens der gefalteten Querrippe (116) an einem Abschnitt des Blatts (2) Umhüllungsmaterial am unterseitigen Ende (101) des Produkts umfasst.
4. Verfahren nach Anspruch 3, wobei der Schritt zum Vorbereiten von Versiegelungsmitteln (116, 118, 119) einen Schritt zum Falten der Querrippe (116) gegen das unterseitige Ende (101) des Produkts (100) umfasst.
5. Verfahren nach einem der vorhergehenden Ansprüche, wobei der Schritt zum Verflechten einen Schritt zum Aktivieren des Bindematerials umfasst, das vom vierten Teilstück (112, 112a) des Bindematerials aktiviert werden kann, das aktiviert werden kann, um einen versiegelten Verschluss der Schleife (4) zu erhalten.
6. Einschlag vom "oberseitig verflochtenen" Typ, enthaltend ein Produkt (100), aufweisend ein unterseitiges Ende (101), ein oberseitiges Ende (102), eine seitliche Oberfläche (103) und eine Hauptachse (D), sich erstreckend zwischen dem unterseitigen Ende (101) und dem oberseitigen Ende (102), wobei der Einschlag einen unterseitigen Abschnitt (3) am unterseitigen Ende (101) des Produkts (100) umfasst und eine Schleife (4), sich erstreckend vom oberseitigen Ende (102) des Produkts (100), wobei der Einschlag **dadurch gekennzeichnet ist, dass** die Schleife (4) auf versiegelte Weise verschlossen ist und der unterseitige Abschnitt (3) Versiegelungsmittel (14, 116, 118, 119) umfasst, sodass er am unter-

seitigen Ende (101) des Produkts (100) auf versiegelte Weise verschlossen ist, wobei es sich bei den Versiegelungsmitteln des unterseitigen Abschnitts (3) um eine Querrippe (116) zum Verschließen des Blatts (2) Umhüllungsmaterial handelt, wobei das Blatt (2) Umhüllungsmaterial um das Produkt (100) gehüllt wird, um eine im Wesentlichen rohrförmige Aufnahme (15) zu formen, wobei die Querrippe (116) das erste Endabschnitt (117) der rohrförmigen Aufnahme (15) verschließt, wobei die Schleife (4) durch eine versiegelte, verflochtene oberseitige Klappe (120) an einem zweiten Endabschnitt (16) der rohrförmigen Aufnahme (15) geformt ist, positioniert an der dem ersten Endabschnitt (117) relativ zum Produkt (100) entgegengesetzten Seite.

7. Einschlag nach Anspruch 6, wobei die Versiegelungsmittel (116, 118, 119) Bindemittel (109, 110, 111, 112) umfassen, die aktiviert werden können, um das Blatt (2) Umhüllungsmaterial am unterseitigen Abschnitt (3) zu verschließen.
8. Einschlag nach Anspruch 6 oder 7, wobei die Bindemittel (109, 110, 111, 112), die aktiviert werden können, mindestens ein Teilstück (112, 112a) aus Bindematerial umfassen, das an der Schleife (4) aktiviert werden kann, um die Schleife auf versiegelte Weise zu verschließen.

Revendications

1. Procédé d'emballage pour former un emballage de type « à torsion supérieure » (1) d'un produit (100) comportant une extrémité de fond (101), une extrémité supérieure (102), une surface latérale (103) et un axe principal (D) se prolongeant entre l'extrémité de fond (101) et l'extrémité supérieure (102), le procédé comprenant :

une étape consistant à préparer au moins une feuille (2) de matériau d'emballage ;
une étape consistant à préparer des moyens de collage (109, 110, 111, 112) pouvant être activés sur la feuille (2) de matériau d'emballage comprenant une première et une seconde portion (109, 110) de liant pouvant être activées positionnées sur un premier et un second bord longitudinal (105, 106) de la feuille (2) de matériau d'emballage, une troisième portion (111) de liant pouvant être activée positionnée sur un bord transversal (107) de la feuille (2) du matériau d'emballage, une quatrième portion (112, 112a) de liant pouvant être activée positionnée transversalement entre les première et seconde portions (109, 110) et parallèle à la troisième portion (111) et délimitant avec les première, seconde et troisième portions (109, 110, 111) une

zone (113) pour positionner le produit (100), le procédé d'emballage comprenant au moins une étape de pliage de la feuille (2) de matériau d'emballage pour former un logement tubulaire (15) comportant au moins une partie terminale (16) se prolongeant le long de l'axe principal (D), de l'extrémité supérieure (102) du produit, l'étape de pliage de la feuille (2) de matériau d'emballage comprenant :

une étape consistant à positionner le produit (100) dans la zone de positionnement (113) joignant la feuille (2) de matériau d'emballage à la surface latérale (103) du produit (100) avec l'extrémité de fond (101) orientée vers le bord transversal (107), une étape consistant à enrouler la feuille (2) de matériau d'emballage autour de l'axe principal (D) du produit (100), se mettant en butée contre les bords longitudinaux (105, 106) et en particulier contre les première et seconde portions (109, 110) de liant pouvant être activées pour obtenir le logement tubulaire (15) ;

le procédé comprenant :

une étape de réglage de moyens (116, 118, 119) servant au moins à sceller en correspondance de l'extrémité de fond (101) du produit ;

une étape d'entortillage, dans une direction (V) pour entortiller la partie d'extrémité (16) du logement tubulaire (15) pour former un noeud (4) ;

les moyens de collage (109, 110, 111, 112) pouvant être activés étant au moins prévus en correspondance du noeud (4), dans lequel

l'étape consistant à préparer les moyens de scellage (116, 118, 119) comprend une étape de scellage en activant au moins une partie des moyens de collage (9, 10, 11, 12, 109, 110, 111, 112) pouvant être activés, d'une partie d'extrémité (117) du logement tubulaire (15) se prolongeant de l'extrémité de fond (101), l'étape de scellage comprenant une étape consistant à former au moins une ailette (116) transversale à l'axe principal (D), le procédé comprenant une étape constant à former un rabat supérieur (120) à partir de la partie d'extrémité (16) du logement tubulaire (15) se prolongeant de l'extrémité supérieure (102) du produit (100), l'étape consistant à entortiller comprenant une étape consistant à saisir et à entortiller le rabat supérieur (120).

2. Procédé selon la revendication 1, dans lequel l'étape consistant à enrouler la feuille (2) de matériau d'emballage autour de l'axe principal (D) du produit (100) forme une ailette longitudinale (115) comprenant les premier et second bords longitudinaux (105, 106), l'étape de pliage de la feuille (2) de matériau d'emballage comprenant une étape de pliage de l'aillette longitudinale (115) sur le logement tubulaire (15), de préférence dans la direction d'entortillage (V) . 5
3. Procédé selon la revendication 1, dans lequel l'étape consistant à préparer les moyens de scellage (116, 118, 119) comprend une étape de blocage d'au moins l'aillette transversale pliée (116) sur une partie de la feuille (2) de matériau d'emballage en correspondance de l'extrémité de fond (101) du produit. 10 15
4. Procédé selon la revendication 3, dans lequel l'étape consistant à préparer les moyens de scellage (116, 118, 119) comprend une étape de pliage de l'aillette transversale (116) contre l'extrémité de fond (101) du produit (100). 20
5. Procédé selon l'une quelconque des revendications précédentes, dans lequel l'étape d'entortillage comprend une étape consistant à activer le liant pouvant être activé de la quatrième portion (112, 112a) des moyens de collage pouvant être activés pour obtenir une fermeture hermétique du noeud (4). 25 30
6. Emballage de type à « torsion supérieure » contenant un produit (100) comportant une extrémité de fond (101), une extrémité supérieure (102), une surface latérale (103) et un axe principal (D) se prolongeant entre l'extrémité de fond (101) et l'extrémité supérieure (102), l'emballage comprenant une partie inférieure (3), en correspondance de l'extrémité de fond (101) du produit (100) et un noeud (4) se prolongeant de l'extrémité supérieure (102) du produit (100), l'emballage étant **caractérisé en ce que** le noeud (4) est fermé de manière étanche et la partie de fond (3) comprend des moyens de scellage (14, 116, 118, 119) de manière à être, en correspondance de l'extrémité de fond (101) du produit (100), fermée de façon étanche, les moyens de scellage de la partie de fond (3) sont une ailette transversale (116) pour fermer la feuille (2) de matériau d'emballage, la feuille (2) de matériau d'emballage étant enroulée autour du produit (100) pour former un logement substantiellement tubulaire (15), l'aillette transversale (116) fermant la première partie d'extrémité (117) du logement tubulaire (15), le noeud (4) étant formé par un rabat supérieur entortillé étanche (120) en correspondance d'une seconde partie d'extrémité (16) du logement tubulaire (15) positionnée sur le côté opposé à la première partie d'extrémité (117) par rapport au produit (100). 35 40 45 50 55
7. Emballage selon la revendication 6, dans lequel les moyens de scellage (116, 118, 119) comprennent des moyens de collage (109, 110, 111, 112) pouvant être activés pour fermer de manière étanche la feuille (2) de matériau d'emballage en correspondance de la partie de fond (3). 5
8. Emballage selon les revendications 6 ou 7, dans lequel les moyens de collage (109, 110, 111, 112) pouvant être activés comprennent au moins une portion (112, 112a) de liant pouvant être activée en correspondance du noeud (4) pour fermer le noeud de manière étanche. 10

FIG.1

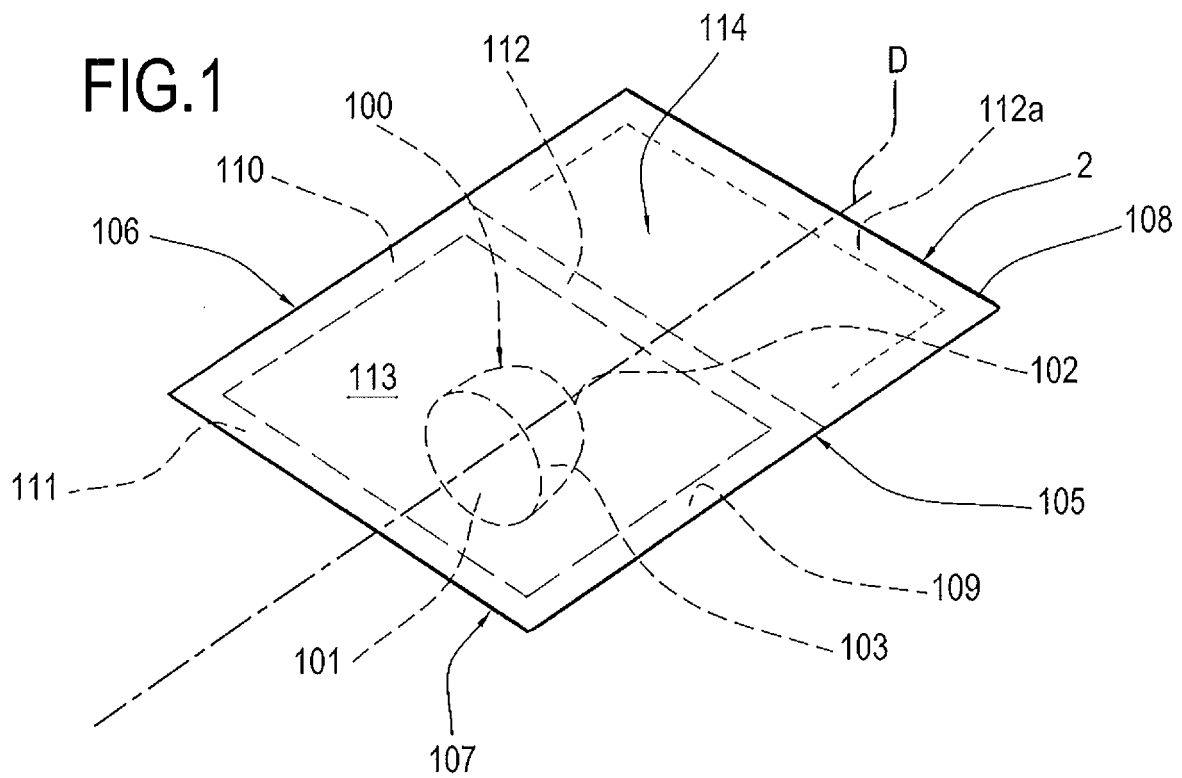


FIG.2

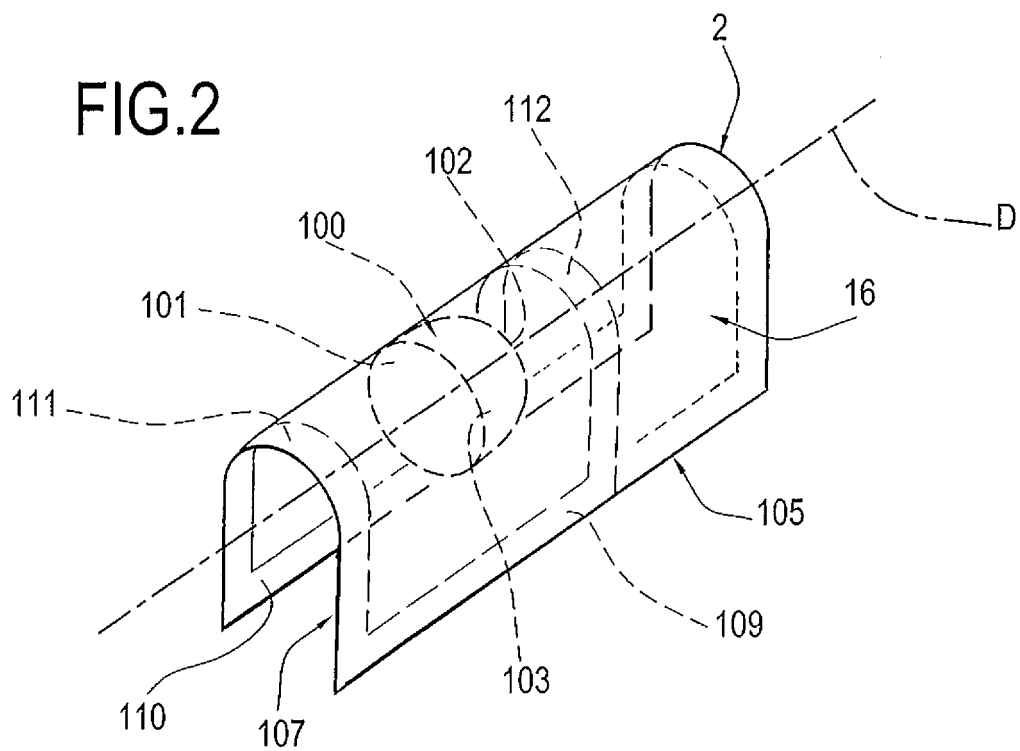


FIG.3

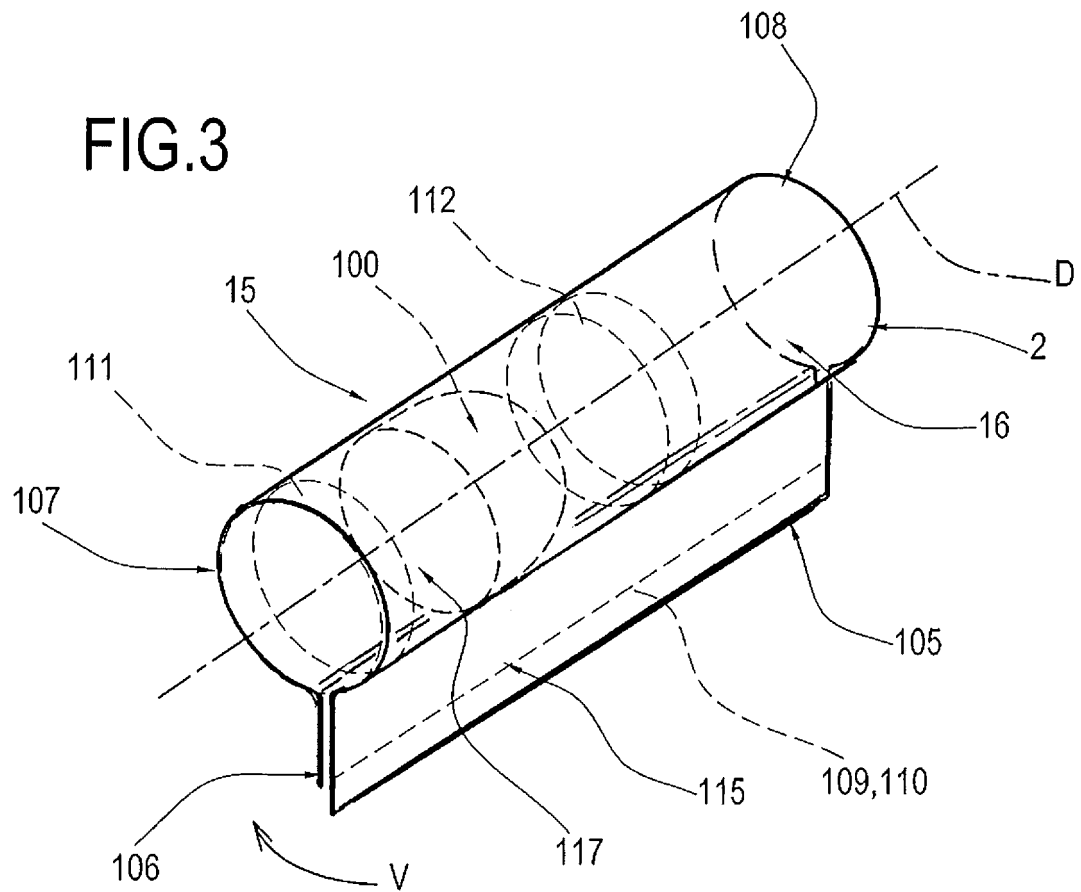


FIG.4

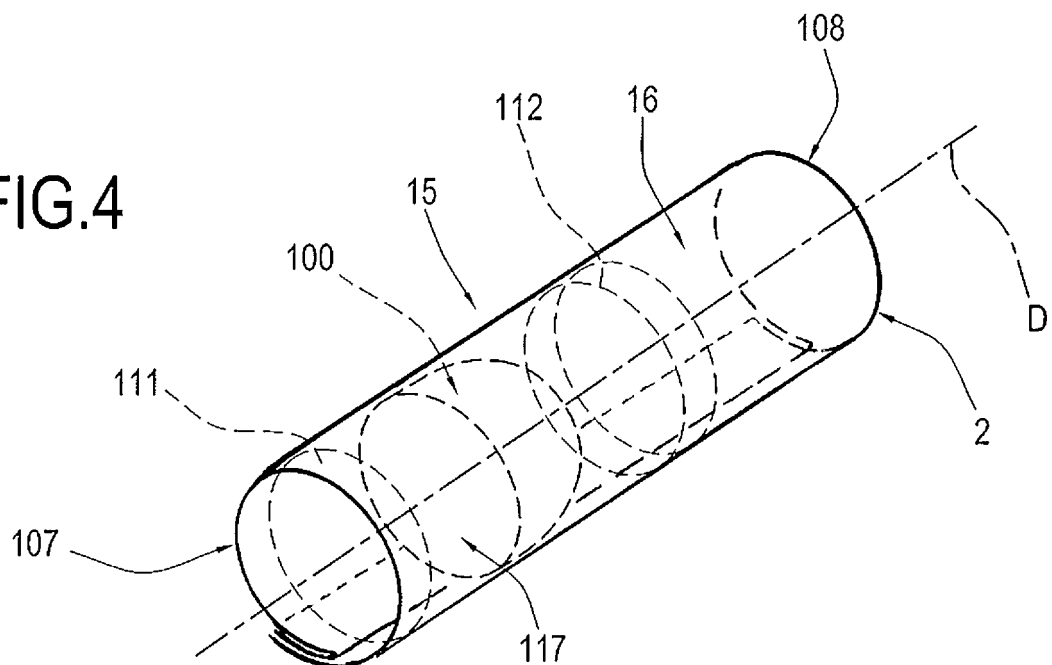


FIG.5

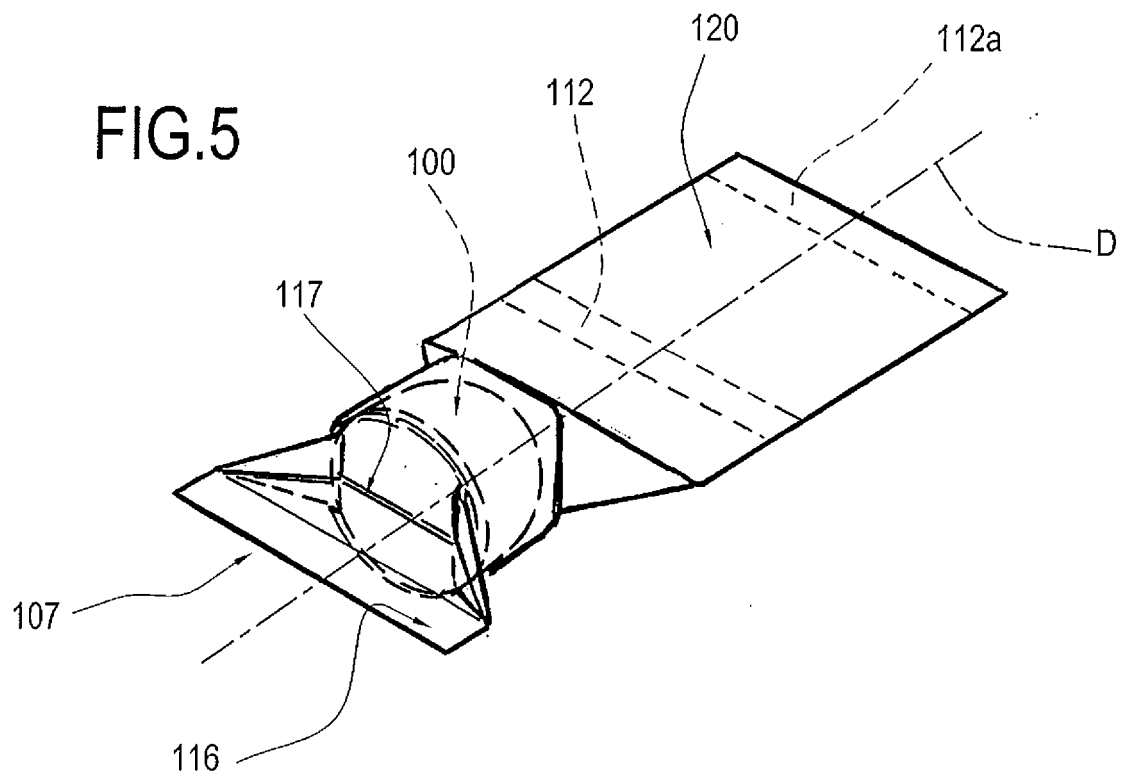


FIG.6

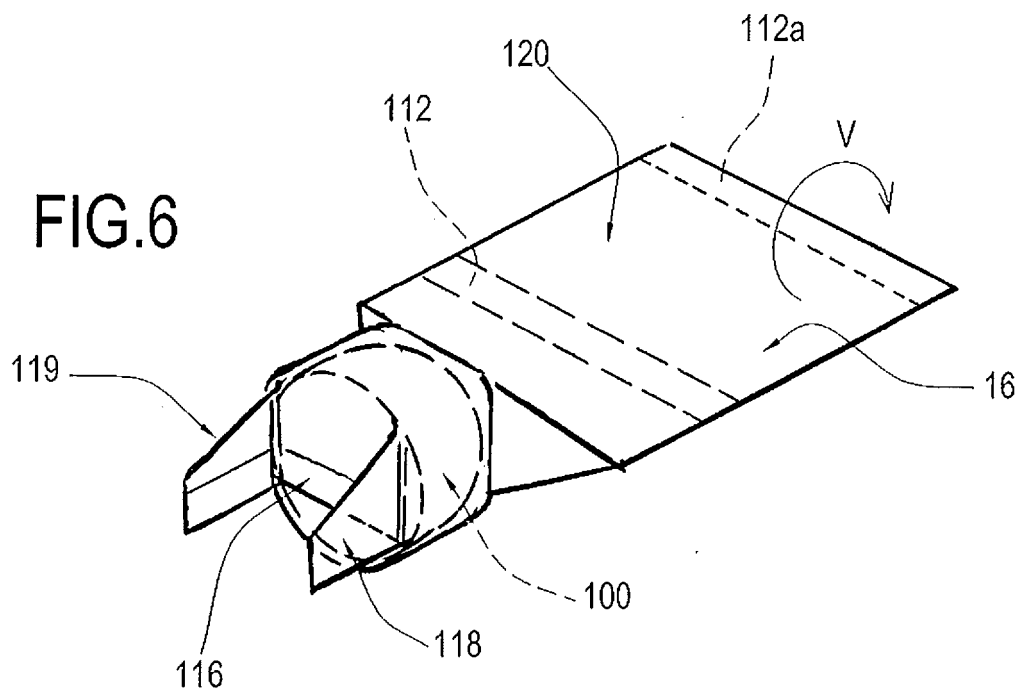
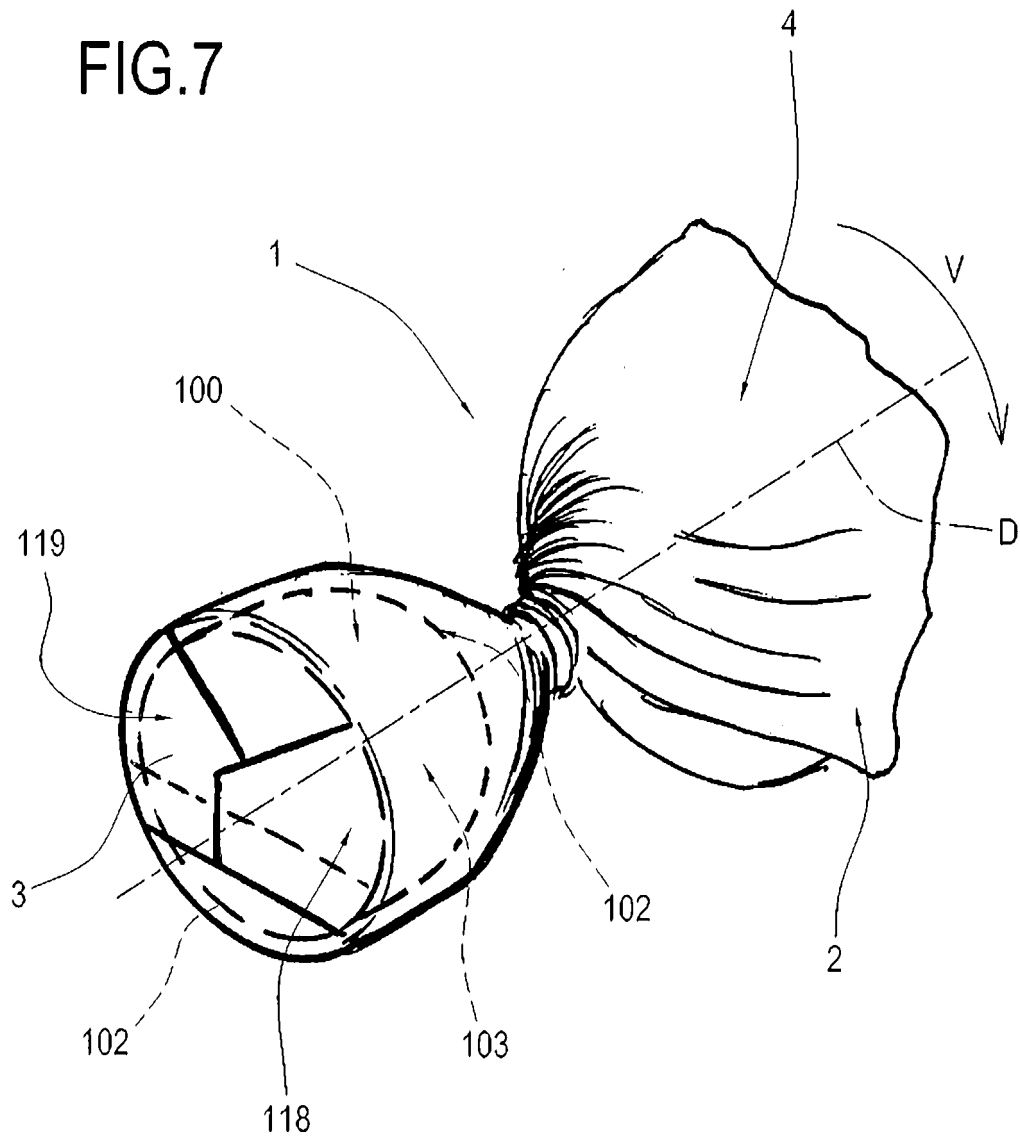


FIG.7



REFERENCES CITED IN THE DESCRIPTION

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