



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
02.10.2013 Bulletin 2013/40

(51) Int Cl.:
B65D 5/00 (2006.01) **B65D 5/28** (2006.01)
B65D 5/68 (2006.01)

(21) Application number: **13382117.3**

(22) Date of filing: **27.03.2013**

(84) Designated Contracting States:
**AL AT BE BG CH CY CZ DE DK EE ES FI FR GB
GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO
PL PT RO RS SE SI SK SM TR**
Designated Extension States:
BA ME

(72) Inventors:
• **Nouchet, Bruno**
53000 LAVAL (FR)
• **Barrere, Jean Pierre**
33210 FARGUES (FR)
• **Lafon, Pierre**
33490 SAINT MAIXANT (FR)

(30) Priority: **30.03.2012 FR 1252929**

(71) Applicant: **Saica Pack, S.L.**
50015 Zaragoza (ES)

(74) Representative: **Hernández Hernández, Carlos**
Olten Patentes y Marcas
Entença, 332-334 3^a-2^a
08029 Barcelona (ES)

(54) **Packaging for conserving and transporting fresh products**

(57) The invention concerns transport and conservation packaging made from a blank sheet of material such as cardboard or corrugated cardboard. Potential applications include the transport of fresh food such as fish

or meat, either alone or with the addition of ice. This packaging consists of a bottom and relatively hermetic side walls to with stand exudates and/or melting ice and to improve retention, possibly channelling evacuation, and of a lid adapted to the base.

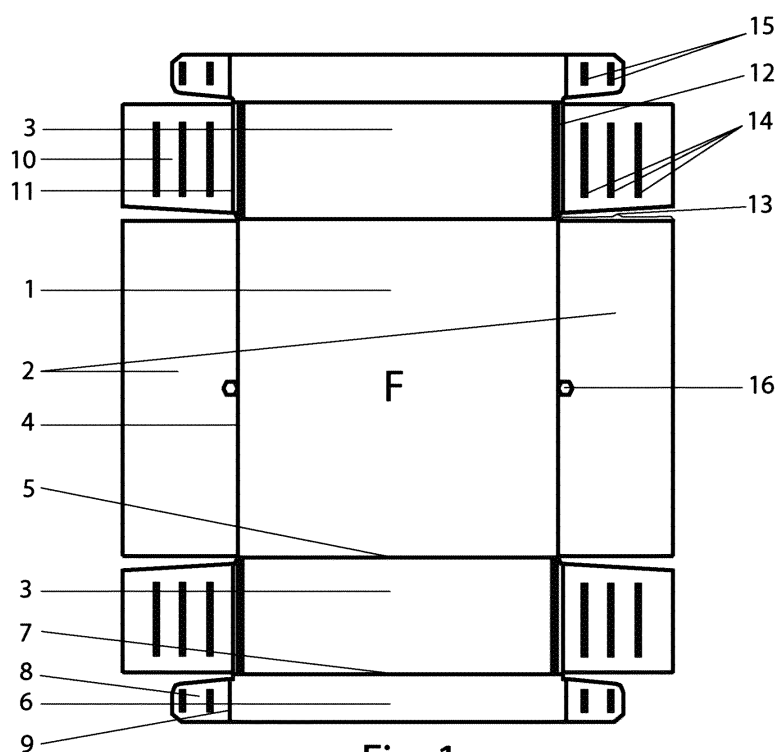


Fig. 1

Description

[0001] The invention concerns packaging for transport and conservation made from a blank sheet of material such as cardboard or corrugated cardboard. Potential applications include the transport of fresh food such as fish or meat, either alone or with the addition of ice.

[0002] This packaging consists of a bottom and relatively hermetic side walls to withstand exudates and/or melting ice and to improve retention, possibly channeling evacuation, and of a lid adapted to the base.

[0003] We know of packaging used for these applications. One representation combining various technical devices appears in patent EP 93401932.4. This patent includes devices shown in Figure 4, such as the side gussets marked out by two 90° seams (mark 110) and a 45° seam (mark 113) between the previous two, so that the external assembly devices, such as the panels (mark 107) and their extensions on both sides, are combined with the panels (mark 109). The purpose of the gussets is to ensure the continuity of the side walls between them and with the base and the purpose of the external assembly devices is to prevent liquids from travelling back up the material through capillary action as internal devices would do. The afore mentioned devices have the advantage of not letting any edge of the material come into contact with the liquid inside.

[0004] On the other hand, these devices have many disadvantages.

[0005] Like the seam (mark 113) of the afore mentioned patent, the gussets have 180° seams that cause partial rupture of the protective lining film and reinforced walls whose resistance to folding negatively affects the ease of assembly and precision.

[0006] The external assembly devices have the great drawbacks of often being impossible to assemble mechanically and/or quickly and of weakening resistance to stacking packaging placed on top of each other due to excess play.

[0007] The present invention aims to overcome these drawbacks, while ensuring the relative sealing required.

Figure 1 is a flat view of the base of the packaging subject to the invention, as supplied by the packaging manufacturer to the user possessing amounting/assembly machine, after cutting the punch and before assembling the volume and assembling the packaging on itself.

Figure 2 is a flat view of the lid of the packaging subject to the invention, as supplied by the packaging manufacturer after cutting the punch.

Figure 3 is a 3D view of the base of the packaging in Figure 1, after mounting/assembly and before filling by the user customer.

Figure 4 is a 3D view of the base of the packaging

in Figure 3 after filling and fastening the lid in Figure 2.

[0008] The first component (F) of the packaging subject to the invention is the base shown in Figures 1 and 3.

[0009] This first component is built around the central panel (1) forming the base itself, preferably rectangular or square, extended on all four sides by roughly rectangular side panels (2 and 3) opposite in pairs on either side of the central panel (1) in perpendicular directions. The first side panels (2) opposite to the first direction are connected to the base by hinge folds (4). The side panels (3) opposite to the direction perpendicular to the previous one are joined to the base by hinge folds (5). The second side panels (3) are themselves extended by partial shuttering panels (6) for closing the upper part of the base, connected to the second side panels (3) by hinge folds (7) and themselves extended in a perpendicular direction by supplementary assembly tabs (8) by means of folding lines and hinge folds (9). Running parallel with the previous, main assembly tabs (10) also extend the second side panels (3) by means of folding lines and hinge folds (11).

[0010] Formation and assembly is performed in the following way:

Firstly: lay down wide lines of thick adhesive (12) parallel to the folding lines (11) between the second side panels (3) and the main assembly tabs (10). These lines of adhesive, laid over the second side panels (3), are very close to the folding lines (11) so as to be located opposite the edge of the material of the first side panels (2) when they end by bearing on the internal side of the second side panels (3). Thus, the adhesive will seal the edge of the material (13) along the entire height-depth of the packaging and ensures the connection necessary for a hermetic seal along the perimeter formed by the alternating sequence of the side panels (2 and 3). The lines of adhesive (12) are laid roughly along the extension of the hinge folds (4) connecting the central panel (1) to the first side panels (2).

Secondly: lay thinner lines of assembly adhesive (14) on the internal side of the main assembly tabs (10) and attach by superimposing these main assembly tabs (10) onto the external side of the first side panels (2).

Thirdly: lay shorter lines of assembly adhesive (15) on the internal side of the secondary assembly tabs (8) and attach by superimposing these secondary assembly tabs (8) onto the external side of the main assembly tabs (10).

[0011] At least one hole per panel, if not two or three, is cut out of the side panels tangentially to their folding lines and hinge folds with the central panel, the holes allowing for evacuation of exudates or the water of melted

ice to the outside of the packaging, in accordance with certain legislation when storage and transport conditions permit. Packaging destined for air transport, for example, does not have evacuation holes.

[0012] The second component (C) of the packaging subject to the invention is the lid shown in Figures 2 and 4. It is adapted to the structure of the upper plane of the first component, which it completes by finishing the packaging seal.

[0013] This second component consists of a flat main panel (20) roughly in the form of a cross. Two parallel folding lines and hinge folds occur twice (22) and define the locking tabs (21).

[0014] Whereas the main panel (20) is partially superimposed on the partial shuttering panels (6) of the base, after pivoting the free ends of the locking tabs (21) according to their hinge folds (22), they slip into these same panels to prevent the lid from shifting horizontally (C) in both directions perpendicular to the side walls of the base (2 and 3). On the periphery of these panels and tabs, the straight (23) lines or right-angle lines forming the perimeter of the lid (C) are preferably bevelled or rounded to reduce the chance of packaging getting entangled during handling.

[0015] The distance between both split parallel hinge folds (21) of the lid (C) is less than the remaining free space between the partial shuttering panels (6) of the base (F) so that the locking tabs (21) may be engaged correctly in the partial shuttering panels (6) and positioned in such a way that in plans they form an obtuse angle with the central panel (20) of the lid in order to not bear on the content.

[0016] The maximum distance between the free opposite outer edges of both locking tabs (21) of the same side of the lid (C) is roughly equal to the available inner distance between the first two side panels (2) of the base (F) when they are in position after formation in order to avoid any lateral movement of the lid relative to the base in that direction.

Claims

1. Transport and conservation packaging made from a sheet material and consisting of two independent but complementary components: made from a sheet material and formed from two independent but complementary components, namely a base (F) intended to be formed and assembled on itself through adhesion and a complementary lid (C), the base (F) consisting of a central panel (1) extended on either side by the first side panels (2) in one direction and, in a perpendicular direction, extended on either side by a succession of second side panels (3) connected to the partial shuttering panels (6), this final succession of panels also extended on either side by the main assembly tabs (10) for the second side panels and by the secondary assembly tabs (8) for the par-

tial shuttering panels, while the lid (C) is made of a main panel (20) roughly in the form of a cross extended on all four corners by locking tabs (21) connected to the main panel, this dual-component packaging is **characterised by**:

For the first component, serving to make the base (F):

- first side panels (2), whose material edges (13) of the free edges perpendicular to the folding lines and hinge folds (4) that connect these first side panels (2) to the central panel (1) of the base bear on the inner sides of the second side panels (3) after they have received wide and thick lines of adhesive along their entire height (12) roughly along the extension of the hinge folds (4) connecting the first side panels (2) to the central panel of the base (1),
- main assembly tabs (10), extending the second side panels on either side (3), are glued on their inner side, then folded to the outside of the first side panels (2) to form a continuous perimeter, alternating between the first and second side panels of the packaging,
- secondary assembly tabs (8), extending the partial shuttering panels (6) on either side, are glued on their inner side, then folded to the outside of the main assembly tabs (10),

For the second, complementary component, serving to make the lid (C):

- locking tabs (21) connected to the main panel (20) are pivoted under the partial shuttering panels (6) of the component serving as the base, while the main panel (20) partially bears on top of the shuttering panels (6).

2. Packaging according to claim 1, **characterised by** the fact that it has liquid evacuation holes (16), arranged in the side panels opposite and tangent to the folding lines (4 or 7) between these side panels and the central panel of the component serving as the base (F).

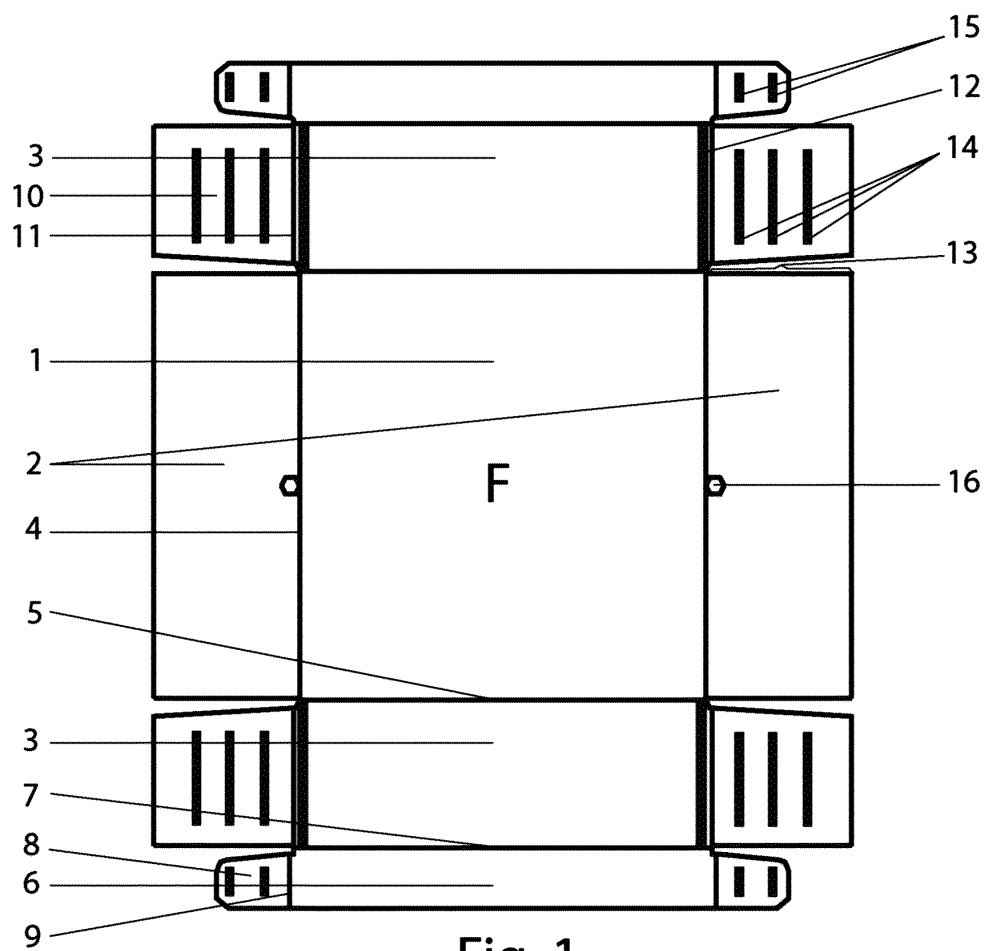


Fig. 1

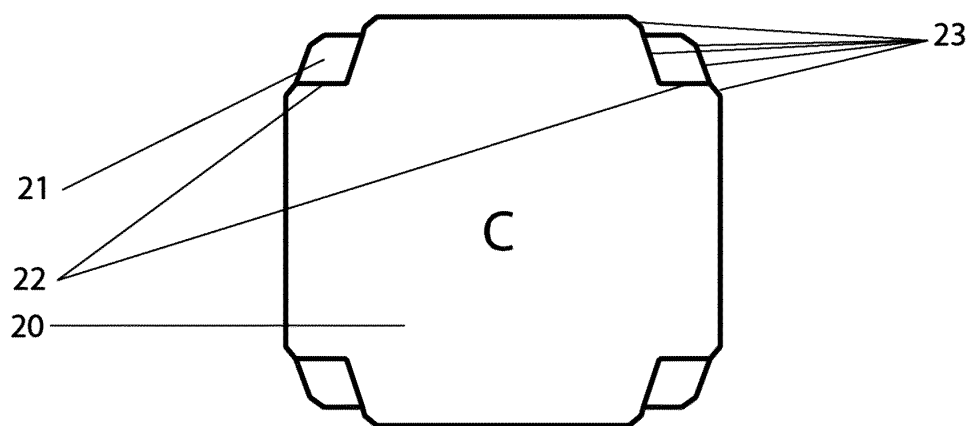


Fig. 2

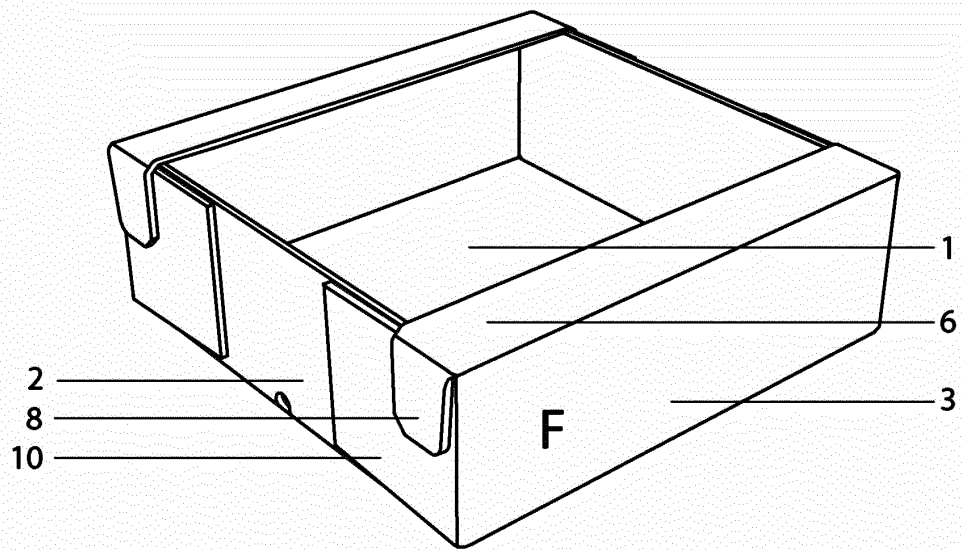


Fig. 3

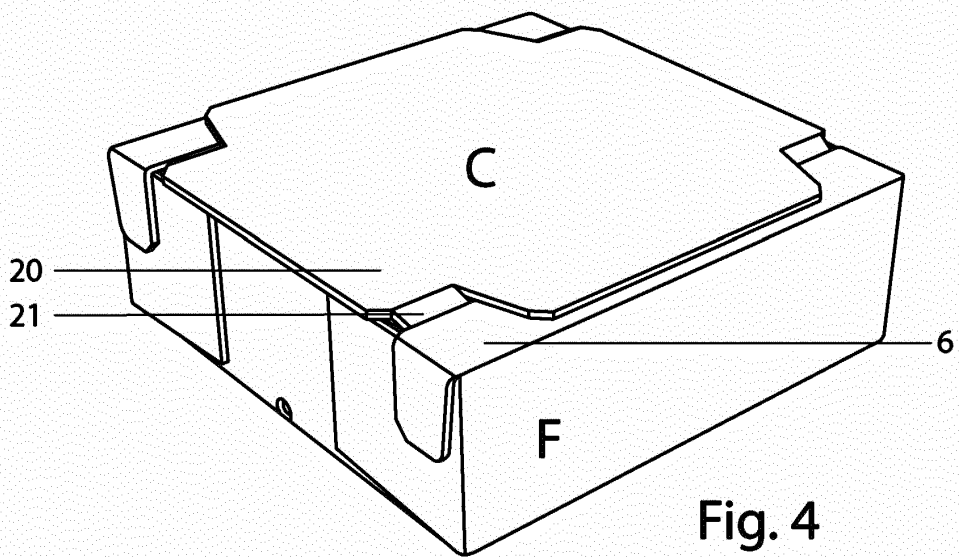


Fig. 4



EUROPEAN SEARCH REPORT

Application Number
EP 13 38 2117

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	GB 730 995 A (R H FILMER LTD; FRANK LESLIE FILMER) 1 June 1955 (1955-06-01) * page 2, lines 45-59; figures 1-4 *	1	INV. B65D5/00 B65D5/28 B65D5/68
A	US 6 354 487 B1 (MUISE JR H DONALD [US]) 12 March 2002 (2002-03-12) * column 2, line 62 - column 3, line 58; figures 1-10 *	1	
A	US 3 373 921 A (CRANE WALTON B) 19 March 1968 (1968-03-19) * column 4, lines 54-66; figures 1-8 *	1	
A	GB 799 792 A (R H FILMER LTD; MICHAEL JAMES KIRBY) 13 August 1958 (1958-08-13) * page 1, lines 37-76; figures 1-2 *	1	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			B65D
Place of search		Date of completion of the search	Examiner
Munich		9 July 2013	Grondin, David
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 03.02 (P04C01)

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

EP 13 38 2117

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.

09-07-2013

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 730995	A	01-06-1955	NONE	
US 6354487	B1	12-03-2002	NONE	
US 3373921	A	19-03-1968	NONE	
GB 799792	A	13-08-1958	NONE	

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

- EP 93401932 A [0003]