



(12)

EUROPEAN PATENT APPLICATION

(43)

Date of publication:

06.05.2009

Bulletin 2009/19

(51)

Int Cl.:

B65D 21/02 (2006.01)

B65D 43/02 (2006.01)

B65D 51/20 (2006.01)

B65D 85/76 (2006.01)

(21)

Application number:

07119822.0

(22)

Date of filing:

01.11.2007

(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 MT NL PL PT RO SE SI SK TR Designated Extension States: AL BA HR MK RS	• Groenland, Ronnie Johannes Wilhelmus 5018 CD, Tilburg (NL) • van Veen, Antonius Gerardus Adrianus 2671 SZ, Naaldwijk (NL)
(71) Applicant: Campina Nederland Holding B.V. 5301 LB Zaltbommel (NL)	(74) Representative: van Westenbrugge, Andries Nederlandsch Octrooibureau Postbus 29720 2502 LS Den Haag (NL)
(72) Inventors: • Cornelissen, Caroline Maria 5632 PC, Eindhoven (NL)	

(54)

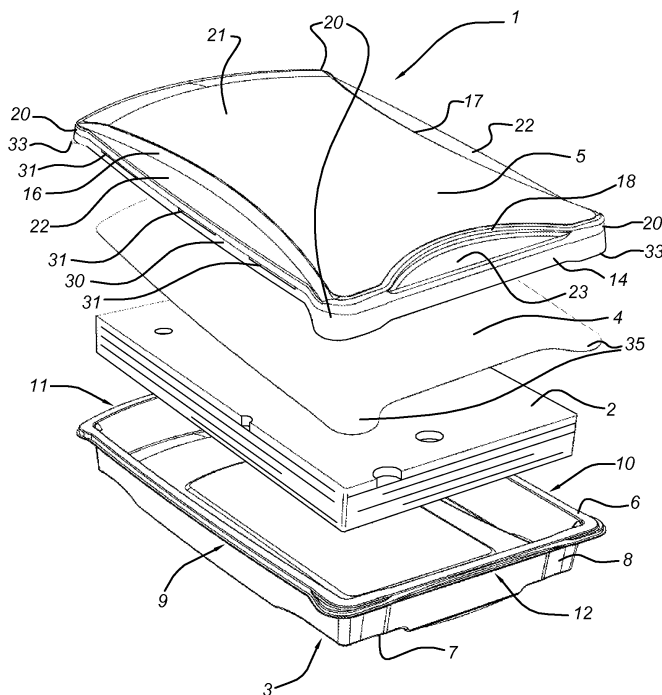
A packaging for containing a food product

(57)

A packaging (1) for containing a food product, such as a piece of cheese or slices of cheese, comprises a tray-like container (3) that is provided with a base (7) and a circumferential wall (8) extending from the base. The circumferential wall has an upper rim (6) that defines an opening of the container. The packaging comprises

a cover (5) for covering the opening of the container. The cover is provided with a circumferential rim (14) corresponding to the upper rim of the circumferential wall of the container. The cover comprises at least one stiffening rib (16,17,18) that is arranged at an angle with respect to the circumferential rim.

Fig 1



Description

[0001] The invention relates to a packaging for containing a food product, such as a piece of cheese or slices of cheese, the packaging comprising:

- a container that is provided with a base and a circumferential wall extending from the base, which circumferential wall has an upper rim that defines an opening of the container, and
- a cover for covering the opening of the container, which cover is provided with a circumferential rim corresponding to the upper rim of the circumferential wall of the container.

[0002] A packaging for a piece of cheese or slices of cheese is known. This packaging consists of a tray-like container and a cover. The tray-like container has a rectangular base and four upright walls. The upright walls define an upper rim of the container, which upper rim delimits an opening. The opening can be closed by the cover. The cover has a circumferential rim which can be snapped onto the upper rim of the container.

[0003] The cover is provided with a stiffening ridge which runs along the entire circumferential rim. When the cover is mounted on the container, the packaging is quite rigid. However, when the cover is removed from the container, the cover is relatively flexible. The flexible cover is not very user-friendly, in particular when reclosing the packaging.

[0004] An object of the invention is to provide an improved packaging for containing a food product.

[0005] This object is achieved in that the cover comprises at least one stiffening rib that is arranged, at least partially, at an angle with respect to the circumferential rim. The stiffening rib is integrally formed with the cover. The longitudinal direction of at least a portion of the stiffening rib is not parallel, but inclined to the circumferential rim of the cover. Thus, the stiffening rib in the cover tapers inwards with respect to the outer circumferential rim. As a result, the stiffness of the cover is improved, in particular when it is free from the container. This facilitates the reclosing of the packaging by snapping the cover onto the container.

[0006] It is noted that US2007/0092611 discloses a food package for sliced food products. The food package comprises a tray 12 and a lid 18 that are made of a thermoformed plastic material. Thus, the food package is a rigid-rigid design. The lid includes flat support channels extending along the longer dimension of the rectangular shape of the lid. These support channels serve to strengthen the lid and prevent deformation of the lid during opening such that it may be reclosed properly. However, the flat support channels are not arranged at an angle with respect to the rim of the lid. Also, the flat support channels affect the available label area.

[0007] The stiffening rib according to the invention may be configured in various ways. It is possible that the stiff-

ening rib comprises a first end arranged at the circumferential rim, wherein the stiffening rib extends inwards from said first end. Also, the stiffening rib may comprise a second end arranged at the circumferential rim, wherein the stiffening rib extends from said ends inwards into the cover. This increases the stiffness of the cover.

[0008] In an embodiment the circumferential rim of the cover comprises two long sides and two short sides, wherein the ends of the stiffening rib are arranged at one of the long sides of the circumferential rim. In this case, the ends of the stiffening rib are located at the outer rim of the cover, whereas the stiffening rib runs radially inwards in the cover between those ends. This is beneficial for the stiffness of the cover.

[0009] It is possible that the cover comprises a second stiffening rib that is provided with two ends arranged at the other long side of the circumferential rim, and wherein the second stiffening rib extends from said ends inwards into the cover. When the cover has two stiffening ribs provided at opposing long sides of the cover, respectively, the stiffness of the cover increases even further.

[0010] In an embodiment the long sides and the short sides are connected to each other at corners, wherein the ends of the stiffening rib or stiffening ribs are arranged at the corners. In this case, the stiffening ribs run from the corners of the cover inwards. This is advantageous for the stiffness of the cover.

[0011] The stiffening rib may have any shape, such as a curved shape. In a specific embodiment, the or each stiffening rib is shaped as a segment of a circle having a radius that is at least as great as the width of the short side, preferably about twice as great as the width of the short side. In this case, the portion of the cover between the stiffening rib and the outer rim of the cover can be easily grasped between the thumb and other fingers of a hand. At the same time, the portion of the cover between the stiffening ribs provides sufficient label area.

[0012] It is possible that the cover comprises a central portion that is defined between the stiffening ribs, and side portions adjacent to the central portion, each side portion being defined between one of the stiffening ribs and the circumferential rim, wherein the central portion is elevated with respect to the side portions. The central portion may be convex. As a result of the elevated central portion, the cover is stiffened effectively, whereas the label area is enlarged and its visibility is improved.

[0013] In an embodiment the base of the container comprises protrusions arranged at the long sides, which protrusions correspond to the side portions of the cover. The protrusions at the long sides of the base of a first container can be accommodated into the side portions of the cover of a stacked second packaging. This results in lateral locking of adjoining containers, which is advantageous during transport and display.

[0014] In an embodiment the cover comprises a third stiffening rib having two ends arranged at one of the short sides of the circumferential rim, wherein the third stiffening rib extends inwards from said ends, which third stiff-

ening rib defines a receiving portion that is lower than the elevated central portion, and wherein the base of the container comprises a protrusion at one of the short sides that corresponds to the receiving portion.

[0015] The protrusion of the container of a first packaging can be received within the receiving portion of the cover of an adjacent second packaging. When a group of packagings are standing on the shelf of a supermarket, these packagings are secured in the upward direction. However, the receiving portions and protrusions allow the packagings to shift down until the packagings rest on the shelf. This is advantageous for presentation of the packagings in the refrigerated display cabinet of the supermarket.

[0016] The container of the packaging according to the invention may comprise a gas barrier layer, such as an amorphous polyethylene terephthalate (APET) or an ethylene vinyl alcohol (EVOH) layer. The gas barrier layer ensures that the cheese in the packaging maintains its quality for a prolonged period. Preferably, a monolayer APET is used, because it can be recycled and it is cost efficient. The gas barrier layer may also be provided in a multilayer film. For example, the multilayer film includes one or more polyethylene (PE) layers and/or an APET layer. The container can be made by thermoforming. However, it is also possible that the container is manufactured by injection moulding.

[0017] In an embodiment the opening of the container is sealed by an intermediate film that provides a gas and/or moisture barrier. Before initial use of the packaging, the intermediate film is arranged over the upper rim of the container so that the contents of the container, for example cheese, is sealed off. Owing to the intermediate film the cheese maintains its characteristics for a prolonged period in the refrigerated display cabinet. The cover is installed above the intermediate film. The consumer opens the packaging by removing the cover and the intermediate film. Subsequently, the consumer may re-close the packaging using the cover.

[0018] The cover can be produced in various ways, for example by thermoforming or injection moulding. Preferably, the cover is made by injection moulding, i.e. the cover is made of a material that allows injection moulding. For example, the cover is made of polypropylene (PP) or any other suitable plastic. When the cover is made by injection moulding rather than by thermoforming, the design freedom is improved. The injection moulded cover may have, for example, different local wall thicknesses. A local reduction of wall thickness can be advantageous in view of costs.

[0019] When the cover is made by injection moulding, its material does not provide a gas and/or moisture barrier. However, it is sufficient that the container is sealed by the intermediate film before initial use. The cover of the packaging does not have to provide a gas and/or moisture barrier.

[0020] It is possible that the circumferential rim of the cover comprises a depending skirt, which is provided with

injection moulded bulges that protrude inwards and can be snapped to the upper rim of the circumferential wall of the container. When the cover is made from a material that can be injection moulded, the wall of the cover can be thickened locally. The injection moulded bulges protrude at the inside of the cover, whereas the outside of the depending skirt can remain smooth. The smooth depending skirt has an attractive appearance.

[0021] In an embodiment the cover comprises corner sections that radially protrude with respect to the long sides and the short sides. The protruding corner sections are also beneficial for the stiffness of the cover.

[0022] The corner sections may each have a lip for lifting the cover from the container. As a result, both right-handed and left-handed users may easily remove the cover from the container of the packaging.

[0023] The invention will now be described in more detail by way of an exemplary embodiment shown in the accompanying figures.

[0024] Figure 1 shows an exploded perspective view from above of a packaging according to the invention.

[0025] Figure 2 shows a perspective view from below of the packaging shown in figure 1.

[0026] The packaging is denoted in its entirety by a reference numeral 1. The packaging 1 comprises a tray-like container 3 and a cover 5. The container 3 has a rectangular base 7 and four walls upstanding from the base 7. The four side walls form a circumferential wall 8 which has an upper rim 6 that defines an opening of the container 3.

[0027] In this exemplary embodiment the container 3 is made from a multilayer film which includes a gas barrier layer, such as a monolayer APET or an EVOH layer. The gas barrier layer can be sandwiched between PE layers. The container 3 is made by thermoforming or injection moulding.

[0028] An intermediate film 4 is removably attached to the upper rim 6 of the container 3. The intermediate film 4 comprises a gas and/or moisture barrier layer. The intermediate film 4 seals the opening of the container 3 such that the contents, for example a piece of cheese 2, maintains its quality during transport and in the supermarket.

[0029] The consumer removes the intermediate film 4 from the container 3 when he opens the packaging for the first time. The intermediate film 4 has two lips 35 for pulling the intermediate film 4 from the container 3. The lips 35 are provided at two opposing corners of the intermediate film 4, which makes it convenient for both right-handed and left-handed consumers to remove the film 4.

[0030] The cover 5 is provided with a circumferential rim 14 corresponding to the upper rim of the circumferential wall 8 of the container 3. The cover 5 is substantially rectangular and comprises two long sides 9, 10 and two short sides 11, 12. The long sides 9, 10 and the short sides 11, 12 are connected to each other at the corner sections 20. In this exemplary embodiment the cover 5 is made of a plastic material that can be injection moulded, such

as polypropylene (PP). The cover 5 is made by injection moulding.

[0031] The cover 5 comprises two stiffening ribs 16,17 at the opposing long sides 9,10, and one stiffening rib 18 at the lower short side 12. The stiffening ribs 16,17,18 are integrally formed with the cover 5. The stiffening ribs 16,17 each have two ends which are arranged at an upper and lower corner section 20, respectively. The stiffening ribs 16,17 run radially inwards between its ends.

[0032] Thus, the stiffening ribs 16,17 are arranged at an angle with respect to the circumferential rim 14 of the cover 5, i.e. the stiffening ribs 16,17 are tapered with respect to the circumferential rim 14. In this exemplary embodiment each slanting stiffening rib 16,17 is shaped as a segment of a circle having a radius that is about twice as great as the width of the short sides 11,12 of the cover 5.

[0033] The cover 5 comprises a central portion 21 that is bounded between the stiffening ribs 16,17. The central portion 21 is elevated with respect to the side portions 22 between the stiffening ribs 16,17 and the circumferential rim 14 of the cover 5. The central portion 21 is convex to the outside.

[0034] The stiffening rib 18 at the lower short side 12 is also shaped as a segment of a circle which extends at an angle inwards with respect to the circumferential rim 14. The stiffening rib 18 has two ends arranged at a distance from the corner sections 20 along the lower short side 12. The stiffening rib 18 defines a receiving portion 23.

[0035] The rectangular base 7 of the container 3 is provided with a protrusion 26 at the short side corresponding to the receiving portion 23. The protrusion 26 of the container 7 of a first packaging can be received in the receiving portion 23 of the cover 5 of another packaging which is stacked against the first packaging. When a group of stacked packagings are standing on a shelf with their lower short sides 12, the packagings are fixed upwards, but may slide down until they rest on the shelf (not shown).

[0036] The base 7 of the container 3 also has protrusions 27,28 at the long sides corresponding to the side portions 22, respectively. As a result, a group of packagings 1 stacked against each other are fixed sideways, because the protrusions 27,28 of the base 7 of a first packaging engages the side portions 22 of the cover 5 of an adjacent packaging.

[0037] The circumferential rim 14 of the cover 5 comprises a depending skirt 30, which is provided with injection moulded bulges 31. The bulges 31 protrude inwards and can be snapped to the upper rim of the circumferential wall 8 of the container 7. As a result, the depending skirt 30 remains smooth at the outside.

[0038] As can be seen in figure 1 the circumferential rim 14 is thicker at the lower short side 12 of the packaging 1 than at the long sides 9,10. The thicker part of the circumferential rim 14 at the lower short side 12 provides an enlarged label area. The corner sections 20 depend

even further downwards so as to increase the rigidity of the cover 5. The corner sections 20 are each provided with a lip 33 for removing the cover 5 from the container 7, whether the consumer is right-handed or left-handed.

[0039] The invention is not limited to the exemplary embodiment shown in the figures. The skilled person may carry out many modifications which are within the scope of the invention. For example, the side portions 22 and the receiving portion 23 may have a triangular shape or any other shape instead of the shape of a segment of a circle.

Claims

1. A packaging for containing a food product, such as a piece of cheese or slices of cheese, the packaging (1) comprising:

- a container (3) that is provided with a base (7) and a circumferential wall (8) extending from the base (7), which circumferential wall (8) has an upper rim that defines an opening of the container (3), and
- a cover (5) for covering the opening of the container (3), which cover (5) is provided with a circumferential rim (14) corresponding to the upper rim of the circumferential wall (8) of the container (3),

characterised in that the cover (5) comprises at least one stiffening rib (16,17,18) that is arranged, at least partially, at an angle with respect to the circumferential rim (14).

2. A packaging according to claim 1, wherein the stiffening rib (16,17,18) comprises a first end arranged at the circumferential rim (14), and wherein the stiffening rib (16,17,18) extends inwards from said first end.
3. A packaging according to claim 1 or 2, wherein the stiffening rib (16,17,18) comprises a second end arranged at the circumferential rim (14), and wherein the stiffening rib (16,17,18) extends from said ends inwards in the cover (5).
4. A packaging according to claim 3, wherein the circumferential rim (14) of the cover (5) comprises two long sides (9,10) and two short sides (11, 12), and wherein the ends of the stiffening rib (16,17) are arranged at one of the long sides (11, 12) of the circumferential rim (14).
5. A packaging according to claim 4, wherein the cover (5) comprises a second stiffening rib (16,17) that is provided with two ends arranged at the other long side (9,10) of the circumferential rim (14), and where-

in the second stiffening rib (16,17) extends from said ends inwards into the cover (5).

6. A packaging according to claim 4 or 5, wherein the long sides (9,10) and the short sides (11,12) are connected to each other at corners sections (20), and wherein the ends of the stiffening rib or stiffening ribs (16,17) are arranged at the corner sections (20). 5
7. A packaging according to claim 6, wherein the or each stiffening rib (16,17) is shaped as a segment of a circle having a radius that is at least as great as the width of the short side (11,12), preferably substantially twice as great as the width of the short side (11,12). 10 15
8. A packaging according to one of the claims 5-7, wherein the cover (5) comprises a central portion (21) that is defined between the stiffening ribs (16,17), and side portions (22) adjacent to the central portion (21), each side portion (22) being defined between one of the stiffening ribs (16,17) and the circumferential rim (14), wherein the central portion (21) is elevated with respect to the side portions (22). 20 25
9. A packaging according to claim 8, wherein the central portion (21) is convex.
10. A packaging according to claim 8 or 9, wherein the cover (5) comprises a third stiffening rib (18) having two ends arranged at one of the short sides (12) of the circumferential rim (14), and wherein the third stiffening rib (18) extends inwards from said ends, which third stiffening rib (18) defines a receiving portion (23) that is lower than the elevated central portion (21), and wherein the base (7) of the container (3) comprises a protrusion (26) that corresponds to the receiving portion (23). 30 35
11. A packaging according to one of the preceding claims, wherein the opening of the container (3) is sealed by an intermediate film that provides a gas and/or moisture barrier. 40
12. A packaging according to one of the preceding claims, wherein the cover (5) is made by injection moulding. 45
13. A packaging according to one of the claims 12, wherein the circumferential rim (14) of the cover (5) comprises a depending skirt (30), which is provided with injection moulded bulges (31) that protrude inwards and can be snapped to the upper rim of the circumferential wall (8) of the container (3). 50 55
14. A packaging according to one of the preceding claims, wherein the cover (5) comprises corner sections (20) that radially protrude with respect to the

long sides (9,10) and the short sides (11,12).

15. A packaging according to claim 14, wherein the corner sections (20) each have a lip (33) for lifting the cover (5) from the container (3).
16. A packaging according to one of the preceding claims, wherein the packaging contains cheese.

Fig 1

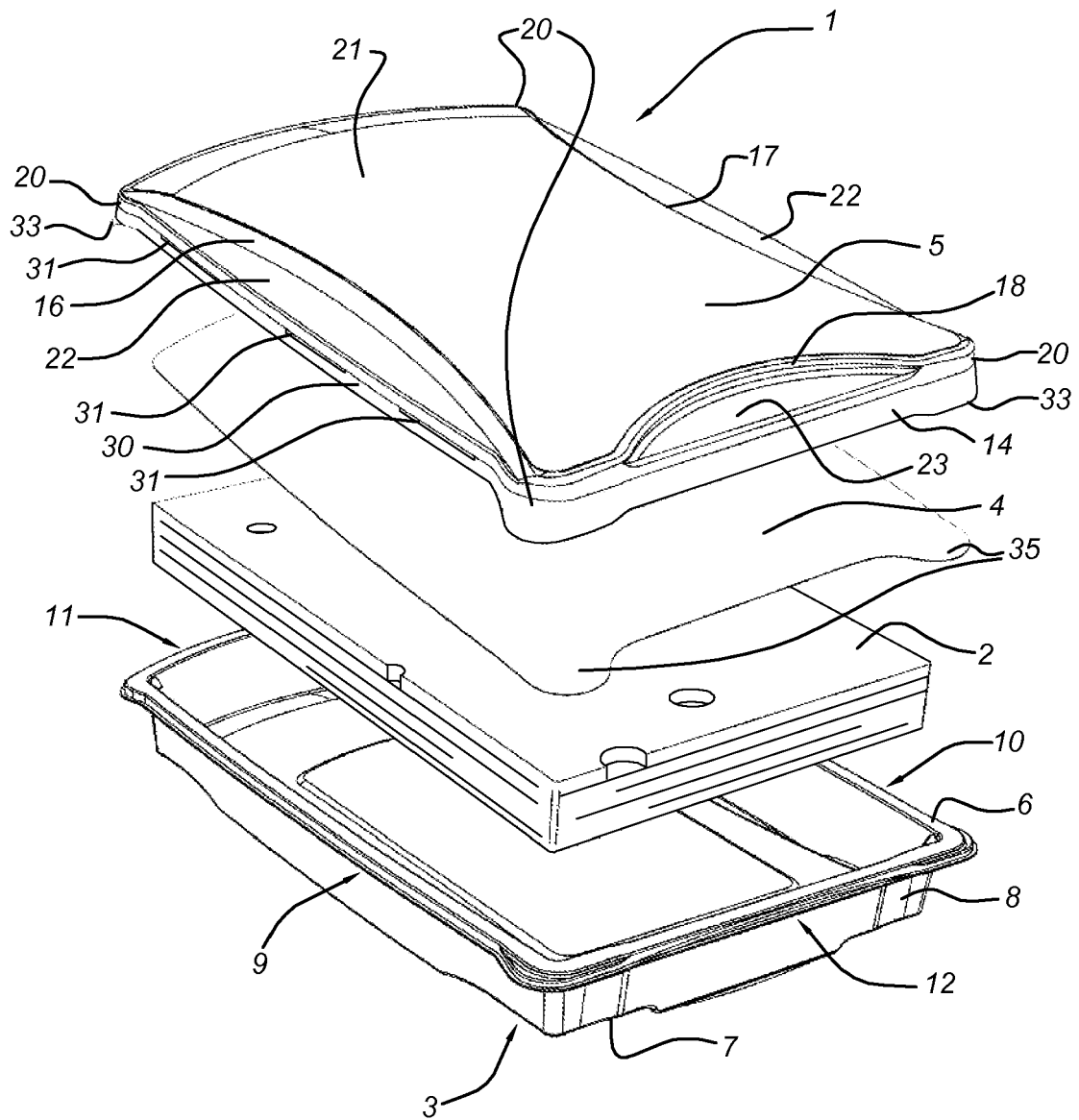
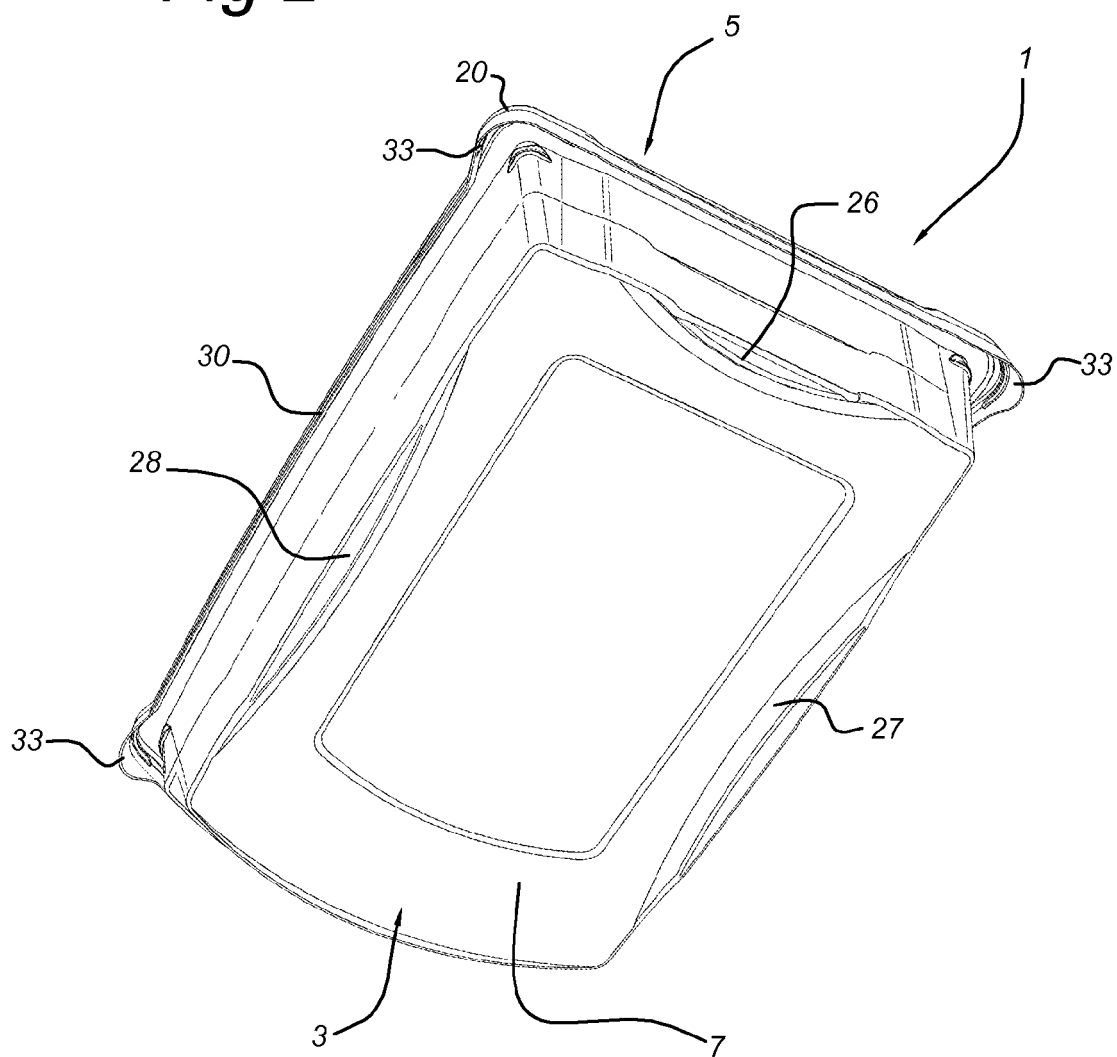


Fig 2





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 07 11 9822

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 03/068623 A (INTERNAT CONS BUSINESS PTY LTD [AU]; WITHERS PHILIP CRAIG [AU]) 21 August 2003 (2003-08-21) * page 6, paragraphs 1,3 * * page 8, paragraph 2; figures *	1-10, 12-15	INV. B65D21/02 B65D43/02 B65D51/20 B65D85/76
Y	-----	11,16	
X	US 5 624 051 A (AHERN JR RICHARD B [US] ET AL) 29 April 1997 (1997-04-29) * column 3, line 10 - line 33; figures *	1,2,4, 12,14,15	
A	-----	3,5-8,10	
X	US 4 061 241 A (RETELNY ANDREW G) 6 December 1977 (1977-12-06) * column 3, line 56 - column 4, line 13; figures *	1-3,12	
Y	-----	16	
A	FR 2 819 496 A (RG PLASTIQUES [FR]) 19 July 2002 (2002-07-19) * abstract *	1,12,13	TECHNICAL FIELDS SEARCHED (IPC)
Y	EP 0 117 673 A (MAYER OSKAR FOODS [US]) 5 September 1984 (1984-09-05) * page 3, line 8 - line 16 * * page 3, line 29 - line 35; figures *	11	B65D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 15 April 2008	Examiner Gino, Christophe
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

1 EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 07 11 9822

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

15-04-2008

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 03068623 A	21-08-2003	EP 1483166 A1	08-12-2004
		JP 2005517596 T	16-06-2005
		US 2005224506 A1	13-10-2005

US 5624051 A	29-04-1997	AR 000199 A1	21-05-1997
		AU 692319 B2	04-06-1998
		AU 3790895 A	30-05-1996
		CA 2161854 A1	25-05-1996
		DE 19542505 A1	30-05-1996
		FR 2727383 A1	31-05-1996
		GB 2295379 A	29-05-1996
		JP 8230874 A	10-09-1996
		NL 1001741 C2	28-01-1997
		NL 1001741 A1	28-05-1996
		NZ 280270 A	22-08-1997

US 4061241 A	06-12-1977	NONE	

FR 2819496 A	19-07-2002	NONE	

EP 0117673 A	05-09-1984	CA 1248050 A1	03-01-1989
		DE 3471074 D1	16-06-1988
		ES 285934 U	01-11-1985
		JP 59209563 A	28-11-1984

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 20070092611 A [0006]