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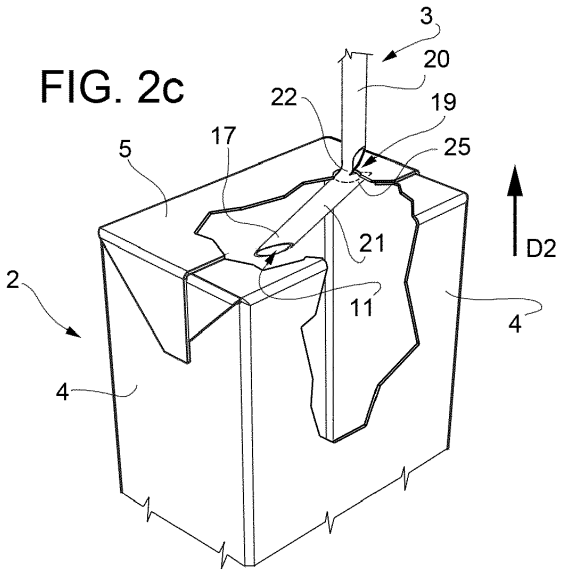
(54) DRINKING STRAW, PACKAGE ASSEMBLY AND METHOD FOR PRODUCING A DRINKING STRAW

(57) There is described a drinking straw (3, 3' , 3", 3"') for a package (2) being filled with a pourable food product comprising a tubular main portion (16) configured to be inserted, in use, into the package (2) and an incision (19) dividing the tubular main portion into a first section (20) and a second section (21) being connected to one another. The second section (20) is configured to abut against an inner surface of the package (2) for limiting, in use, a movement of the tubular main portion (16) out of the package (2) for impeding the removal and/or separation of the drinking straw (3, 3', 3'', 3"') from the package (2).

FIG. 2c



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Description

TECHNICAL FIELD

[0001] The present invention relates to a drinking straw for a package filled with a pourable food product.

[0002] The present invention also relates to a package assembly having a package filled with a pourable food product and a drinking straw.

[0003] The present invention also relates to a method for producing a drinking straw.

BACKGROUND ART

[0004] As is known, many liquid or pourable food products, such as fruit juice, UHT (ultra-high-temperature treated) milk, wine, tomato sauce, etc., are sold in packages made of sterilized packaging material.

[0005] A typical example is the parallelepiped-shaped package for pourable food products known as Tetra Brik Aseptic (registered trademark), which is made by sealing and folding a laminated strip packaging material. The packaging material has a multilayer structure comprising a carton and/or paper base layer, covered on both sides with layers of heat-seal plastic material, e.g. polyethylene. In the case of aseptic packages for long-storage products, the packaging material also comprises a layer of oxygen-barrier material, e.g. an aluminum foil, which is superimposed on a layer of heat-seal plastic material, and is in turn covered with another layer of heat-seal plastic material forming the inner face of the package eventually contacting the food product.

[0006] There are known package assemblies comprising a package and a drinking straw, in particular for the consumption on-the-go. The package comprises a separation membrane separating the inner space of the package from an outer environment and which is configured to be pierced and/or opened by the drinking straw so as to allow the introduction of the drinking straw into the package and the subsequent extraction of the pourable food product through the drinking straw.

[0007] Each drinking straw is typically attached to the respective package within a closed envelope. Prior to its use a consumer extracts the respective drinking straw from the envelope and introduces the drinking straw into the package by piercing at least partially the separation membrane.

[0008] A drawback of these packages resides in that the drinking straws may be littered independently (voluntarily or involuntarily) from the package after the complete or partial consumption of the pourable food product.

[0009] Therefore, a need is felt in the sector to improve the known drinking straws and the known package assemblies and the known method for producing drinking straws. In particular, so as to overcome at least one of the above-mentioned drawbacks.

DISCLOSURE OF INVENTION

[0010] It is therefore an object of the present invention to provide in a straightforward and low-cost manner an improved drinking straw solving the above-mentioned drawback.

[0011] It is a further object of the present invention to provide in a straightforward and low-cost manner an improved package assembly solving the above-mentioned drawback.

[0012] It is a further object of the present invention to provide in a straightforward and low-cost manner a method for producing a drinking straw.

[0013] According to the present invention, there is provided a drinking straw according to the independent claim.

[0014] Further advantageous embodiments of the drinking straw are specified in claims 2 to 11.

[0015] Furthermore, there is provided a packaging assembly according to claim 12.

[0016] Furthermore, there is a provided a method for producing a drinking straw according to claims 13 to 15.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017] Four non-limiting embodiments of the present invention will be described by way of example with reference to the accompanying drawings, in which:

Figure 1 is a perspective view of a package assembly having a package and a drinking straw according to a first embodiment of the present invention, with parts removed for clarity;

Figure 2a is a perspective view of details of the package assembly of Figure 1 prior to a partial insertion of the drinking straw into the package, with parts removed for clarity;

Figure 2b is a perspective view of details of the package assembly of Figures 1 after insertion of the drinking straw into the package, with parts removed for clarity;

Figure 2c is a perspective view of details of the package assembly of Figure 1 after an attempt of removing the drinking straw from the package, with parts removed for clarity;

Figure 3 is a schematic representation of steps of the production of the drinking straw of Figures 1 to 2c, with parts removed for clarity;

Figure 4 is a perspective view of a portion of a drinking straw according to a second embodiment of the present invention, with parts removed for clarity;

Figure 5 is a perspective view of a portion of a drinking straw according to a third embodiment of the present invention, with parts removed for clarity;

Figure 6 is a perspective view of a package assembly having a package and the drinking straw according to Figure 5, with parts removed for clarity; and

Figure 7 is a perspective view of a portion of a drink-

ing straw according to a fourth embodiment of the present invention, with parts removed for clarity.

BEST MODES FOR CARRYING OUT THE INVENTION

[0018] Reference numeral 1 indicates as a whole a package assembly having a package 2, in particular a carton package, and a drinking straw 3. In particular, package assembly 2 is adapted for the consumption on-the-go.

[0019] According to a preferred non-limiting embodiment, package assembly 1 also comprises an envelope or a pocket for housing the drinking straw 3 prior to its use.

[0020] Preferably but not necessarily, the envelope or the pocket is provided on and/or fixed to package 2.

[0021] According to a preferred non-limiting embodiment, package 2 is filled with a pourable food product, in particular a sterilized and/or a sterile-processed pourable food product, such as water, pasteurized milk, fruit juice, beverages with pulp or other beverages suitable for consumption on-the-go.

[0022] Package 2 may be obtained from a web of packaging material having a multilayer structure (not shown), and comprises at least a layer of fibrous material, such as paper or cardboard, and at least two layers of polymeric plastic material, e.g. polyethylene, interposing the layer of fibrous material in between one another. One of these two layers of polymeric material defining the inner face of package 2 contacting the pourable food product in the filled package 2.

[0023] Preferably but not necessarily, the web of packaging material also comprises a layer of gas- and light-barrier material, e.g. aluminum foil or a film layer comprising ethylene vinyl alcohol (EVOH), in particular being arranged between one of the layers of the polymeric material and the layer of fibrous material. Preferentially but not necessarily, the web of packaging material also comprises a further layer of polymeric material being interposed between the layer of gas- and light-barrier material and the layer of fibrous material.

[0024] With particular reference to Figures 1 to 2c, package 2 extends along a longitudinal axis A. In particular, package 2 comprises a first wall portion, in particular being transversal, even more particular perpendicular, to axis A, from which package 2 extends along axis A. Preferably but not necessarily, the first wall portion defines a support surface of package 2, which, in use, can be put in contact with a support, such as a shelf, when, in use, being e.g. exposed within a sales point. In particular, when being arranged on a support and/or, in use, during consumption of the pourable food product by a consumer from package 2 the first wall portion defines a bottom wall portion.

[0025] Preferably but not necessarily, package 2 also comprises a plurality of lateral walls 4 being (fixedly) connected to the first wall portion and extending, in particular substantially parallel to axis A, from the first wall portion.

[0026] Preferably but not necessarily, package 2 also comprises a second wall portion 5 opposite to the first wall portion and being (fixedly) connected to lateral walls 4. In other words, lateral walls 4 are interposed between the first wall portion and second wall portion 5. In particular, when being arranged on a support and/or, in use, during consumption of the pourable food product by a consumer from package 2 second wall portion 5 defines a top wall portion.

[0027] According to a preferred non-limiting embodiment, the first wall portion and second wall portion 5 may be parallel to one another.

[0028] According to a non-limiting alternative embodiment, the first wall portion and second wall portion 5 could be inclined with respect to one another.

[0029] Preferentially but not necessarily, package 2 is parallelepiped-shaped.

[0030] With particular reference to Figures 1 to 2c, package 2 comprises a main opening allowing for the introduction of drinking straw 3 into package 2.

[0031] According to a preferred non-limiting embodiment, package 2 also comprises a separation membrane 6 covering the main opening and being configured to be ruptured and/or opened and/or cut and/or pierced, in particular by drinking straw 3 so as to allow the insertion of drinking straw 3 (through the main opening) into package 2. In particular, separation membrane 6 separates, prior to losing its integrity, an inner environment of package 2 containing the pourable food product from an outer environment. In this manner, the pourable food product is protected from the outer environment.

[0032] Preferentially but not necessarily, separation membrane 6 comprises a gas- and light-barrier material, e.g. aluminum foil or a film comprising ethylene vinyl alcohol (EVOH).

[0033] According to a preferred non-limiting embodiment, separation membrane 6 is defined by a portion of the web of packaging material, in particular a portion of the layers of the web of packaging material being different from the layer of fibrous material.

[0034] Preferentially but not necessarily, separation membrane 6 has a circular shape.

[0035] Preferentially but not necessarily, separation membrane 6 is provided on second wall portion 5.

[0036] According to a preferred non-limiting embodiment, the main opening is defined by a respective hole within the layer of fibrous material.

[0037] With particular reference to Figures 1 to 2c, drinking straw 3 comprises at least a tubular body 10 defining and/or delimiting a passage for the pourable food product.

[0038] According to a preferred non-limiting embodiment, drinking straw 3, in particular tubular body 10, comprises at least an outlet opening 12 configured to allow for the outlet of the pourable food product from drinking straw 3 (i.e. a consumer receives the pourable food product through outlet opening 12). In particular, outlet opening 12 is provided at a first end of drinking straw 3, in particular of tubular body 10.

[0039] Preferentially but not necessarily, drinking straw 3, in particular tubular body 10, also comprises an inlet opening 11 configured to allow for the introduction of at least a portion of the pourable food product into drinking straw 3. In particular, inlet opening 11 is arranged at a second end of drinking straw 3, in particular of tubular body 10, opposite to the first end.

[0040] According to the non-limiting embodiment shown, tubular body 10 presents a circular cross-section.

[0041] In an alternative embodiment not shown, tubular body 10 could have a rectangular or square cross-section or a more complex cross-section.

[0042] According to a preferred non-limiting embodiment, drinking straw 3, in particular tubular body 10, comprises

- a mouthpiece 15 having and/or carrying outlet opening 12; and
- a tubular main portion 16 being configured to be inserted, in use, into package 2.

[0043] Preferentially but not necessarily, tubular main portion 16 has and/or carries inlet opening 11.

[0044] According to a preferred non-limiting embodiment, tubular main portion 16 and mouthpiece 15 are connected to one another.

[0045] According to a preferred non-limiting embodiment, mouthpiece 15 and tubular main portion 16 carry and/or define and/or have respective the first end and second end of drinking straw 3.

[0046] According to a preferred non-limiting embodiment, tubular main portion 16 is configured to be inserted into package 2 through separation membrane 6. In particular, tubular main portion 16 is configured to form, in use, during insertion of tubular main portion 16 into package 2, a hole within package 2 and/or separation membrane 6 having a size substantially corresponding to an outer size, in particular an outer diameter, of tubular main portion 16.

[0047] According to a preferred non-limiting embodiment, the maximum size of the hole is limited by the size of the main opening covered by separation membrane 6. In particular, the size of the hole may be smaller than the size of the main opening.

[0048] According to a preferred non-limiting embodiment, tubular main portion 16 comprises an outer lateral surface.

[0049] Preferentially but not necessarily, tubular main portion 16 comprises a tip section 17 configured to rupture and/or open and/or cut and/or pierce, in use, separation membrane 6, in particular by means of a consumer arranging tip section 17 on separation membrane 6 (see Figure 2a) and exerting a force on drinking straw 3, in particular tubular main portion 16, even more particular tip section 17, for directing tubular main portion 16 through separation membrane 6 (for liberating the main opening) and into package 2 (see Figure 2b), in particular towards the first wall portion.

[0050] Preferentially but not necessarily, tip section 17 defines the second end of drinking straw 3.

[0051] Preferentially but not necessarily, tip section 17 carries and/or comprises inlet opening 11.

[0052] Preferentially but not necessarily, tip section 17 is wedge-shaped.

[0053] According to a preferred non-limiting embodiment, at least a portion of tubular main portion 16 and/or tubular body 10 extends along a longitudinal axis B.

[0054] According to a preferred non-limiting embodiment, drinking straw 3, in particular tubular body 10, comprises a corrugated portion 18 interposed between mouthpiece 15 and tubular main portion 16. In particular, corrugated portion 18 connects mouthpiece 15 and tubular main portion 16 with one another.

[0055] Preferentially but not necessarily, corrugated portion 18 is configured to allow for a relative movement between mouthpiece 15 and tubular main portion 16. In particular, corrugated portion 18 allows a consumer to arrange mouthpiece 15 according to the consumer's needs and/or preferences. In other words, corrugated portion 18 allows inclining mouthpiece 15 with respect to tubular main portion 16 and/or longitudinal axis B.

[0056] Advantageously, drinking straw 3, in particular tubular body 10, even more particular tubular main portion 16, comprises an incision 19, in particular being transversal to longitudinal axis B, and dividing tubular main portion 16 into a first section 20 and a second section 21 being connected to one another.

[0057] According to a preferred non-limiting embodiment, drinking straw 3, in particular tubular body 10, even more particular tubular main portion 16, comprises a hinge section 22 defined by incision 19 and connecting first section 20 and second section 21 with one another. In particular, first section 20 and second section 21 are connected to one another at hinge section 22.

[0058] According to the non-limiting embodiment shown in Figures 1 to 3, incision 19 extends along a circumferential portion of tubular main portion 16. In particular, incision 19 is obtained by means of cutting tubular main portion 16 along the circumferential portion. It must be understood that the circumferential portion has an extension such that first section 20 and second section 21 do not separate from one another.

[0059] Preferentially but not necessarily, the (cut) circumferential portion is arc-shaped.

[0060] Preferentially but not necessarily, the circumferential portion is symmetrical with respect to a symmetry axis transversal to axis B and/or is symmetrical with respect to a symmetry plane within which axis B extends.

[0061] According to a preferred non-limiting embodiment, incision 19 is inclined with respect to longitudinal axis B. In particular, longitudinal axis B and incision 19 form and/or define an acute angle ranging between 20° to 80°.

[0062] Advantageously, second section 21 is configured to abut against an inner surface of package 2, in particular in the area of, even more particular at, the hole

formed within package 2 and/or separation membrane 6 for limiting, in use, a movement of tubular main portion 16 out of package 2 for impeding the removal and/or separation of drinking straw 3 from package 2, in particular once tubular main portion 16 has been introduced into package 2.

[0063] Preferentially but not necessarily, in use, during insertion of tubular main portion 16 into package 2 drinking straw 3 is moved along a first direction D1 transversal to separation membrane 6 and/or the first wall portion and/or second wall portion 5. In the ideal case, after the complete or partial consumption of the pourable food product present within package 2, the consumer disposes of package 2 together with drinking straw 3 without the attempt to remove drinking straw 3 from package 2. In the non-ideal case that a consumer tried to remove drinking straw 3 from package 2 by moving drinking straw 3 along a second direction D2 opposite to first direction D1 and out of package 2, second section 21 would limit the possible extraction as second section 21 abuts, at some degree of extraction, against the inner surface of package 2.

[0064] According to a preferred non-limiting embodiment, first section 20 and second section 21 are movable with respect to one another. In particular, first section 20 and second section 21 are rotatable (being adapted to angularly move) with respect to one another around a hinge axis defined by hinge section 22. In particular, the hinge axis is defined by incision 19.

[0065] According to a preferred non-limiting embodiment, tubular main portion 16 comprises a gap between first section 20 and second section 21. In particular, the gap being defined by incision 19.

[0066] Preferentially but not necessarily, the gap is configured to allow for the introduction of at least a portion of the pourable product into package 2. In particular, in use, upon the application of a suction force by the consumer, in particular at mouthpiece 15, the pourable product enters into drinking straw 3 through the gap and, in particular also through inlet opening 11. According to the non-limiting embodiment disclosed, drinking straw 3 comprises both the gap and inlet opening 11.

[0067] According to an alternative non-limiting embodiment not shown, drinking straw 3 comprises the gap, but does not comprise inlet opening 11; according to such an embodiment, the pourable product enters, in use, drinking straw 3 only through the gap.

[0068] According to a preferred non-limiting embodiment, second section 21 comprises a peripheral tip 25, in particular being arranged at a peripheral position of tubular main portion 16. In particular, tip 25 has an interaction surface configured to abut, in use, against the inner surface of package 2.

[0069] More specifically, in use, if a consumer actuates a movement of tubular main portion 16 along direction D2, after some degree of extraction second section 21, in particular the interaction surface of tip 25, engages with the inner surface of package 2, in particular in the area of and/or at a rim portion of the hole formed within package 2 and/or separation membrane 6. In particular, at this position, a portion of package 2 and/or separation membrane 6 is arranged within the gap and/or is partially interposed between first section 20 and second section 21. Upon further movement of tubular main portion 16 along direction D2, second section 21 executes a relative movement, in particular a relative rotation around the hinge axis, with respect to first section 20. Upon even further movement of tubular main portion 16 along direction D2, second section 21 orientates such to abut against the inner surface of package 2 blocking and/or impeding the further exit of second section 21 from package 2.

[0070] According to a preferred non-limiting embodiment, drinking straw 3 is of a polymeric material or paper or cardboard or a composite material.

[0071] With particular reference to Figure 3, a method for producing drinking straw 3 comprises at least the steps of:

- forming an initial tubular body 29; and
- creating at least one incision 19, preferentially but not necessarily two incisions 19, on initial tubular body 29.

[0072] Preferentially but not necessarily, initial tubular body 29 has the size of two tubular bodies 10.

[0073] In alternative, initial tubular body 29 could substantially correspond to tubular body 10, i.e. having the size of a single tubular body 10.

[0074] According to a preferred non-limiting embodiment, during the step of forming an initial tubular body 29, initial tubular body 29 is obtained by means of extrusion.

[0075] According to a preferred non-limiting embodiment, the method for producing drinking straw 3 also comprises the steps of:

- cutting initial tubular body 29 for forming two tubular bodies 10;
- executing the step of creating at least one incision 19 twice so as to create a respective incision 19 within each one of the tubular bodies.

[0076] In particular, the step of executing can be executed prior, during or after the step of cutting initial tubular body 29.

[0077] Preferentially but not necessarily, during the step of creating at least one incision 19, initial tubular body 29 is cut along a circumferential portion of initial tubular body 29 for forming incision 19.

[0078] Preferentially but not necessarily, during the step of creating at least one incision 19, initial tubular body 29 is supported on a supporting surface and a cutting knife is moved to and partially through initial tubular body 29 along a direction parallel to a normal of the supporting surface.

[0079] Preferentially but not necessarily, during the

step of cutting initial tubular body 29, initial tubular body 29 is supported on the supporting surface and the cutting knife or another cutting knife is moved to and through initial tubular body 29 along a direction parallel to the normal of the supporting surface.

[0080] According to a preferred non-limiting embodiment, the method for producing drinking straw 3 also comprises the step of corrugating, during which initial tubular body 29 and/or tubular body 10 is partially corrugated for forming corrugated portion 18.

[0081] With reference to Figure 4, number 3' indicates an alternative embodiment of a drinking straw according to the present invention; as drinking straw 3' is similar to drinking straw 3, the following description is limited to the differences between them, and using the same references, where possible, for identical or corresponding parts.

[0082] In particular, drinking straw 3' differs from drinking straw 3 in that a portion of second section 21, in particular tip 25, is radially bend outwards. In other words, tip 25 protrudes away from the outer lateral surface.

[0083] Preferentially but not necessarily, tip 25 is elastically deformable, in particular so that, in use, during insertion of tubular main portion 16 into package 2 (movement along direction D1) the outwards bent tip 25 adapts to the hole formed within package 2 and/or separation membrane 6 and returns into its original configuration with tubular main portion 16 being arranged within package 2.

[0084] The method for producing drinking straw 3' is similar to the production of drinking straw 3. Therefore, the following description is solely focused on the difference.

[0085] In particular, the method for producing drinking straw 3' also comprises the step of bending, executed during or after the step of creating at least one incision 19, during which tip 25 is bent outwards.

[0086] With reference to Figures 5 and 6, number 3" indicates a further alternative embodiment of a drinking straw according to the present invention; as drinking straw 3" is similar to drinking straw 3, the following description is limited to the differences between them, and using the same references, where possible, for identical or corresponding parts.

[0087] In particular, tubular main portion 16 of drinking straw 3" comprises a corrugated zone 30, in particular distinct from corrugated portion 18, and incision 19 is provided at and/or within corrugated zone 30.

[0088] According to a preferred non-limiting embodiment, corrugated zone 30 is connected to tip section 17.

[0089] In particular, by providing for corrugated zone 30 it is possible to actuate a relative movement of tip section 17 upon contact with an inner surface of package 2, in particular of the first wall portion, and to orient tip section 17 with respect to the inner surface of the first wall portion. In such a way, it is possible to facilitate the complete removal of the pourable food product from package 2.

[0090] According to a preferred non-limiting embodiment, straw 3" does not comprise an inlet opening 11 so that, in use, the pourable product only enters into straw 3". In particular, tip section 17 is sealed and/or closed.

[0091] The method for producing drinking straw 3" is similar to the production of drinking straw 3. Therefore, the following description is solely focused on the difference.

[0092] In particular, the method for producing drinking straw 3" also comprises a further step of corrugating, during which corrugated zone 30 is formed.

[0093] According to a preferred non-limiting embodiment, the method of producing drinking straw 3" also comprises the further step of sealing, during which tip section 17 is sealed, in particular so as to ensure and/or guarantee that, in use, the pourable product can enter drinking straw 3" only through the gap (i.e. there is no inlet opening 11).

[0094] With reference to Figure 7, number 3"' indicates a further alternative embodiment of a drinking straw according to the present invention; as drinking straw 3"' is similar to drinking straw 3', the following description is limited to the differences between them, and using the same references, where possible, for identical or corresponding parts.

[0095] In particular, drinking straw 3"' comprises a plurality of rupturable bridging elements 31 arranged within incision 19, in particular the gap, and being connected to first section 20 and second section 21. In particular, bridging elements 31 are configured to stabilize tubular main portion 16, in particular by mechanically connecting first section 20 and second section 21, prior to insertion of tubular main portion 16 into package 2.

[0096] According to a preferred non-limiting embodiment, bridging elements 31 are configured to rupture, in use, at least upon contact of second section 21, in particular tip 25, with the inner surface of package 2 in the area of and/or at the hole formed within package 2 and/or separation membrane 6 and movement of tubular main portion 16 out of package 2 (along direction D2).

[0097] According to a preferred non-limiting embodiment, first section 20 and second section 21 are movable, in particular rotatable around the hinge axis, with respect to one another after, in use, rupture of bridging elements 31.

[0098] The method for producing drinking straw 3"' is similar to the production of drinking straw 3'. Therefore, the following description is solely focused on the difference.

[0099] In particular, during the step of creating at last one incision 19, incision 19 is created in such a way as to form bridging elements 31.

[0100] The advantages of drinking straws 3, 3', 3", 3"' according to the present invention will be clear from the foregoing description.

[0101] In particular, by providing for incision 19 and the formation of first section 20 and second section 21 a simple and efficient mechanism is offered, allowing to impede the separation of drinking straws 3, 3', 3", 3"' from

the respective packages 2 after their insertion into the respective packages 2. In this way, littering of drinking straws 3, 3', 3", 3''' is avoided.

[0102] Clearly, changes may be made to drinking straws 3, 3', 3", 3''' and the method for producing these as described herein without, however, departing from the scope of protection as defined in the accompanying claims.

[0103] In an alternative embodiment not shown, tip 25 of second section 21 of drinking straw 3" is radially bend outwards in a way similar to the one disclosed with respect to drinking straw 3'.

[0104] In an alternative embodiment not shown, tip 25 of second section 21 of drinking straw 3''' could be realized in a way similar to the one disclosed with respect to drinking straw 3.

[0105] In another alternative embodiment not shown, drinking straw 3" could comprise bridging elements 31.

Claims

1. Drinking straw (3, 3', 3'', 3''') for a package (2) being filled with a pourable food product comprising:

   - a tubular main portion (16) configured to be inserted, in use, into the package (2); and
   - an incision (19) dividing the tubular main portion into a first section (20) and a second section (21) being connected to one another;

   wherein the second section (20) is configured to abut against an inner surface of the package (2) for limiting, in use, a movement of the tubular main portion (16) out of the package (2) for impeding the removal and/or separation of the drinking straw (3, 3', 3'', 3''') from the package (2).

2. Drinking straw according to claim 1, wherein the tubular main portion (16) at least partially extends along a longitudinal axis (B);
   wherein the incision (19) is transversal to the longitudinal axis (B).

3. Drinking straw according to claim 2, wherein the incision (19) is inclined with respect to the longitudinal axis (B).

4. Drinking straw according to claim 3, wherein the longitudinal axis (B) and the incision (19) form and/or define an acute angle ranging between 20° to 80°.

5. Drinking straw according to any one of the preceding claims, wherein the first section (20) and the second section (21) are rotable with respect to one another around a hinge axis defined by a hinge section (22) connecting the first section (20) and the second section (22) with one another;
   wherein the hinge section (22) and/or the hinge axis is/are defined by the incision (19).

6. Drinking straw according to any one of claims 1 to 4, and further comprising at least one rupturable bridging element (31) arranged within the incision (19) and connected to the first section (20) and the second section (21).

7. Drinking straw according to claim 6, wherein the bridging element (31) is configured such to rupture, in use, at least upon contact of the second section (21) with the inner surface of the package (2) and movement of the tubular main portion (16) out of the package (2).

8. Drinking straw according to claim 6 or 7, wherein the first section (20) and the second section (21) are rotable with respect to one another around a hinge axis defined by a hinge section (22) connecting the first section (20) and the second section (21) with one another after, in use, rupture of the bridging element (31);
   wherein the hinge section (22) and/or the hinge axis is/are defined by the incision (19).

9. Drinking straw according to any one of the preceding claims, wherein the tubular main portion comprises a corrugated zone (30) and wherein the incision is provided within the corrugated zone (30).

10. Drinking straw according to any one of the preceding claims, wherein at least a portion of the second section (21) is radially bend outwards.

11. Drinking straw according to claim 10, wherein the second section (21) comprises a tip (25) defined by the incision (19);
    wherein the tip (25) is radially bend outwards.

12. Package assembly (1) comprising a package (2) being filled with a pourable food product and a drinking straw (3, 3', 3'', 3''') according to any one of the preceding claims.

13. Method for producing a drinking straw (3, 3', 3", 3''') according to any one of claims 1 to 11, comprising at least the steps of:

    - forming an initial tubular body (29);
    - creating at least one incision (19) on the initial tubular body (29).

14. Method according to claim 13, further comprising the steps of:

    - cutting the initial tubular body (29) for forming two tubular bodies (10);

- executing the step of creating at least one incision 19 twice so as to create a respective incision (19) within each one of the tubular bodies (10);

wherein the step of executing, is executed prior, during or after the step of cutting the initial tubular body (29).

15. Method according to any one of claims 13 or 14, wherein, during the step of creating at least one incision (19), the initial tubular body (29) is cut along a circumferential portion of the initial tubular body (29).

FIG. 1

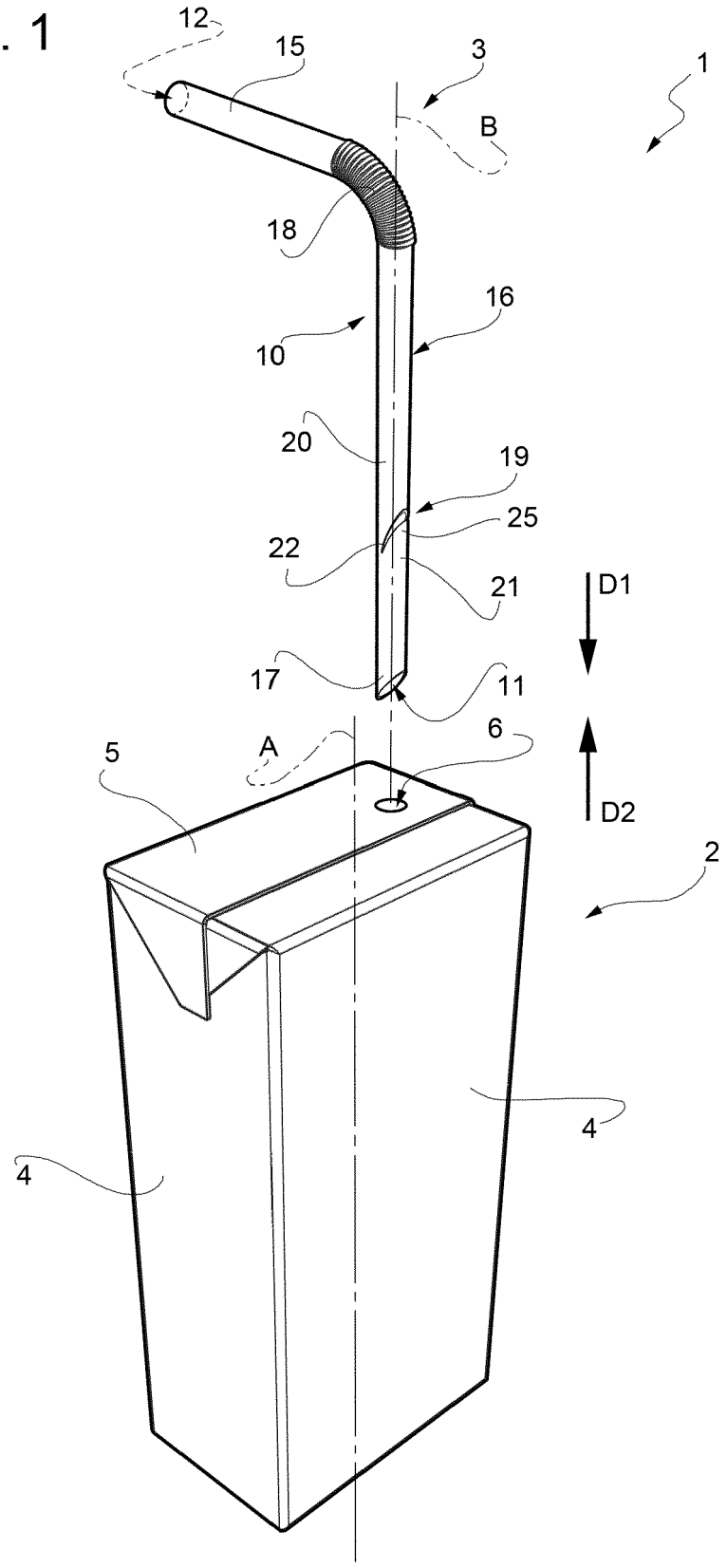


FIG. 2a

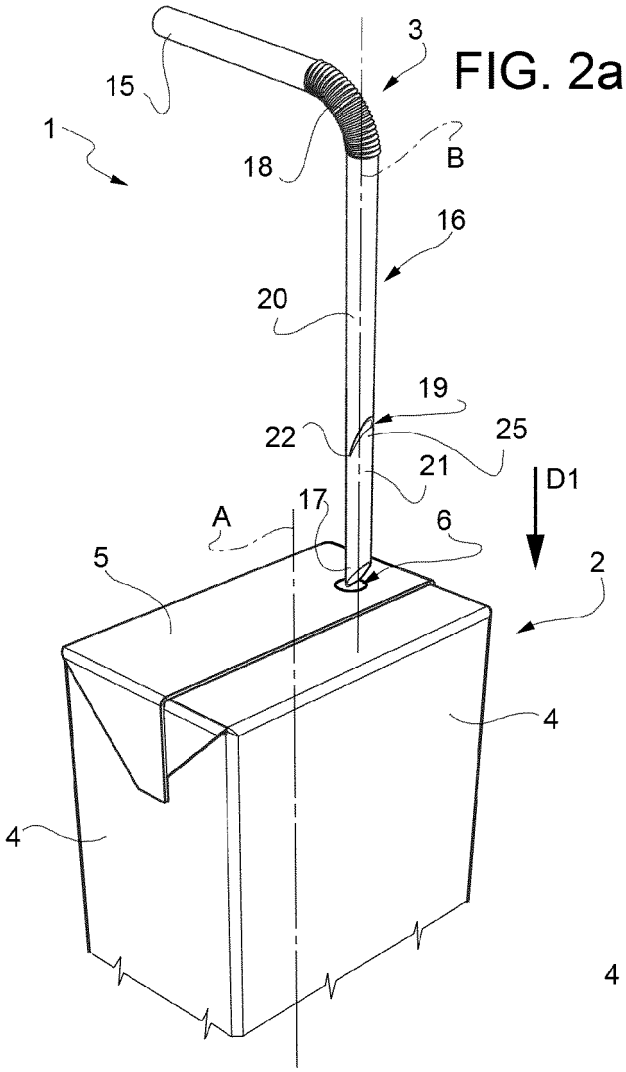


FIG. 2b

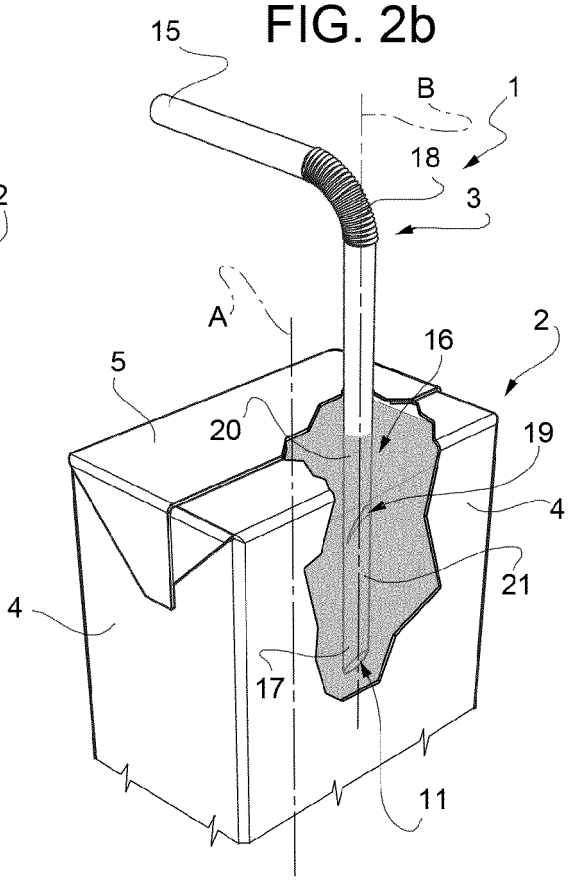


FIG. 2c

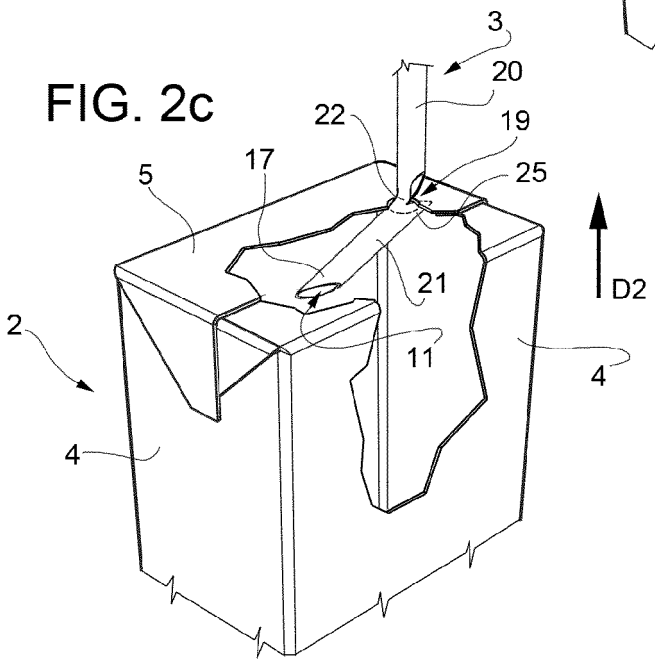


FIG. 3

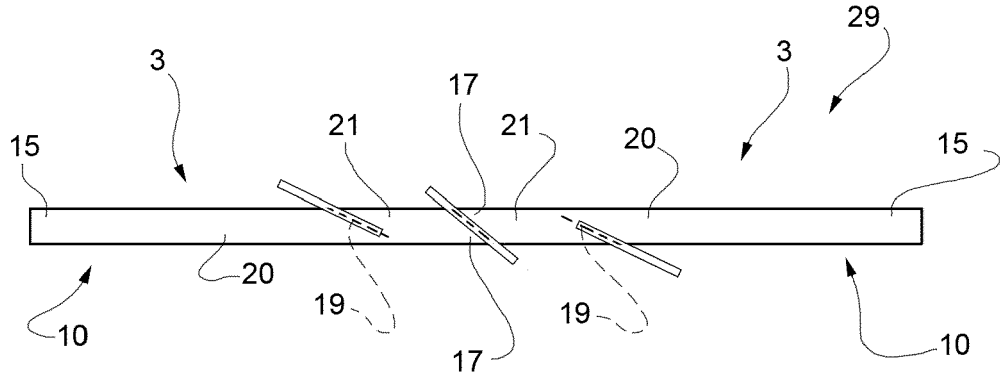


FIG. 4

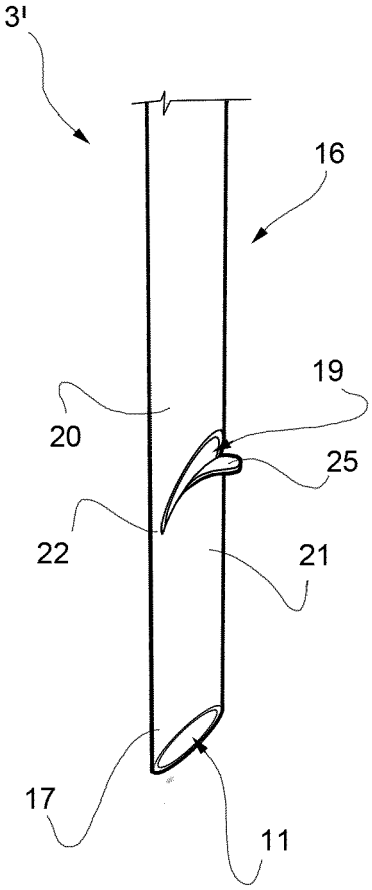


FIG. 5

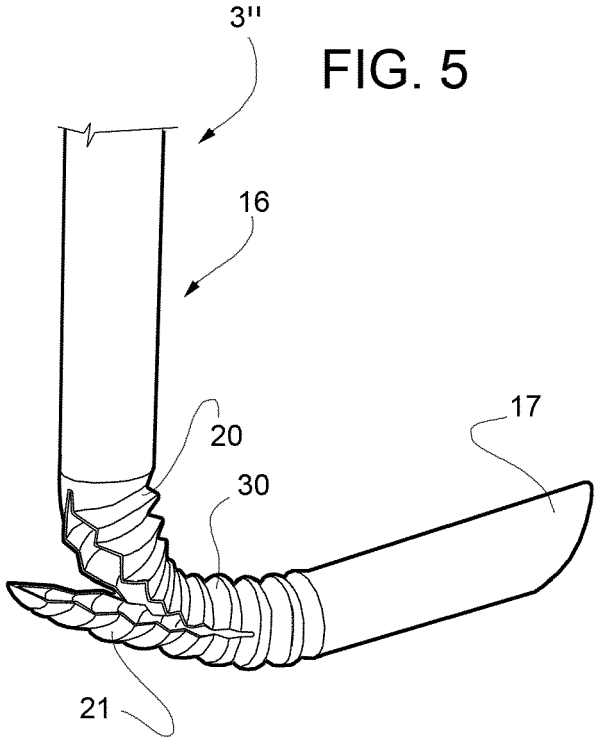
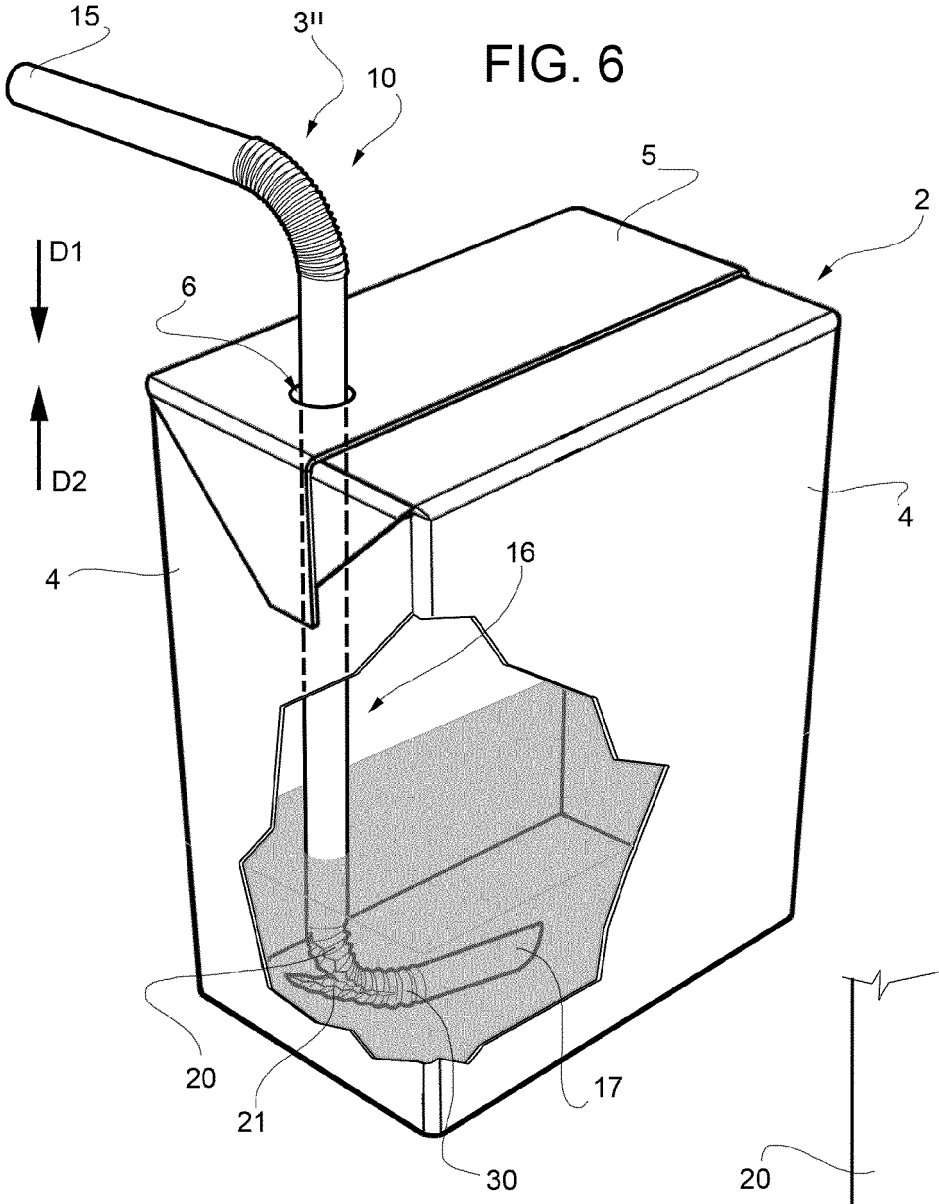


FIG. 6



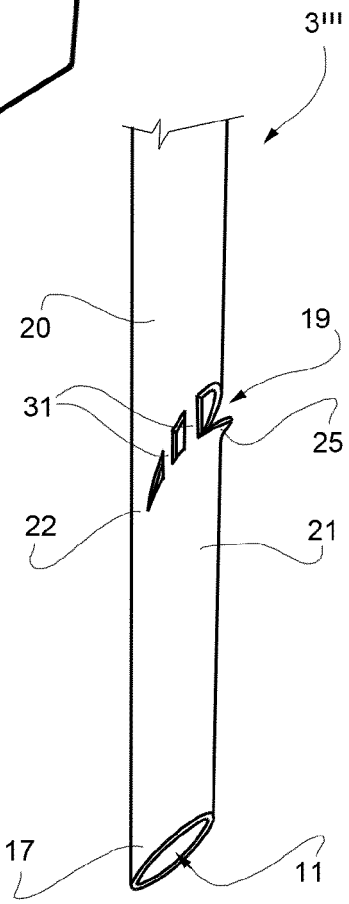


FIG. 7

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EUROPEAN SEARCH REPORT

Application Number
EP 19 15 5752

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	5 August 2019	Vistisen, Lars

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