

(19)



(11)

EP 3 312 104 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
25.04.2018 Bulletin 2018/17

(51) Int Cl.:
B65D 21/02 (2006.01)

(21) Application number: **17001705.7**

(22) Date of filing: **16.10.2017**

(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
Designated Validation States:
MA MD

(71) Applicant: **Vincenzo, Ventura**
13044 Crescentino (VC) (IT)

(72) Inventor: **Vincenzo, Ventura**
13044 Crescentino (VC) (IT)

(74) Representative: **Garavelli, Paolo**
A.BRE.MAR. S.R.L.
Consulenza in Proprietà Industriale
Via Servais 27
10146 Torino (IT)

(30) Priority: **21.10.2016 IT 201600105933**

(54) **STACKABLE CONTAINER FOR FOOD PRODUCTS**

(57) A stackable container (10) for food products is described, comprising a base (11) and a cover (12) adapted to be closed on the base (11), the base (11) comprising an internal face (21) oriented towards the cover (12) and an external face (22) opposite to the internal

face (21) and adapted to be associated with the cover (12) of a second container (10) through fitting means (51, 52) associated with the base (11) and with the cover (12) and configured to be mutually engaged and stack the two containers (10).

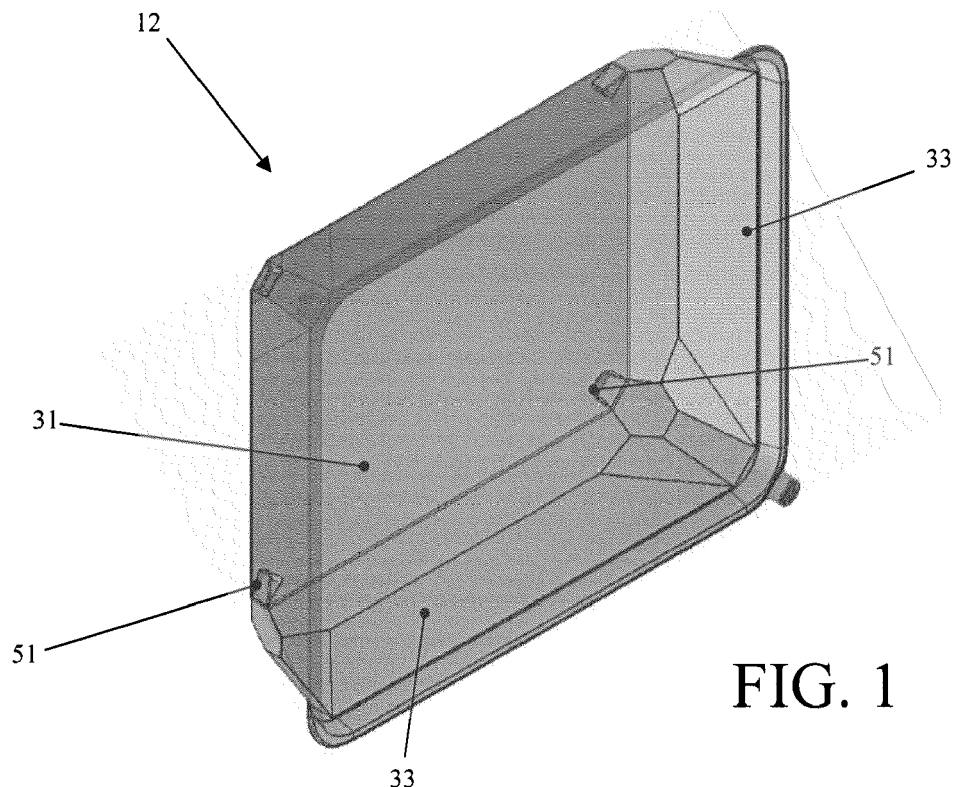


FIG. 1

EP 3 312 104 A1

Description

[0001] The present invention refers to a stackable container for food products, in particular a container for packaging foodstuff.

[0002] Containers for food products, which are used for packaging foodstuff, are known in the art.

[0003] These containers, however, are not satisfactory and have the problem that, when packaging, when it is necessary to stack the containers one above the other after they have been filled, they do not allow easily forming a stable stack, causing delays or slowing the production line.

[0004] Object of the present invention is solving the above prior art problem, by providing a stackable container for food products which can be stacked with other similar containers with a simple operation, which requires a reduced time to be completed, guaranteeing the formation of a stable stack.

[0005] Another object of the present invention is making a container for food products, which allows easily and quickly closing the container in order to speed up the production line.

[0006] The above and other objects and advantages of the invention, as will result from the following description, are obtained with a stackable container for food products as claimed in claim 1. Preferred embodiments and non-trivial variations of the present invention are the subject matter of the dependent claims.

[0007] It is intended that all enclosed claims are an integral part of the present description.

[0008] The present invention will be better described by some preferred embodiments thereof, provided as a non-limiting example, with reference to the enclosed drawings, in which:

- Figure 1 is a perspective view of a first embodiment of a cover of a stackable container according to the present invention;
- Figure 2 is a top view of a first embodiment of a cover of a stackable container according to the present invention;
- Figure 3 is a perspective view of a base of a stackable container according to the present invention;
- Figure 4 is a top view of a base of a stackable container according to the present invention;
- Figure 5 is a perspective view of a second embodiment of a cover of a stackable container according to the present invention;
- Figure 6 is a top view of a second embodiment of a cover of a stackable container according to the present invention;
- Figure 7 is a side view of a stackable container according to the present invention in a closed configuration; and
- Figure 8 is a side view of stackable containers according to the present invention stacked one above the other.

[0009] With reference to the Figures, preferred embodiments of the stackable container for food products of the present invention are shown and described. It will be immediately obvious that numerous variations and modifications (for example related to shape, sizes, various colors and parts with equivalent functionality) can be made to what is described, without departing from the scope of the invention, as appears from the enclosed claims.

[0010] The stackable container 10 for food products of the present invention comprises a base 11 and a cover 12 which can be closed on the base 11, preferably made of plastic material, for example thermoformed molded transparent fog-preventing PET, PET, PS, PP or the like.

[0011] Preferably, the container 10 is shaped as a polyhedron, and the base 11 and the cover 12 preferably have edges whose shape is substantially equal one to the other, so that they can be overlapped when are closed one over the other.

[0012] The base 11 comprises an internal face 21 oriented towards the cover 12 of the stackable container 10 when it is closed, and an external face 22 opposite to the internal face 21 and adapted to be associated with the cover 12 of a second container 10 to stack the two containers.

[0013] The cover 12 comprises an upper wall 31 and side walls 33 connected to the upper wall 31.

[0014] The stackable container 10 further comprises fitting means 51, 52, having male fitting elements 51 and female fitting elements 52 associated to the base and to the cover and configured to be mutually engaged in order to stack two containers 10.

[0015] For example, the male fitting elements 51 are composed of punches or projections 51 obtained next to the angles of the cover 12, in particular next to the angles of the upper wall 31, and the female fitting elements 52 are composed of recesses or hollows 52 obtained next to the angles of the base 11, preferably at every angle of the base 11 and of the cover 12.

[0016] Alternatively, the punches 51 can be obtained on the base 12 and the recesses 52 on the cover 11, or can be both present both on the base 11 and on cover 12, with a punch obtained next to a respective recess 52.

[0017] The fitting elements 51, 52 obtained on the base 11 of a first stackable container 10 of the invention are adapted to be fitted onto the fitting elements 51, 52 obtained on the cover 12 of a second stackable container 10 of the invention, in order to stack the two containers 10 in a stable stack.

[0018] Preferably, the base 11 comprises at least one first tongue 25 obtained on an edge 24 thereof, for example next to an angle, and the cover 12 comprises a second tongue 35 obtained on an edge 34 thereof; preferably, the base 11 and the cover 12 each comprise two tongues 25, 35, obtained respectively next to two opposite angles of the base 11 and of the cover 12.

[0019] When the container 10 is closed, preferably the first tongue 25 is in contact with the second tongue 35;

the tongues 25, 35 are adapted to enable the closing and opening operations of the stackable container 10 to speed up the production line.

[0020] Preferably, the stackable container 10 of the invention comprises holding means 26 arranged on the edge 24 of the base 11 and adapted to be associated with or connected to complementary holding means 36 arranged on the edge 34 of the cover, to sealingly close the cover 12 on the base 11.

[0021] Preferably, said holding means 26 and said complementary holding means 36 extend for the whole length of the sides, respectively of the base 11 and of the cover 12.

[0022] In a preferred way, the holding means are composed of a projecting groove 26 obtained next to the edge 24 of the base 11, and the complementary holding means are composed of a recessed groove 36 next to the edge 34 of the cover 12; for example, the recessed groove 36 next to the lower edge 34 of the cover 12 is composed of a recessed step 36 between the edge 34 of the cover and the side walls 33 of the cover 12.

[0023] In an alternative configuration, the holding means can be for example composed of a recessed groove next to the edge 24 of the base 11, and the complementary holding means can be composed of a projecting groove obtained next to the edge 34 of the cover 12.

[0024] The holding means 26 and the complementary holding means 36 have such sizes and position to mutually cooperate to airtight close the cover 12 and the base 11.

[0025] In the embodiment of the container 10 of the invention in which the holding means are composed of a projecting groove 26 and the complementary holding means are composed of a recessed groove 36, the projecting groove 26 is adapted to be inserted inside the recessed groove 36, with the external surface of the projecting groove 26 in contact with the surface of the recessed groove 36, to sealingly close the cover 12 on the base 11, preventing the product contamination and the formation of condensates on the internal walls of the container 10.

[0026] Preferably, the external face 22 and the internal face 21 of the base 11 comprise reinforcing ribs 41 inclined with respect to their sides, which stiffen and strengthen the structure of the base 11; preferably, the ribs 41 are recessed to prevent the product contained in the container 10 from adhering to its base 11.

[0027] The operation of the stackable container 10 for food products according to the present invention will now be described.

[0028] In a first step, the container 10 is open and the food product which must be packaged, for example a slice or a cutting of a confectionery product, is deposited on the internal face 21 of the base 11, preferably on the ribs 41.

[0029] In a second closing step, the holding means 26 are associated with the complementary holding means

36 and cooperated therewith to sealingly close the cover 12 on the base 11.

[0030] Once closed, the containers 10 are stacked by engaging the fitting means 51, 52 associated with the base 11 of a first container 10, with the fitting means 51, 52 associated with the cover 12 of a second container 10, in particular engaging the male fitting elements 51 with the female elements 52, in order to stack the first container 10 onto the second container 10.

[0031] In the embodiment of the container 10 of the invention which comprises a first tongue 25 obtained next to the edge 24 of the base 11 and a second tongue 35 obtained next to the edge 34 of the cover 12, the tongues 25, 35 are mutually in contact at the end of the second closing step.

[0032] Advantageously, the tongues 25, 35 help an operator during the opening and closing operations of the container, making the production line fluid and quick.

[0033] Advantageously, the reinforcing ribs 41 obtained on the external face 22 and on the internal face 21 of the base 11 stiffen and strengthen the structure of the base 11, in addition to prevent the product from adhering to the base 11 of the container 10.

Claims

1. Stackable container (10) for food products comprising a base (11) and a cover (12) adapted to be closed on the base (11), the base (11) comprising an internal face (21) oriented towards the cover (12) and an external face (22) opposite to the internal face (21) and adapted to be associated with the cover (12) of a second container (10) through fitting means (51, 52) associated with the base (11) and with the cover (12) and configured to be mutually engaged and stack the two containers (10), **characterized in that** the fitting means (51, 52) comprise male fitting elements (51) and female fitting elements (52) associated with the base (11) and with the cover (12), obtained next to the angles of the base (11) and of the cover (12) and configured to be mutually engaged for stacking two containers (10), the base (11) comprising at least one first tongue (25) obtained next to an edge (24) thereof and the cover (12) comprising a second tongue (35) obtained next to an edge (34) thereof, said tongues (25, 35) being adapted to enable the closing and opening operations of the stackable container (10), the base (11) and the cover (12) each comprising two tongues (25, 35) obtained respectively next to two opposite angles of the base (11) and of the cover (12), the stackable container (10) comprising holding means (26) arranged next to the edge (24) of the base (11) and adapted to be associated with complementary holding means (36) arranged next to the edge (34) of the cover (12) to sealingly close the cover (12) on the base (11), said holding means (26) and said complementary holding

means (36) extending for the whole length of the sides respectively of the base (11) and of the cover (12).

2. Stackable container (10) for food products according to claim 1, **characterized in that** the male fitting elements (51) are composed of punches (51) obtained next to the angles of the cover (12), and the female fitting elements (52) are composed of recesses (52) obtained next to the angles of the base (11). 5
10
3. Stackable container (10) for food products according to claim 1, **characterized in that** the male fitting elements (51) are composed of punches (51) obtained next to the angles of the base (11), and the female fitting elements (52) are composed of recesses (52) obtained next to the angles of the cover (12). 15
4. Stackable container (10) for food products according to any one of the previous claims, **characterized in that** the cover (12) comprises an upper wall (31) and side walls (33) connected to the upper wall (31). 20
5. Stackable container (10) for food products according to any one of the previous claims, **characterized in that** the external face (22) and the internal face (21) of the base (11) comprise reinforcing ribs (41) inclined with respect to their sides, which stiffen and strengthen the structure of the base (11). 25
30

35

40

45

50

55

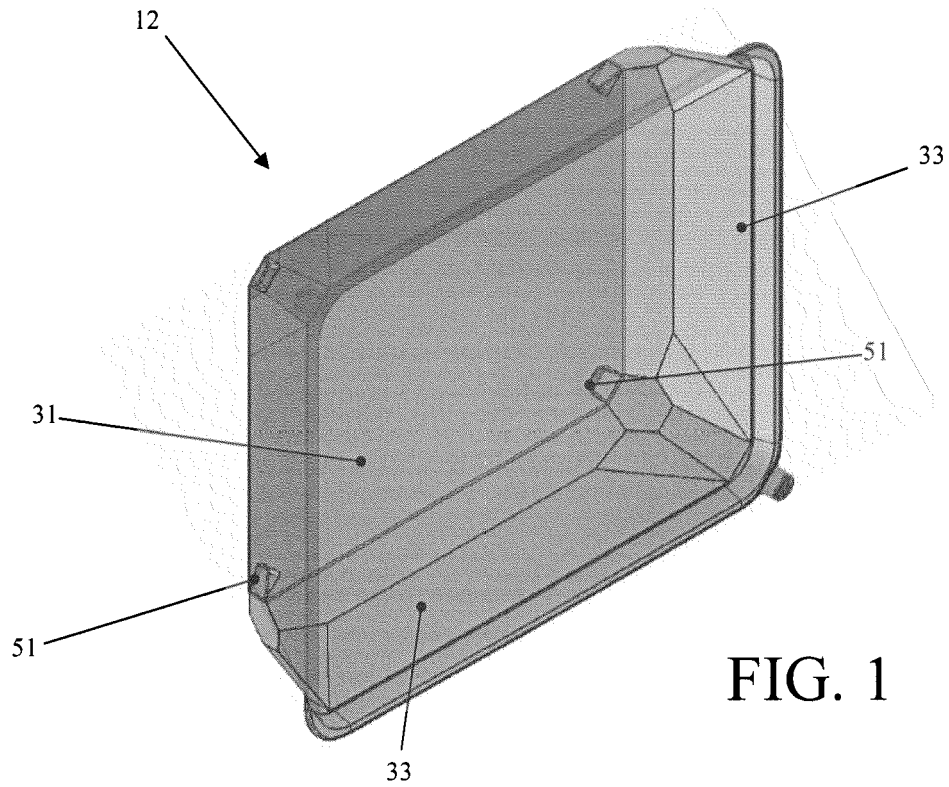


FIG. 1

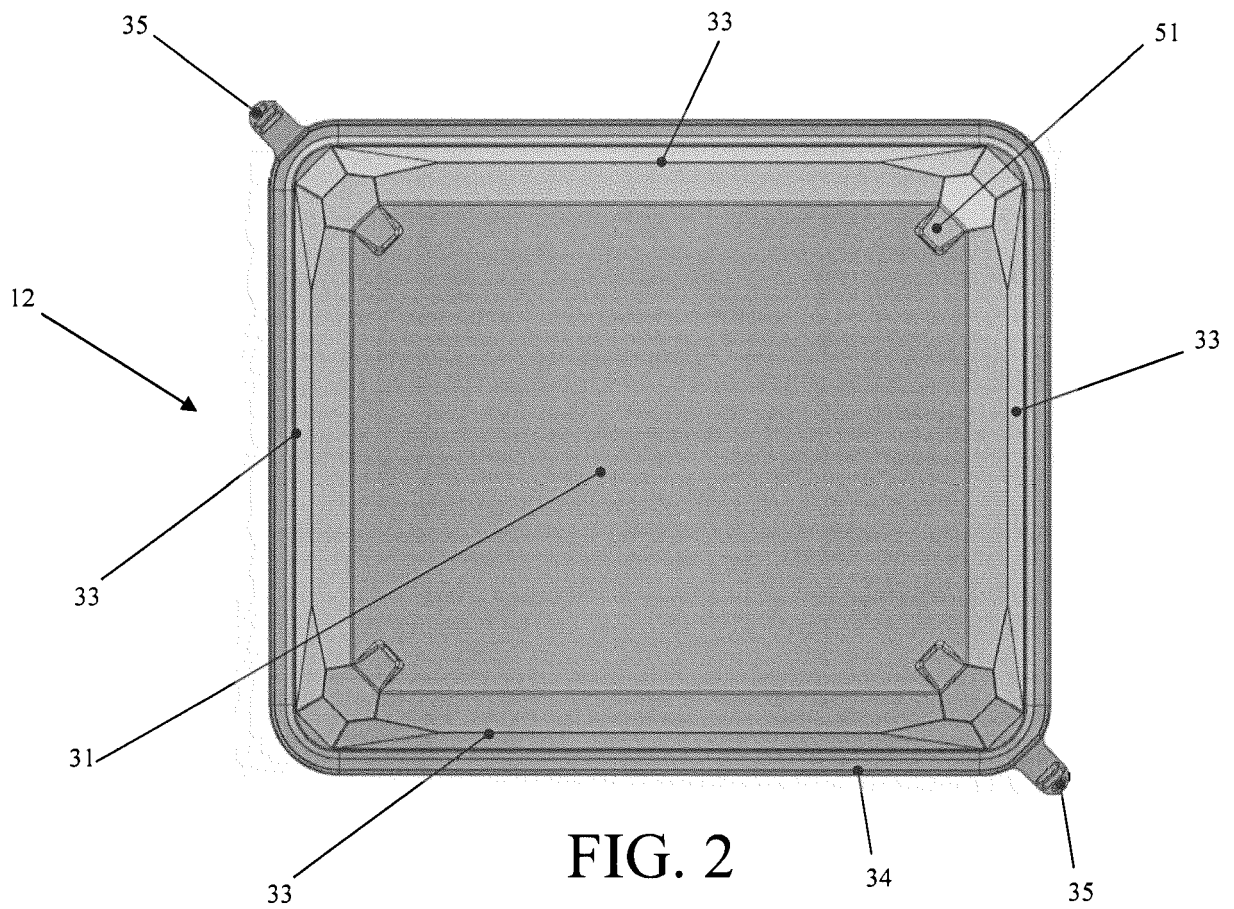


FIG. 2

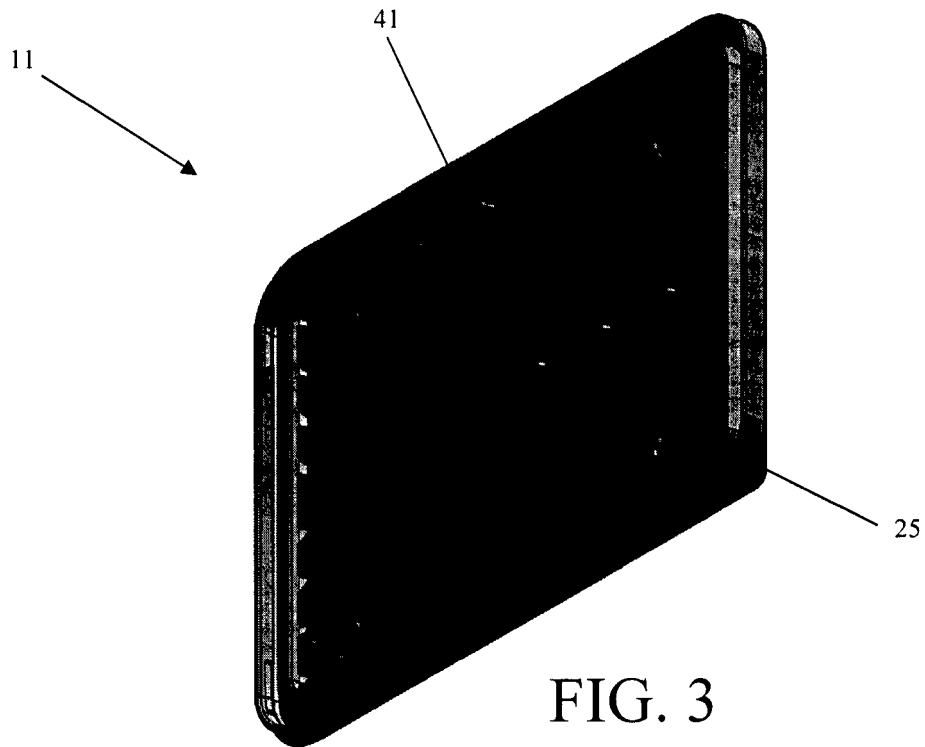


FIG. 3

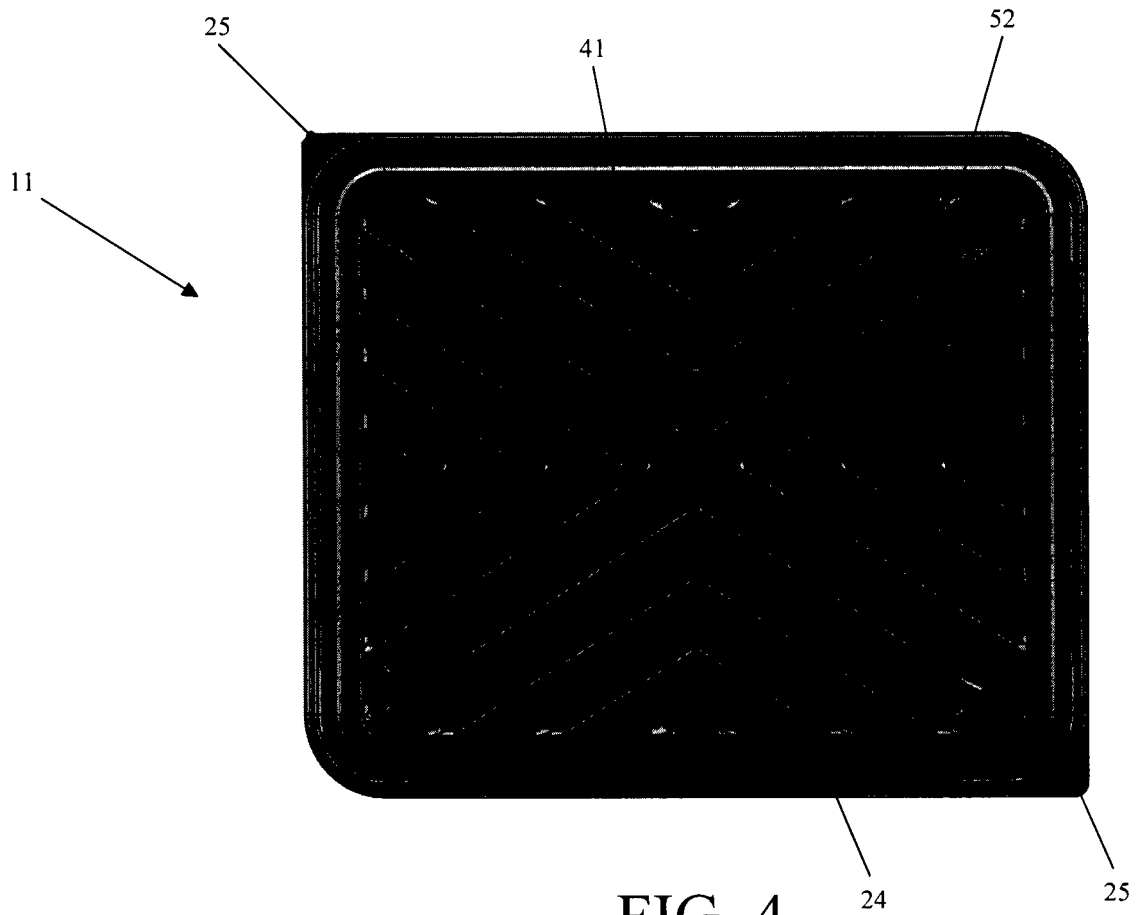
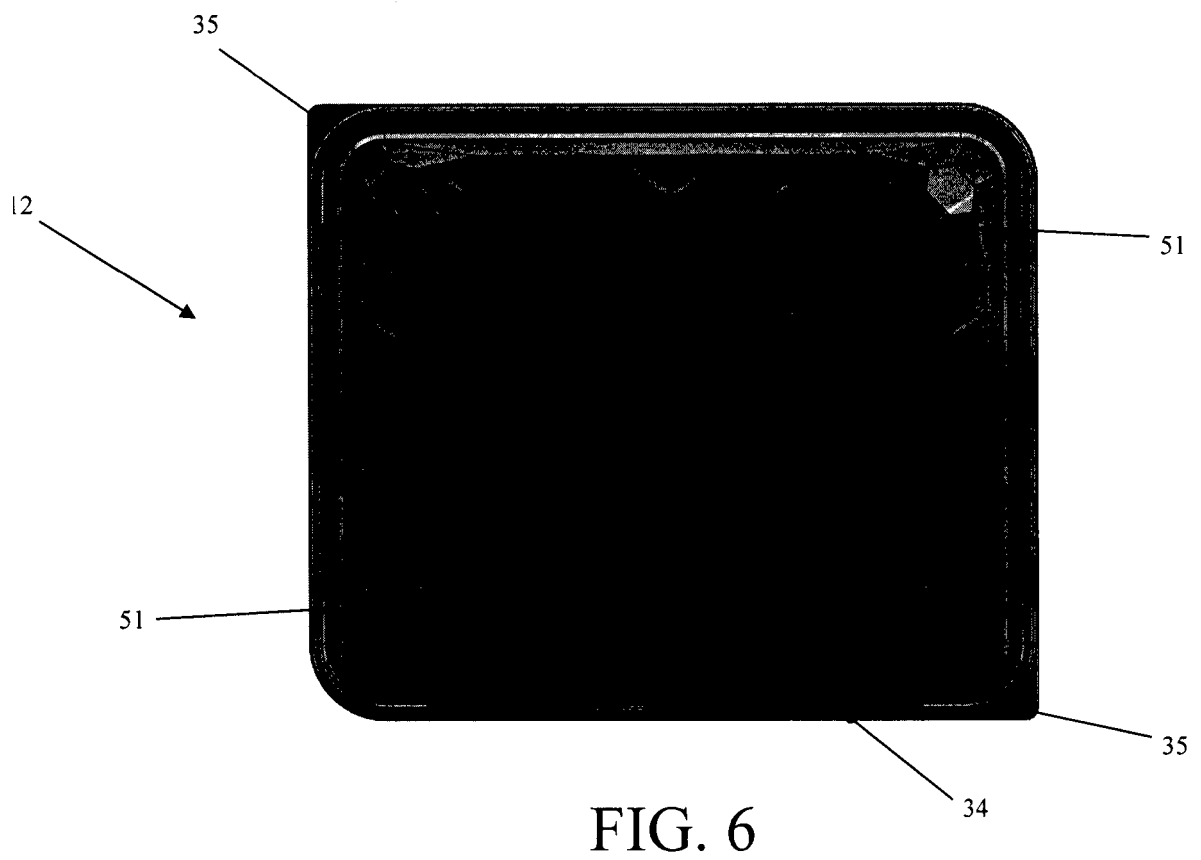
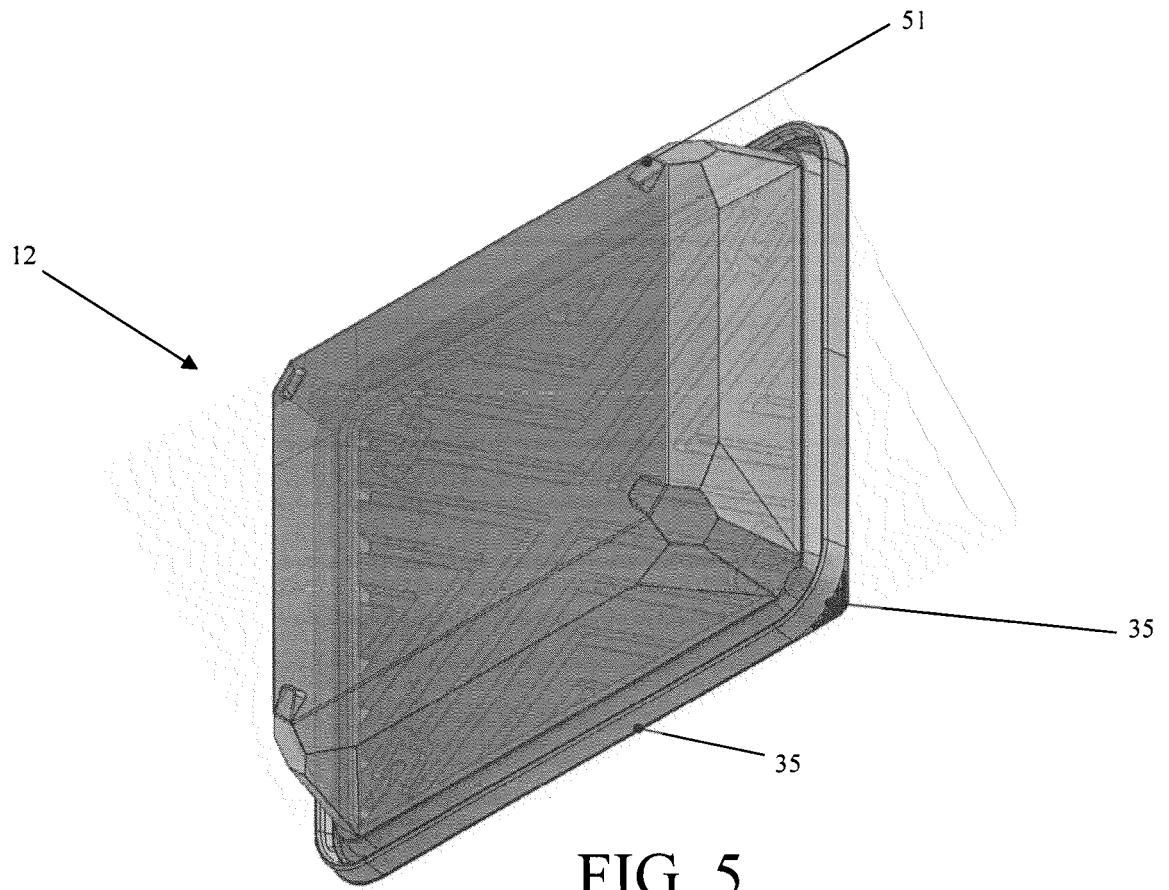
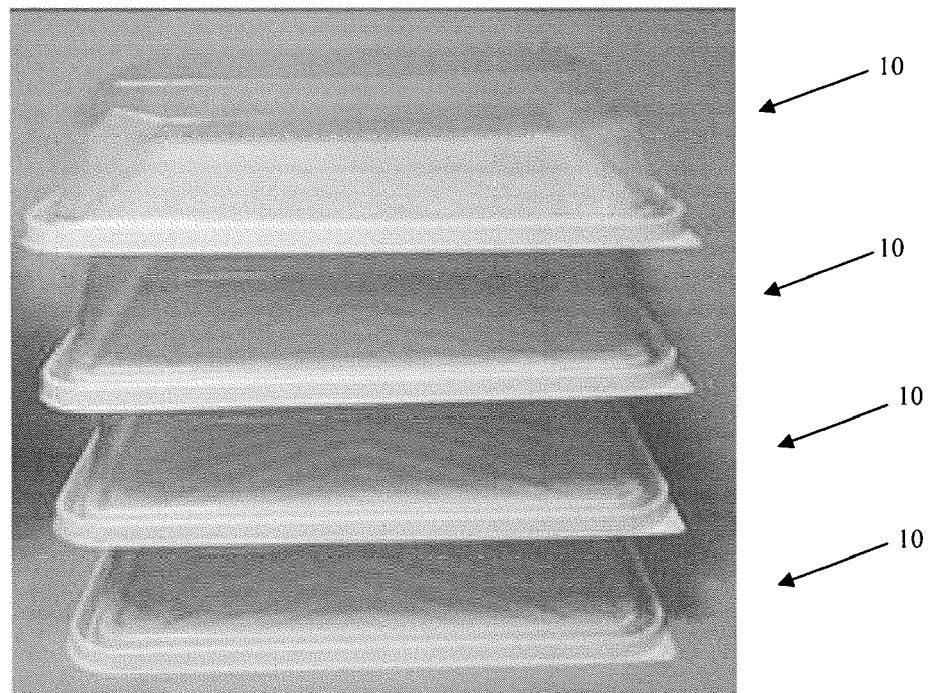
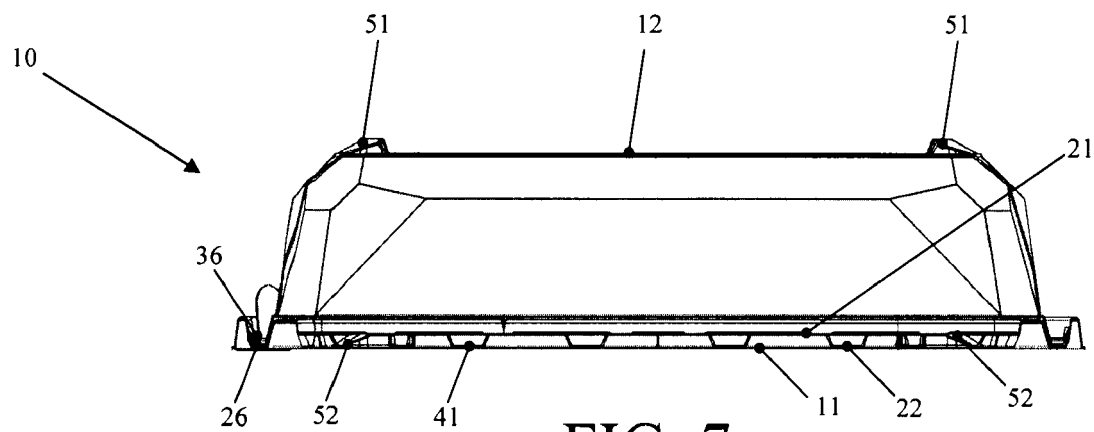


FIG. 4







EUROPEAN SEARCH REPORT

 Application Number
 EP 17 00 1705

5

10

15

20

25

30

35

40

45

50

55

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	US 2011/210033 A1 (CHHAY KHIM SEANG [US]) 1 September 2011 (2011-09-01) * paragraphs [0057] - [0105] *	1-5	INV. B65D21/02
Y	EP 2 502 837 A1 (KOEFLDA GERALD R [GB]; COOK ALAN J [GB]) 26 September 2012 (2012-09-26) * figures 11-12 *	5	
Y	EP 1 939 098 A1 (KRAFT FOODS HOLDINGS INC [US]) 2 July 2008 (2008-07-02) * paragraph [0041]; figures 1-12 *	1,4	
Y	US 2005/098469 A1 (AGAKANIAN ARMIK [US]) 12 May 2005 (2005-05-12) * paragraphs [0043] - [0044]; figures *	2,3	
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
The Hague		15 February 2018	Fournier, Jacques
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			

 3
 EPO FORM 1503 03.02 (P04C01)

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

EP 17 00 1705

5

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.

15-02-2018

10

15

20

25

30

35

40

45

50

55

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2011210033 A1	01-09-2011	NONE	
EP 2502837 A1	26-09-2012	CA 2772393 A1 EP 2502837 A1 MX 342286 B US 2012241349 A1	25-09-2012 26-09-2012 23-09-2016 27-09-2012
EP 1939098 A1	02-07-2008	AU 2007216948 A1 CA 2601386 A1 EP 1939098 A1 NZ 561917 A US 2008160143 A1	17-07-2008 29-06-2008 02-07-2008 30-10-2009 03-07-2008
US 2005098469 A1	12-05-2005	US 2005098469 A1 WO 2005047109 A2	12-05-2005 26-05-2005

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82