(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 1 984 270 B1

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention of the grant of the patent:
13.04.2016 Bulletin 2016/15

(21) Application number: **06706699.3**

(22) Date of filing: **07.02.2006**

(51) Int Cl.:
B65D 75/52 *(2006.01)* ***B65D 75/58*** *(2006.01)*
B65D 33/02 *(2006.01)*

(86) International application number:
PCT/EP2006/001047

(87) International publication number:
WO 2007/090415 (16.08.2007 Gazette 2007/33)

(54) **SELF-STANDING INSULATING SPACE-EFFICIENT PACKAGING ASSEMBLY FOR FOOD AND BEVERAGES**

ISOLIERENDE, RAUMSPARENDE STAND-VERPACKUNGSANORDNUNG FÜR LEBENSMITTEL UND GETRÄNKE

ENSEMBLE DE CONDITIONNEMENT COMPACT ISOLANT ET AUTOPORTEUR POUR ALIMENTS ET BOISSONS

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

(43) Date of publication of application:
29.10.2008 Bulletin 2008/44

(73) Proprietor: **Nestec S.A.**
1800 Vevey (CH)

(72) Inventors:
- **ELLENRIEDER, Michael**
78239 Rielasingen-Worblingen (DE)
- **MOROZOV, Serguei**
78315 Radolfzell am Bodensee (DE)

(74) Representative: **Mollet, Beat Max et al**
Nestec S.A.
CT-IAM
Avenue Nestlé 55
1800 Vevey (CH)

(56) References cited:
EP-A1- 0 533 648
FR-A2- 2 207 066
GB-A- 945 217
US-A- 3 684 156

Note: Within nine months of the publication of the mention of the grant of the European patent in the European Patent Bulletin, any person may give notice to the European Patent Office of opposition to that patent, in accordance with the Implementing Regulations. Notice of opposition shall not be deemed to have been filed until the opposition fee has been paid. (Art. 99(1) European Patent Convention).

EP 1 984 270 B1

Printed by Jouve, 75001 PARIS (FR)

Description

[0001] The present invention concerns a self-standing, insulating space-efficient packaging assembly containing a product, which can be reconstituted with water and / or heated in a microwave oven.

[0002] It is known according to US Patent No. 3'542'566 to have a collapsible container package for concentrate. With this solution, the user has to tear the upper part of the package to open it and also the lower part of the package to allow the inner pouch to expand its volume. This gives a package with restricted initial volume and heat insulation, which is not self-standing and not easy to open.

[0003] The FR patent No. 2'207'066 discloses a water and airtight sachet for conditioning liquid products in particular, of the type made of a film of flexible material and essentially comprising a flattened sheath making up at least two lateral walls joined at their lower extremity to form the base of the said sachet, while each of the lateral walls of this sachet comprises a longitudinal strengthening rod or strip, characterized in that this strip is shorter than the closed sachet, its lower edge being on the one hand in contact with the corresponding wall and on the other hand situated at a certain distance from the base of the said sachet. The stiffening of the walls has the effect, that the packaging can be self standing.

[0004] The GB patent No. 1'536'110 concerns a rigid pouch usable as a cup and a method of producing the same, wherein outer rigid material is lined with inner flexible material, the sheet obtained thereof is center-folded and its opposed parts joined together to form a rigid pouch which, when unfolded, is claimed to turn into a package that can be used as a cup. This gives a package without bending lines on the rigid part, which is difficult to manufacture, fill, open, fold, unfold and seal and which is not locked in unfolded position.

[0005] The present invention concerns a packaging assembly, whose advantages for the user compared to prior art are easier opening, better self-standing when unfolded, easier handling and less space utilisation in carrying, storage and disposal. The advantage of the present invention for the food manufacturer compared to prior art is less space utilisation in transport of packaging materials or pre-formed packaging assembly from the supplier to the filling location

[0006] The present invention concerns a packaging assembly comprising

- two separate opposite outer panels composed of rigid material, each said outer panel comprising two side parts with their respective side edges, a middle part, an upper part with its respective upper edge and a lower part with its respective lower edge, wherein each said side part comprises a least one bending line and each middle part comprises at least one bending line and
- an inner pouch disposed inside said two outer panels, said inner pouch comprising two opposite walls, each said wall comprising a lower, an upper and two side parts, wherein said two walls are bonded together and also with said two outer panels in a way that the packaging assembly can be unfolded and/or erected by pressing said outer panels together on their side edges and wherein the upper parts of the walls of said inner pouch are placed higher than the opposite upper edge of said outer panels and the lower parts of the walls of said inner pouch are placed higher than the opposite lower edge of said outer panels.

[0007] It is preferable according to the invention to have one bending line in each side part and one bending line in each middle part.

[0008] The packaging assembly under the present invention provides easy opening, folding, unfolding, locking in unfolded position, self-standing and heat insulation.

[0009] According to the invention, easy opening of said packaging assembly is provided by the material of the inner pouch and/or by additional means on the material or/and on seals of said inner pouch.

[0010] According to the invention, folding and unfolding of said packaging assembly is provided by the bending lines on the outer panels and by the bonding areas between the outer panels and the walls of the inner pouch.

[0011] According to the invention, locking of said packaging assembly in unfolded and erected position is provided by means on the lower parts of the outer panels.

[0012] According to the invention, self-standing of said packaging assembly in unfolded position is provided by the lower edges of the outer panels.

[0013] According to the invention, heat insulation of said packaging assembly is provided by the side parts of the outer panels and by the middle bending line on the middle part of the outer panels. Therefore, in the case of reconstitution of a product with hot water or/and microwave heating it is possible to hold the packaging assembly vertically on its side edges without burning hands/fingers.

[0014] According to the invention, it is possible that the packaging assembly be either empty or filled. In the case of an empty packaging assembly, the inner pouch is open.

[0015] In the case of a filled packaging assembly, the product inside the inner pouch can be a dry, a pasty or a liquid material with or without pieces and the inner pouch is closed.

[0016] According to the invention, the outer panels are made from solid or corrugated board or a combination thereof having a grammage comprised between 100 and 1000 g/m2.

[0017] According to the invention, the inner pouch is made from a single-layer or multiple-layer material, wherein the layer or layers is/are taken in the group comprising Aluminium, Paper, Polypropylen, Polyethylen,

Polyester, Polyamide, Ethylen vinyl alcohol comprising any coatings, adhesives and additives, the total thickness of the inner pouch being comprised between 10 and 1000 microns.

[0018] According to the invention, the inner pouch and the outer panels can be printed or unprinted.

[0019] According to the invention, it is possible to cover the outer panels with or place the panels inside an additional layer or layers of insulating material e.g. polystyrene foam, with or without bonding it with said outer panels. The additional insulating material is not critical as heat insulation is already provided by the material and geometry of the outer panels.

[0020] According to the invention, the walls of the inner pouch are bonded with the outer panels with adhesives or by seaming. This means that the outer panels are not bonded together directly and the assembly is maintained together by seaming or gluing between the inner pouch and the outer panels and also by the side seals on the walls of said inner pouch.

[0021] According to the invention, it is possible that the inner pouch containing a product be formed and sealed in closed position in several ways

[0022] One solution is that the upper parts of the walls of the inner pouch are bonded together forming a top seal. In this case, it is a classical way of proceeding and the user tears the bonded upper parts of said inner pouch on one side to open the inner pouch. The user has then to press the side edges of the outer panels together, therefore opening completely said inner pouch, so that hot water can be poured into the inner pouch to reconstitute the product. The easy opening in this case is provided by the material of the inner pouch which is easy to tear e.g. comprising paper, mechanical or laser perforation, easy-tear sealant layer e.g. easy-tear polypropylene or combination thereof.

[0023] The second solution is that the upper parts of the walls of the inner pouch are bonded together forming a top seal, whereas one or two side seals on the walls of the inner pouch present a notch or a slit for starting the tearing. It is a solution that is similar to the 1st one, the only difference is the notch or slit so that the user has an even easier way to open the inner pouch, the way of proceeding afterwards being the same as for the 1st solution.

[0024] The third solution is that the upper parts of the walls of the inner pouch are bonded together forming a top seal, whereas said upper parts contain an easy-peel material e.g. easy-peel polypropylene or comprise a coating or adhesive that allows said upper parts to open from the bonded position when the side edges of the outer panels are pressed together. This means that the user has nothing to tear, he has only to press the side edges of the outer panels together, so that there is a separation of the bonded upper parts of the walls of the inner pouch. This solution combines easy opening and no torn piece like in solutions 1-2 to be disposed of.

[0025] The fourth solution is that the upper parts of the walls of the inner pouch are bonded together forming a top seal, whereas said upper parts contain an easy-peel material e.g. easy-peel polypropylene or comprise a coating or adhesive that allows said upper parts to open from the bonded position under pressure and/or temperature increase inside the inner pouch. For this solution, the most known procedure is to place the closed packaging assembly containing a product upwright into a microwave device. The user does not need to open the packaging assembly anymore after microwaving as it opens and erects by itself in the microwave device. This solution combines self-opening and no torn piece like in solutions 1-2 to be disposed of.

[0026] According to a further feature of the invention, the packaging assembly comprises means at the lower parts of the rigid panels for locking the unfolded and erected packaging assembly in that position. This prevents folding the packaging assembly back when filled with reconstituted product and when pressing the outer panels by mistake, and, consequently, helps prevent the product from pouring out when not desired.

[0027] According to the invention, all kinds of technically feasible shapes are possible for the packaging assembly including the inner pouch, the outer panels, the means of locking said packaging assembly in unfolded and erected position, the seals on the inner pouch and the bonding areas between the inner pouch and the outer panels.

[0028] Finally, the present invention concerns a method of producing the packaging assembly as described before, wherein

Embodiment 1:

1. the inner pouch is formed from reel-stock
2. said inner pouch is assembled with the outer panels that come in blanks
3. said inner pouch is filled and the upper parts of its walls are seamed or glued together

Embodiment 2:

1. the inner pouch is formed from reel-stock
2. said inner pouch is filled and the upper parts of its walls are seamed or glued together
3. said inner pouch is assembled with the outer panels that come in blanks

[0029] According to embodiments 1 and 2 here above, the inner pouch can be assembled with the outer panels either at the filling location or at a packaging manufacturer. In the latter case, the packaging manufacturer preforms the inner pouch from reel-stock, assembles the inner pouch with the outer panels coming in blanks and delivers the assembly in a flat condition to the filling location.

[0030] The following description is made in relation with the drawings of the invention, wherein:

Figure 1 is a schematic perspective view of the packaging assembly in an open standing state.

Figure 2 is a schematic front view of said packaging assembly in a filled and closed standingstate

Figure 3 is a schematic top view of said packaging assembly in a filled and closed standing state

Figure 4 is a schematic side view of said packaging assembly in a filled and closed standing state

Figure 5 is a schematic top view of the outer panels and pre-formed inner pouch of said packaging assembly before assembling

Figure 6 is a vertical section view of said packaging assembly in an open standing state

Figure 7 is a schematic view of one option of means of locking of said packaging assembly in unfolded and erected position. It also shows the bonding areas between the outer panels and the inner pouch.

[0031] In relation with figures 1 to 7, the packaging assembly comprises:

- two separate outer panels (1,2) composed of rigid material, each of said outer panels comprising an upper part (3), a lower part (4), two side parts (5,6), two side edges (7,8), an upper edge (30), a lower edge (31) and a middle part (9), the side parts (5,6) of each said outer panel comprising bending lines (10,11) and the middle part (9) of each said outer panel comprising a bending line (12).
- an inner pouch (13) comprising two opposite walls (14,15), a lower part (18) and an upper part (19), said walls being bonded together by two side seals(16,17) and said inner pouch being disposed inside said two outer panels wherein the walls (14, 15) of said inner pouch (13) are bonded with corresponding opposite outer panels (1,2), wherein the upper part (19) of said inner pouch is placed higher than the upper edge (30) of said outer panels and the lower edge (31) of said outer panels is placed lower than the lower part (18) of said inner pouch.

[0032] The walls of the inner pouch (13) are bonded with the corresponding opposite outer panels (1,2) along the side edges (7, 8) of said outer panels, along the upper edge (30) of said outer panels and along the lower part (18) of the walls of said inner pouch as it can be seen on Figure 7.

[0033] In the case of the delivery of an empty packaging assembly according to the invention, the assembly is ready to be filled with a product and then sealed to obtain the assembly as shown on Figures 2, 3 and 4.

[0034] On the contrary, if a product is already contained in the inner pouch of said packaging assembly, in an opened state shown on Figures 1 and 6, the user can , depending on the product, either pour hot water onto the product to reconstitute it or place said packaging assembly into a microwave device. The assembly withstands high temperatures reached by the product.

[0035] Figure 5 shows both panels (1,2) and the inner pouch (13) with their opposite walls (14,15) and their two side seals (16,17) before sealing panels and inner pouch together. Figure 6 shows a vertical cross section with panels and inner pouch sealed together.

[0036] Figure 7 shows specifically one of the opposite outer panels (1) with means of locking the packaging assembly in unfolded and erected position comprising one smaller flap (40), one larger flap (41) and bending lines (42, 43, 44). The flaps (40, 41) interlock with identical opposite flaps on the opposite identical outer panel. The second panel has the same flaps (40) and (41).

[0037] According to figures 2, 3 and 4, the inner pouch of said packaging assembly is closed and contains a product. For the specific example on figures 2, 3 and 4, this is a food product, which is dried mashed potatoes. There is a seal (20) on the upper part (19) of the inner pouch (13). For convenience reasons for the user, below the seal (20), there is a notch (21) to start the tearing of the upper part of the inner pouch, when the user has decided to open the inner pouch.

[0038] In this example, the panels are made of carboard having a grammage of 350 g/m2. The inner pouch is made of Polyester / Aluminium / Easy-tear polypropylene laminate and has a thickness of 80 microns.

Claims

1. A packaging assembly comprising

- two separate opposite outer panels (1, 2) composed of rigid material, each said outer panel comprising two side parts (5, 6) with their respective side edges (7, 8), a middle part (9), an upper part (3) with its respective upper edge (30) and a lower part (4) with its respective lower edge (31), wherein each said side part (5, 6) comprises at least one bending line (10, 11) and each middle part (9) comprises at least one bending line (12) and
- an inner pouch (13) disposed inside said two outer panels (1, 2), said inner pouch (13) comprising two opposite walls (14, 15), each said wall comprising a lower (18), an upper (19) and two side parts (16, 17), wherein said two walls are bonded together and also with said two outer panels in a way that the packaging assembly can be unfolded and/or erected by pressing said outer panels (1, 2) together on their side edges (7, 8) and wherein the upper parts (19) of the walls of said inner pouch (13) are placed higher

than the opposite upper edge (30) of said outer panels and the lower parts (18) of the walls of said inner pouch are placed higher than the opposite lower edge (31) of said outer panels.

2. A packaging assembly according to claim 1, wherein each side part (5, 6) of said outer panels comprises one bending line (10, 11) and each middle part (9) comprises one bending line (12).

3. A packaging assembly according to claims 1 or 2, wherein it is empty and the upper part (19) of the inner pouch (13) is open.

4. A packaging assembly according to claims 1 or 2, wherein it is closed and filled with a dry, pasty or liquid material with or without pieces.

5. A packaging assembly according to any of claims 1 to 4, wherein the two rigid outer panels are made of solid or corrugated board or a combination thereof.

6. A packaging assembly according to claim 5, wherein the solid or corrugated board or a combination thereof has a grammage comprised between 100 and 1000 g/m2.

7. A packaging assembly according to any of claims 5 or 6, wherein the solid or corrugated board or a combination thereof contains an additional layer of insulating material.

8. A packaging assembly according to any of claims 1 to 7, wherein the inner pouch (13) contains a layer or layers taken in the group comprising Aluminium, Paper, Polypropylen, Polyethylen, Polyester, Polyamide, Ethylen vinyl alcohol.

9. A packaging assembly according to claim 8, wherein the inner pouch (13) is made from a material having a thickness comprised between 10 and 1000 microns.

10. A packaging assembly according to any of claims 1 to 9, wherein the walls of the inner pouch are bonded with the outer panels with adhesives or/and by seaming.

11. A packaging assembly according to any of claims 4 to 10, wherein the walls of the inner pouch are bonded together with adhesives or/and by seaming.

12. A packaging assembly according to any of claims 4 to 11, wherein the side parts of the walls of the inner pouch present notches or slits for starting the tearing.

13. A packaging assembly according to any of claims 4 to 12, wherein the material of the inner pouch (13) is made to facilitate tearing by comprising specific additives, by manufacturing or converting process, by any other means or by a combination thereof.

14. A packaging assembly according to any of claims 4 to 11, wherein the upper parts (19) of the inner pouch (13) are made from an easy-peel material or comprise a coating or adhesive that allows said upper parts to open from the bonded position when the side edges (5, 6) of the outer panels (1, 2) are pressed together.

15. A packaging assembly according to any of claims 4 to 11, wherein the upper parts (19) of the inner pouch (13), are made from an easy-peel material or comprise a coating or adhesive that allows said upper parts to open from the bonded position under pressure and/or temperature increase inside the inner pouch.

16. A packaging assembly according to any of claims 1 to 15, comprising means at the lower part of the rigid outer panels for locking the unfolded and erected packaging assembly in that position.

17. A method of producing the packaging assembly according to any of claims 1 to 16, wherein

1. the inner pouch (13) is formed from reel-stock,
2. said inner pouch is assembled with the outer panels (1, 2) that come in blanks,
3. said inner pouch is filled and the upper parts (19) of its walls are bonded together.

18. A method of producing the packaging assembly according to any of claims 1 to 16, wherein

1. the inner pouch (13) is formed from reel-stock,
2. said inner pouch is filled and the upper parts (19) of its walls are bonded together,
3. said inner pouch is assembled with the outer panels (1, 2) that come in blanks.

Patentansprüche

1. Verpackungsbaugruppe, umfassend

- zwei separate, gegenüber liegende Außenplatten (1, 2) aus steifem Material, wobei jede Außenplatte zwei Seitenteile (5, 6) mit ihren zugehörigen Seitenkanten (7, 8), einen mittleren Teil (9), einen oberen Teil (3) mit seiner zugehörigen oberen Kante (30) und einen unteren Teil (4) mit seiner zugehörigen unteren Kante (31) umfasst, wobei jedes Seitenteil (5, 6) mindestens eine Faltlinie (10, 11) umfasst und jeder mittlere Teil (9) mindestens eine Faltlinie (12) umfasst, und

- einen Innenbeutel (13), der innerhalb der zwei Außenplatten (1, 2) angeordnet ist, wobei der Innenbeutel (13) zwei gegenüber liegende Wände (14, 15) umfasst, wobei jede Wand einen unteren (18), einen oberen (19) und zwei Seitenteile (16, 17) umfasst, wobei die zwei Wände miteinander und auch mit den zwei Außenplatten derart verbunden sind, dass die Verpackungsbaugruppe auseinandergefaltet und/oder aufgestellt werden kann, indem die Außenplatten (1, 2) an ihren Seitenkanten (7, 8) zusammengedrückt werden, und wobei die oberen Teile (19) der Wände des Innenbeutels (13) höher als die gegenüber liegende obere Kante (30) der Außenplatten platziert sind und die unteren Teile (18) der Wände des Innenbeutels höher als die gegenüber liegende untere Kante (31) der Außenplatten platziert sind.

2. Verpackungsbaugruppe nach Anspruch 1, wobei jedes Seitenteil (5, 6) der Außenplatten eine Faltlinie (10, 11) umfasst und jedes mittlere Teil (9) eine Faltlinie (12) umfasst.

3. Verpackungsbaugruppe nach Anspruch 1 oder 2, wobei sie leer ist und der obere Teil (19) des Innenbeutels (13) offen ist.

4. Verpackungsbaugruppe nach Anspruch 1 oder 2, wobei sie geschlossen und mit einem trockenen, pastösen oder flüssigen Material mit oder ohne Stücke gefüllt ist.

5. Verpackungsbaugruppe nach einem der Ansprüche 1 bis 4, wobei die beiden steifen Außenplatten aus Voll- oder Wellpappe oder einer Kombination davon hergestellt sind.

6. Verpackungsbaugruppe nach Anspruch 5, wobei die Voll- oder Wellpappe oder eine Kombination davon eine Grammatur zwischen 100 und 1000 g/m^2 aufweist.

7. Verpackungsbaugruppe nach einem der Ansprüche 5 oder 6, wobei die Voll- oder Wellpappe oder eine Kombination davon eine zusätzliche Schicht Isoliermaterial enthält.

8. Verpackungsbaugruppe nach einem der Ansprüche 1 bis 7, wobei der Innenbeutel (13) eine Schicht oder Schichten enthält, die der Gruppe entnommen sind, die Aluminium, Papier, Polypropylen, Polyethylen, Polyester, Polyamid, Ethylenvinylalkohol umfasst.

9. Verpackungsbaugruppe nach Anspruch 8, wobei der Innenbeutel (13) aus einem Material hergestellt ist, das eine Dicke zwischen 10 und 1000 Mikrometer aufweist.

10. Verpackungsbaugruppe nach einem der Ansprüche 1 bis 9, wobei die Wände des Innenbeutels mit den Außenplatten mit Klebstoffen oder/und durch Nähen verbunden sind.

11. Verpackungsbaugruppe nach einem der Ansprüche 4 bis 10, wobei die Wände des Innenbeutels mit Klebstoffen oder/und durch Nähen verbunden sind.

12. Verpackungsbaugruppe nach einem der Ansprüche 4 bis 11, wobei die Seitenteile der Wände des Innenbeutels Kerben oder Schlitze zum Anfangen des Reißens aufweisen.

13. Verpackungsbaugruppe nach einem der Ansprüche 4 bis 12, wobei das Material des Innenbeutels (13) hergestellt ist, um durch Umfassen von spezifischen Additiven, durch den Herstellungs- oder Umwandlungsprozess, durch beliebige andere Mittel oder durch eine Kombination davon das Reißen zu erleichtern.

14. Verpackungsbaugruppe nach einem der Ansprüche 4 bis 11, wobei die oberen Teile (19) des Innenbeutels (13) aus einem leicht abziehbaren Material hergestellt sind oder eine Beschichtung oder einen Klebstoff umfassen, die bzw. der ermöglicht, dass die oberen Teile sich von der verbundenen Position öffnen, wenn die Seitenkanten (5, 6) der Außenplatten (1, 2) zusammengedrückt werden.

15. Verpackungsbaugruppe nach einem der Ansprüche 4 bis 11, wobei die oberen Teile (19) des Innenbeutels (13) aus einem leicht abziehbaren Material hergestellt sind oder eine Beschichtung oder einen Klebstoff umfassen, die bzw. der ermöglicht, dass die oberen Teile sich bei Druck- und/oder Temperaturanstieg innerhalb des Innenbeutels von der verbundenen Position öffnen.

16. Verpackungsbaugruppe nach einem der Ansprüche 1 bis 15, wobei sie am unteren Teil der steifen Außenplatten Mittel zum Sichern der auseinandergefalteten und aufgestellten Verpackungsbaugruppe in dieser Position umfasst.

17. Verfahren zum Herstellen der Verpackungsbaugruppe nach einem der Ansprüche 1 bis 16, wobei

1. der Innenbeutel (13) aus Rollenmaterial gebildet wird,
2. der Innenbeutel mit den Außenplatten (1, 2) montiert wird, die als Rohteile bereitgestellt werden,
3. der Innenbeutel gefüllt wird und die oberen Teile (19) seiner Wände miteinander verbunden werden.

18. Verfahren zum Herstellen der Verpackungsbaugruppe nach einem der Ansprüche 1 bis 16, wobei

1. der Innenbeutel (13) aus Rollenmaterial gebildet wird,
2. der Innenbeutel gefüllt wird und die oberen Teile (19) seiner Wände miteinander verbunden werden,
3. der Innenbeutel mit den Außenplatten (1, 2) montiert wird, die als Rohteile bereitgestellt werden.

Revendications

1. Ensemble de conditionnement comprenant

- deux panneaux externes opposés indépendants (1, 2) composés d'un matériau rigide, chaque panneau externe précité comprenant deux parties latérales (5, 6) avec leurs bords latéraux respectifs (7, 8), une partie centrale (9), une partie supérieure (3) avec son bord supérieur respectif (30) et une partie inférieure (4) avec son bord inférieur respectif (31), dans lequel chaque partie latérale précitée (5, 6) comprend au moins une ligne de pliage (10, 11) et chaque partie centrale (9) comprend au moins une ligne de pliage (12) et
- un sachet interne (13) disposé à l'intérieur desdits deux panneaux externes (1, 2), ledit sachet interne (13) comprenant deux parois opposées (14, 15), chaque paroi précitée comprenant une partie inférieure (18), une partie supérieure (19) et deux parties latérales (16, 17), dans lequel lesdites deux parois sont liées l'une à l'autre ainsi qu'auxdits deux panneaux externes, d'une façon telle que l'ensemble de conditionnement peut être déplié et/ou monté en pressant lesdits panneaux externes (1, 2) ensemble sur leurs bords latéraux (7, 8) et dans lequel les parties supérieures (19) des parois dudit sachet interne (13) sont placées plus haut que le bord supérieur opposé (30) desdits panneaux externes et les parties inférieures (18) des parois dudit sachet interne sont placées plus haut que le bord inférieur opposé (31) desdits panneaux externes.

2. Ensemble de conditionnement selon la revendication 1, dans lequel chaque partie latérale (5, 6) desdits panneaux externes comprend une ligne de pliage (10, 11) et chaque partie centrale (9) comprend une ligne de pliage (12).

3. Ensemble de conditionnement selon les revendications 1 ou 2, dans lequel il est vide et la partie supérieure (19) du sachet interne (13) est ouverte.

4. Ensemble de conditionnement selon les revendications 1 ou 2, dans lequel il est fermé et rempli d'un matériau sec, pâteux ou liquide avec ou sans morceaux.

5. Ensemble de conditionnement selon l'une quelconque des revendications 1 à 4, dans lequel les deux panneaux externes rigides sont constitués de carton plein ou ondulé ou d'une association de ceux-ci.

6. Ensemble de conditionnement selon la revendication 5, dans lequel le carton plein ou ondulé ou une association de ceux-ci présente un grammage compris entre 100 et 1000 g/m^2.

7. Ensemble de conditionnement selon l'une quelconque des revendications 5 ou 6, dans lequel le carton plein ou ondulé ou une association de ceux-ci contient une couche supplémentaire de matériau isolant.

8. Ensemble de conditionnement selon l'une quelconque des revendications 1 à 7, dans lequel le sachet interne (13) contient une ou plusieurs couches prises dans le groupe comprenant l'aluminium, le papier, le polypropylène, le polyéthylène, le polyester, le polyamide, l'alcool éthylène vinylique.

9. Ensemble de conditionnement selon la revendication 8, dans lequel le sachet interne (13) est constitué d'un matériau dont l'épaisseur est comprise entre 10 et 1000 micromètres.

10. Ensemble de conditionnement selon l'une quelconque des revendications 1 à 9, dans lequel les parois du sachet interne sont liées aux panneaux externes avec des adhésifs ou/et par jointage.

11. Ensemble de conditionnement selon l'une quelconque des revendications 4 à 10, dans lequel les parois du sachet interne sont liées les unes aux autres avec des adhésifs ou/et par jointage.

12. Ensemble de conditionnement selon l'une quelconque des revendications 4 à 11, dans lequel les parties latérales des parois du sachet interne présentent des encoches ou des fentes pour démarrer la déchirure.

13. Ensemble de conditionnement selon l'une quelconque des revendications 4 à 12, dans lequel le matériau du sachet interne (13) est fait pour faciliter la déchirure en comprenant des additifs spécifiques, par le processus de fabrication ou de conversion, par n'importe quel autre moyen ou par une combinaison de ceux-ci.

14. Ensemble de conditionnement selon l'une quelcon-

que des revendications 4 à 11, dans lequel les parties supérieures (19) du sachet interne (13) sont faites d'un matériau facile à détacher ou comprennent un revêtement ou un adhésif qui permet auxdites parties supérieures de s'ouvrir depuis la position liée lorsque les bords latéraux (5, 6) des panneaux externes (1, 2) sont pressés ensemble.

15. Ensemble de conditionnement selon l'une quelconque des revendications 4 à 11, dans lequel les parties supérieures (19) du sachet interne (13) sont faites d'un matériau facile à détacher ou comprennent un revêtement ou adhésif qui permet auxdites parties supérieures de s'ouvrir depuis la position liée en augmentant la pression et/ou la température à l'intérieur du sachet interne.

16. Ensemble de conditionnement selon l'une quelconque des revendications 1 à 15, comprenant un moyen au niveau de la partie inférieure des panneaux externes rigides pour bloquer l'ensemble de conditionnement déplié et monté dans cette position.

17. Procédé de production de l'ensemble de conditionnement selon l'une quelconque des revendications 1 à 16, dans lequel

1. le sachet interne (13) est formé d'une matière de départ en bobine,
2. ledit sachet interne est assemblé avec les panneaux externes (1, 2) qui arrivent sous forme d'ébauches,
3. ledit sachet interne est rempli et les parties supérieures (19) de ses parois sont liées les unes aux autres.

18. Procédé de production de l'ensemble de conditionnement selon l'une quelconque des revendications 1 à 16, dans lequel

1. le sachet interne (13) est formé d'une matière de départ en bobine,
2. ledit sachet interne est rempli et les parties supérieures (19) de ses parois sont liées les unes aux autres,
3. ledit sachet interne est assemblé avec les panneaux externes (1, 2) qui arrivent sous forme d'ébauches.

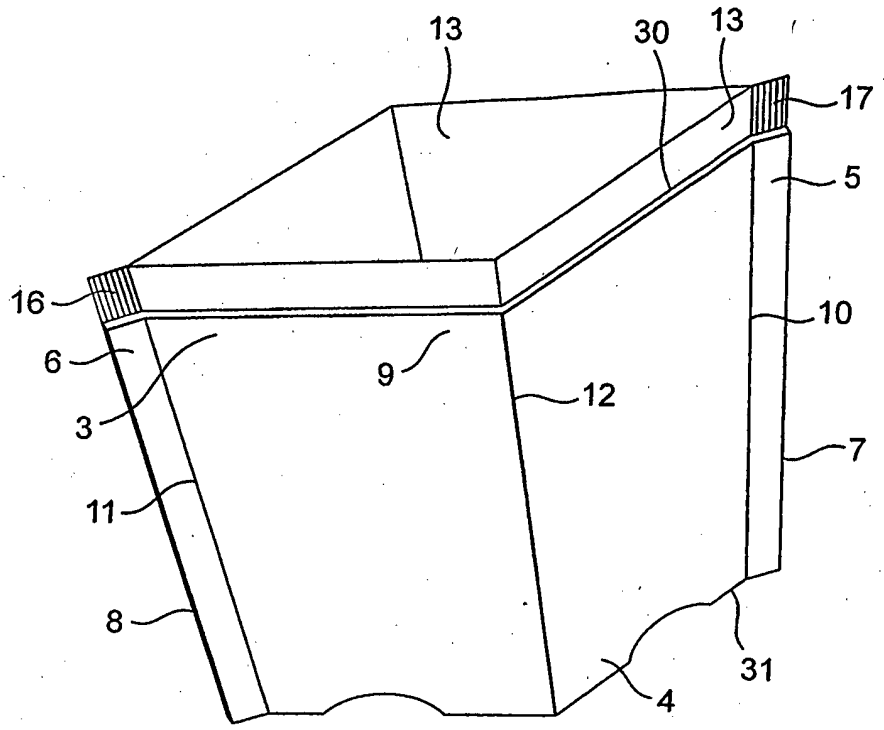
13
30
13
17
5
16
10
6
9
12
3
7
11
8
31
4

FIG. 1

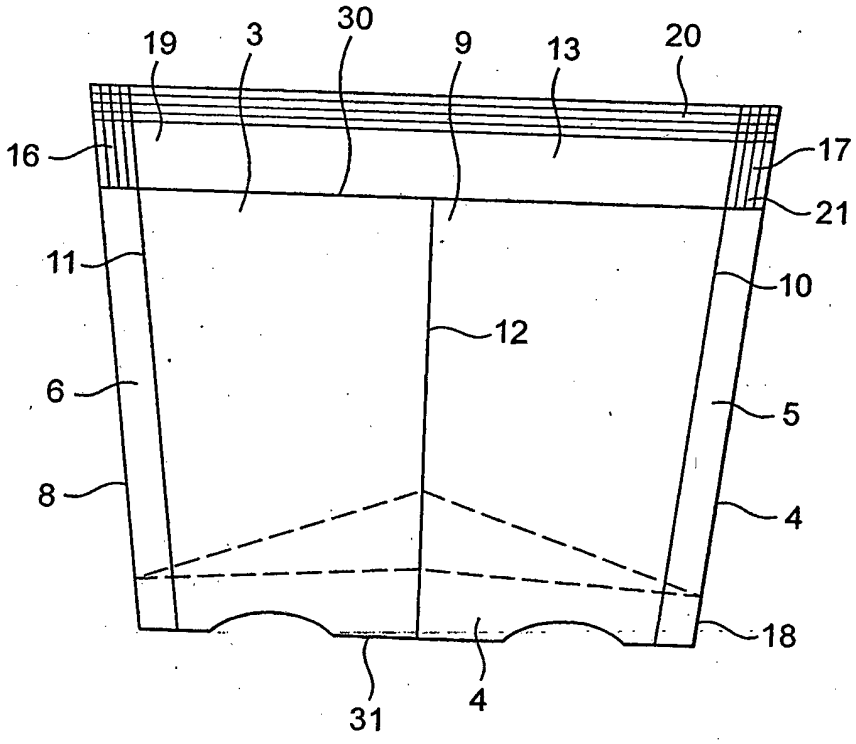
19
3
30
9
13
20
16
17
21
11
10
12
6
5
8
4
18
31
4

FIG. 2

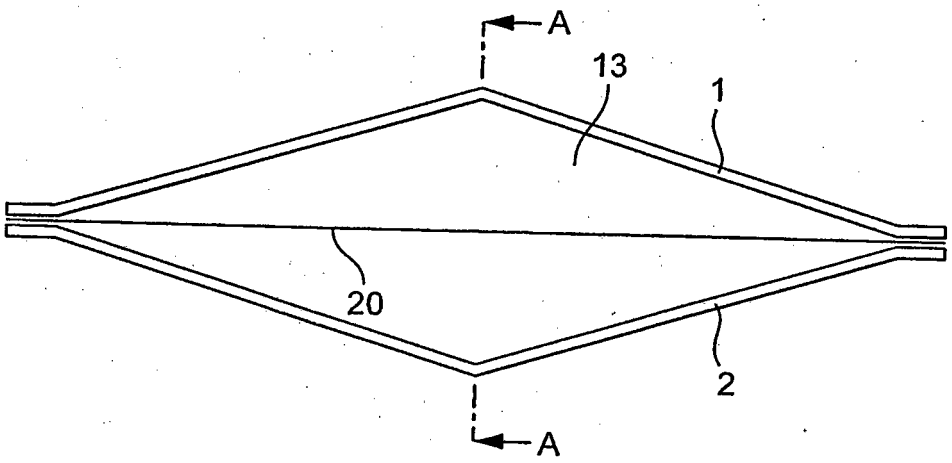

FIG. 3

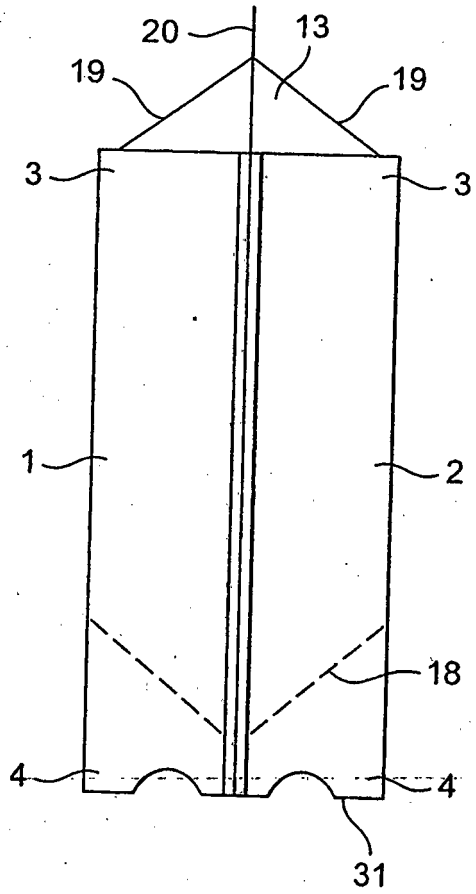

FIG. 4

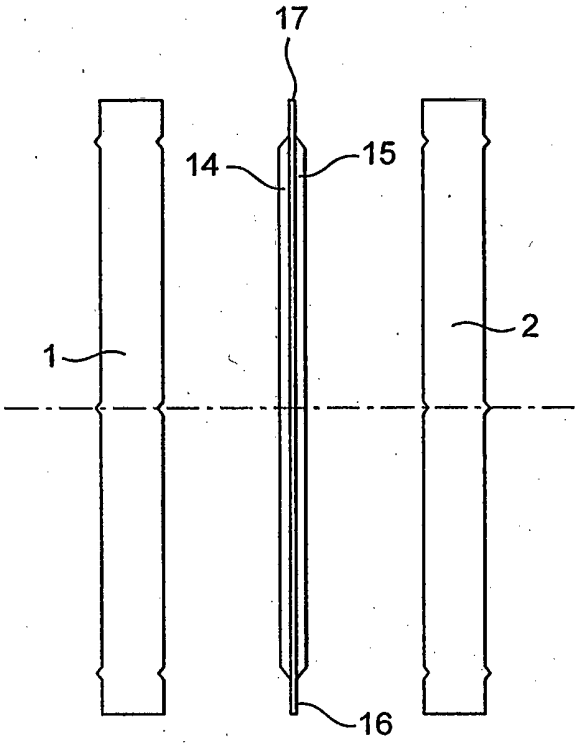

FIG. 5

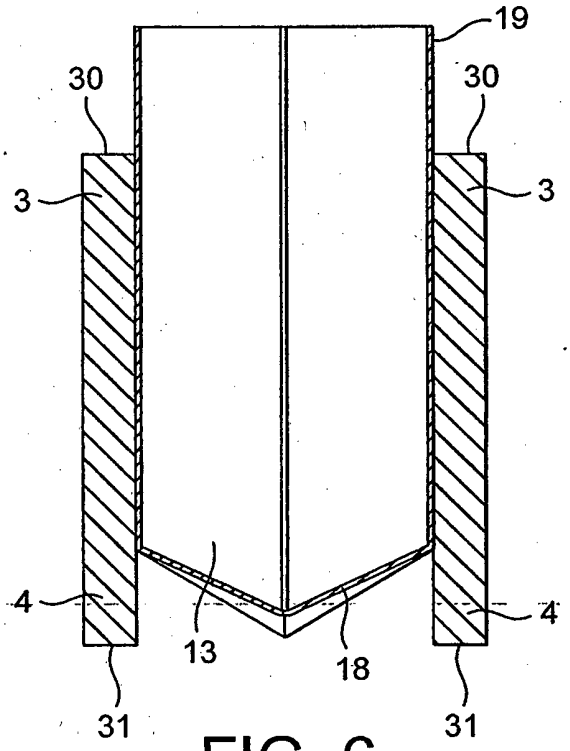

FIG. 6

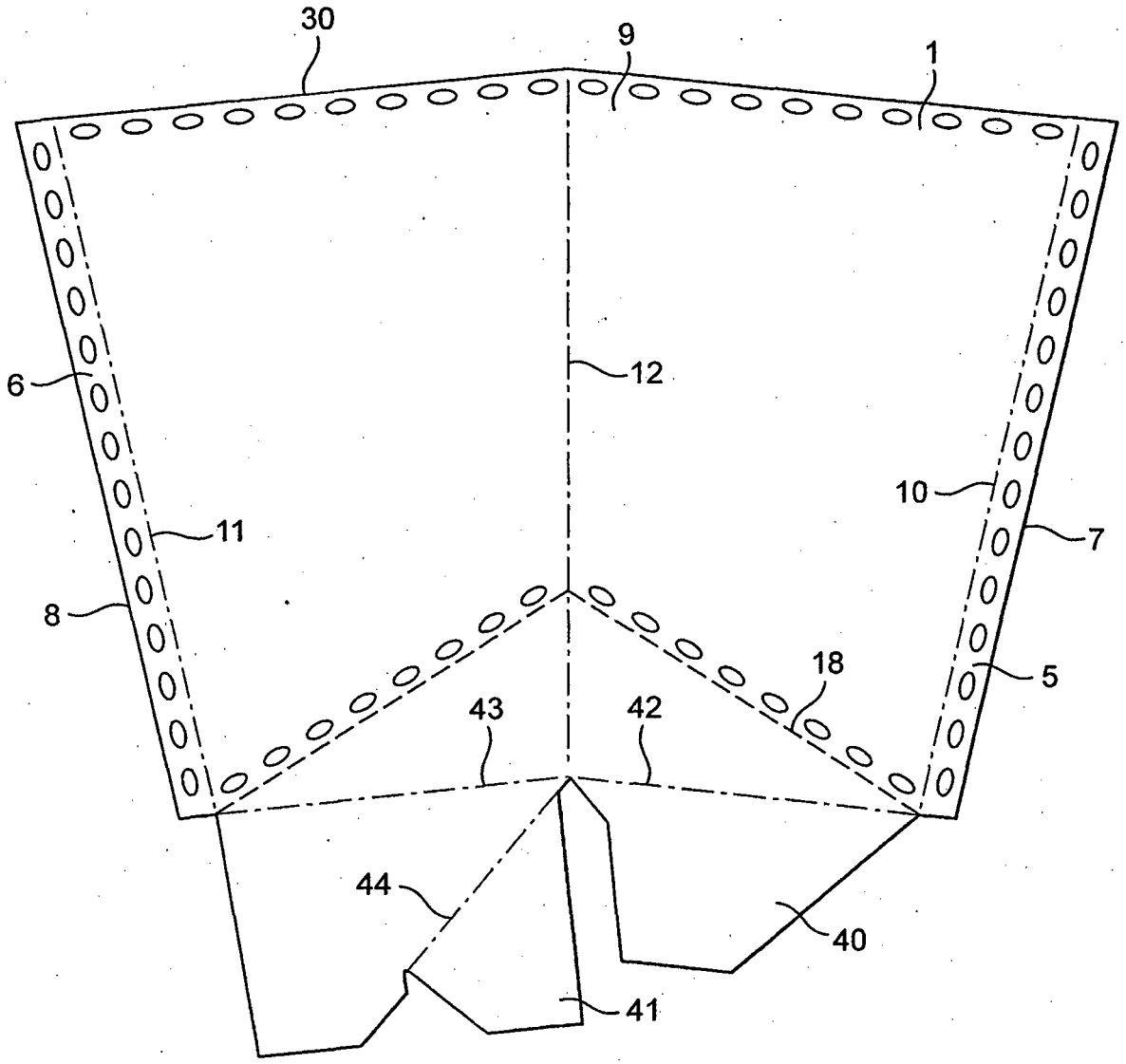

FIG. 7

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- US 3542566 A **[0002]**
- FR 2207066 **[0003]**
- GB 1536110 A **[0004]**