

(19)



(11)

EP 2 543 606 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:

09.01.2013 Bulletin 2013/02

(51) Int Cl.:

B65D 1/36 (2006.01)

B65D 77/20 (2006.01)

B65D 81/32 (2006.01)

(21) Application number: **12174771.1**

(22) Date of filing: **03.07.2012**

(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

(30) Priority: **07.07.2011 IT MO20110169**

07.07.2011 IT MO20110168

(71) Applicant: **Coopbox Group S.P.A.**

42123 Reggio Emilia (IT)

(72) Inventors:

• **Cornini, Veronica**

43123 PARMA (IT)

• **De Angelis, Silvia**

**42023 CADELBOSCO SOPRA (REGGIO EMILIA)
(IT)**

• **Fornaciari, Claudio**

**42023 CADELBOSCO SOPRA (REGGIO EMILIA)
(IT)**

• **Fiordelisi, Fabio**

42123 REGGIO EMILIA (IT)

(74) Representative: **Colò, Chiara**

Bugnion S.p.A.

Via Vellani Marchi, 20

41124 Modena (IT)

(54) **A container**

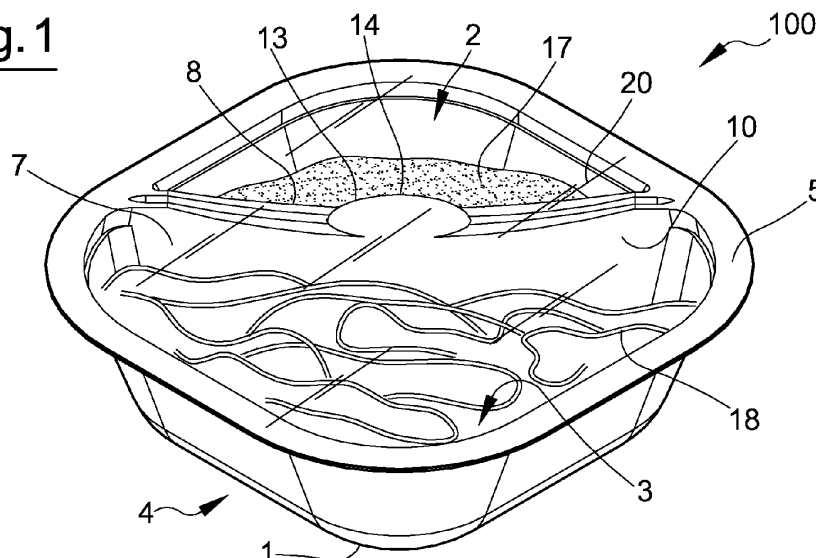
(57) A container comprises:

- a first containing cavity (2),
- a second containing cavity (3),
- a separating element (7) for separating the first containing cavity (2) from the second containing cavity (3),
- a perimeter zone (5) suitable for being joined to a closure film (20) in order to close the container (1),
- an edge (8) that delimits the separating element (7) and

that is depressed relative to the perimeter zone (5) at least along a portion (15) of said edge (8),

- a hinge line defined by a folding line (16) arranged along at least one region of the edge (8) of the separating element (7) for allowing the first containing cavity (2) to be rotated relative to the second containing cavity (3),
- a protruding element (13) that projects from the edge (8) of the separating element (7).

Fig. 1



EP 2 543 606 A1

Description

[0001] The invention relates to a container having two containing cavities suitable for receiving distinct products, particularly food products intended to be mixed together prior to the consumption thereof. The invention further relates to a package comprising a container and a closure film.

[0002] Containers are known which comprise two containing cavities that are initially filled with different food products, for example yoghurt and cereal. After the containing cavities have been filled, the known containers are closed by means of a closure film that is welded to the container. The closure film is joined to the container not only at a perimeter zone of the container itself, but also at an upper edge of a separating element that separates the first containing cavity from the second containing cavity.

[0003] Prior to consumption of the food products contained in the container, it is necessary to remove the closure film from the container. In this manner, the consumer can gain access to the separate food products and mix them in one of the two containing cavities according to his/her personal preference.

[0004] Moreover, food products are known that are mixed at the time of production and packaged after they have been mixed. An example of food products of this type is that of precooked pasta and the condiment or sauce intended to be mixed with the pasta; such products are normally packaged, already mixed, in a single containing cavity of a container, which is subsequently closed with a closure film. At the time of use, the container containing the sauced pasta is heated in an oven, after which the closure film is removed to allow the consumer to consume the pasta.

[0005] A drawback of the containers for sauced pasta described hereinabove is that many hours may pass from the moment when the precooked pasta is mixed with the sauce to the moment when the pasta is heated so as to be served. The prolonged contact between the pasta and the sauce causes a deterioration of the organoleptic properties of the sauced pasta, which proves to be less palatable for the consumer.

[0006] For the reasons stated above, it would be useful to mix the precooked pasta with the sauce shortly before the sauced pasta is served to the consumer.

[0007] However, the containers having two containing cavities of the type used for yoghurt and cereal are not suitable for use with pasta mixed with a sauce. In fact, these containers make it impossible to mix the pasta and the sauce without removing the closure film. On the other hand, if the container is put in the oven after having removed the closure film to mix the sauce into the pasta, there is a risk of contaminating the sauced pasta with foreign substances. This is undesirable, particularly if the sauced pasta is to be served to the public, as is the case when meals are distributed in schools, hospitals or other public facilities.

[0008] FR 2763572 discloses a package for food products, for example hams, intended to be cooked and that produce exudates while cooking. The package comprises a main pouch made of a heat-shrinkable material and suitable for containing the product to be cooked. The package further comprises two secondary pouches, arranged on the sides of the main pouch for receiving the exudates. The secondary pouches are in communication with the main pouch by means of communication passages, through which the exudates pass from the main pouch into the secondary pouches, when the film forming the main pouch shrinks during the cooking process. The communication passages are defined by interrupting a welding, which, along an edge zone, joins the material forming the pouches to a closure film of the package. The edge zone is flat, both at the communication passages and outside the communication passages.

[0009] The package disclosed in FR 2763572 is not suitable for containing products to be mixed prior to opening the package, because the communication passages between the main pouch and the secondary pouches are very narrow and do not allow the product to pass from the main pouch to the secondary pouches or vice versa, especially if the product contains solid parts having sizes larger than the communication passages.

[0010] DE 202008008636U discloses a dual chamber container, comprising two chambers separated by a separating element, along which a weakening line is provided. By folding the container along the weakening line, a food product may pass from one chamber to the other.

[0011] However, in the container according to DE 202008008636U, it may be difficult for the food product to pass from one chamber to the other, particularly if a closure film is welded to the container and if the food product contains parts that are relatively large in size. This occurs for example when the food product is a meat sauce, or a condiment containing vegetables such as peas, beans or in any case, vegetables cut in pieces. It may happen that the closure film does not detach from the edge of the separating element or that it detaches only slightly from that edge, which blocks the passage of the food product.

[0012] WO 2008/053927 discloses a container that is closed by a closure film and has a plurality of containing cavities separated one from the other by corresponding separating elements. The separating elements have portions that are depressed with respect to an edge zone of the container to which the closure film is welded. Through these depressed portions, a gas generated inside the container can pass from one containing cavity to the other, until it reaches one or more discharge holes that open when the pressure of the gas swells the closure film beyond a pre-set limit.

[0013] WO 2008/053927 has the same drawbacks described hereinabove in connection with DE 202008008636U, with reference to the capacity of a food product to pass from one containing cavity to the other when the closure film is still welded to the edge zone of

the container. These drawbacks are worsened by the fact that, due to the geometry of the containing cavities disclosed in WO 2008/053927, it is not possible to rotate a containing cavity about a hinge axis with respect to a further containing cavity, so that the food product descends from the containing cavity located further above towards the containing cavity located further below.

[0014] US 2009/0014348 discloses a stackable container, inside of which there is provided a partition wall, from which a pillar extends. The pillar enables a lid that closes the container to withstand compressive forces applied to the lid when a plurality of containers are stacked. The partition wall connects two opposing side faces of the container, preventing the side faces from buckling, thus spreading apart from each other, when compressive forces are applied.

[0015] The container disclosed in US 2009/0014348 is not used for containing different types of food products that it are desired to be mixed prior to use.

[0016] An object of the invention is to improve known containers, particularly containers intended to contain two distinct products suitable for being mixed prior to being utilized, as well as the packages obtained from these containers and the relative methods of utilization.

[0017] Another object is to provide a container and a package for containing two distinct products, in which it is possible to mix the two products and subject them to desired treatments, for example heating, under good hygienic conditions.

[0018] A further object is to provide a container and a package for containing two separate products, in which it is possible to mix the two products without removing a closure film intended to close the container.

[0019] In a first aspect of the invention, there is provided a container comprising a first containing cavity and a second containing cavity, a separating element for separating the first containing cavity from the second containing cavity, a perimeter zone suitable for being joined to a closure film so as to close the container, the separating element being delimited by an edge that is depressed relative to the perimeter zone, at least along a portion of said edge, a folding line being arranged along at least one region of the edge of the separating element, the folding line defining a hinge line so as to allow the first containing cavity to be rotated relative to the second containing cavity, **characterized in that** a protruding element projects from the edge of the separating element.

[0020] The container according to the first aspect of the invention can be used for containing two distinct food products, for example a sauce received in the first containing cavity and a certain amount of pasta received in the second containing cavity. The separating element makes it possible to keep the two food products separate until shortly before use. When it is desired to mix the food products, the folding line acts as a hinge line and makes it possible to rotate one of the containing cavities with respect to the other, so that the containing cavity that is rotated is further above the other. The food product can

thus pass, by virtue of the force of gravity, from the containing cavity that is further above to the containing cavity that is in a lower position. The protruding element enables the closure film to remain at a distance from the depressed portion of the edge of the separating element, so as to define one or more passages through which a food product can pass from one containing cavity to the other, even when the food product contains solid parts of relatively large sizes such as pieces of meat, peas or beans.

[0021] After the sauce has passed into the containing cavity housing the pasta, it is possible to heat the container, which is still closed by the closure film and thus under highly hygienic conditions. Lastly, the consumer can remove the closure film immediately before consuming the pasta, already sauced and heated.

[0022] In a second aspect of the invention, there is provided a package comprising a container and a closure film for closing the container, the container comprising a first containing cavity and a second containing cavity, a separating element being provided for separating the first containing cavity from the second containing cavity, **characterized in that** the closure film is detached from the separating element at least along a portion of a free edge of the separating element.

[0023] By providing a closure film that is detached from the separating element at least along a portion of the free edge thereof, it is possible to make the first containing cavity and the second containing cavity communicating with each other even when the closure film is still joined to the container. In this manner, the product contained in one of the two containing cavities, for example in the first containing cavity, can pass into the second containing cavity and be mixed together with the further product contained therein, before opening the package. This makes it possible to mix the products contained in the two containing cavities shortly before consuming them. This prevents the properties, particularly the organoleptic properties, of the mixture of the two packaged products from deteriorating due to prolonged contact between the components.

[0024] Furthermore, the mixture of products contained in the two containing cavities can be subjected to further treatments, for example heating, without contaminating the mixture.

[0025] In a third aspect of the invention, there is provided a container comprising a first containing cavity and a second containing cavity, a separating element for separating the first containing cavity and the second containing cavity, a perimeter zone suitable for being joined to a closure film so as to close the container, **characterized in that** the separating element is delimited by an edge that is depressed, relative to the perimeter zone, at least along a portion thereof.

[0026] Owing to the third aspect of the invention, it is possible to allow a product contained in a containing cavity to pass into the other containing cavity with relative ease. When the container is closed by a closure film that

is joined to the container along the perimeter zone, the closure film is substantially arranged at the same height as the perimeter zone. The edge of the separating element is instead found, at least along the depressed portion, at a lower height than the perimeter zone and it is thus at a distance from the closure film. In this manner, between the closure film and the edge of the separating element, there is defined at least one passage zone through which the product contained in one containing cavity can pass into the other containing cavity when the container is still closed.

[0027] In a fourth aspect of the invention, there is provided a container comprising a first containing cavity and a second containing cavity, a separating element for separating the first containing cavity from the second containing cavity, **characterized in that** the separating element is delimited by an edge from which a protruding element projects.

[0028] When the container according to the fourth aspect of the invention is closed by a closure film, the protruding element acts as a spacer element, thereby keeping the closure film at a distance from the portions of the edge of the separating element that are adjacent to the protruding element. Near the portions of the edge of the separating element in which the closure film is at a distance from the separating element, there are thus defined one or more passage zones through which the first containing cavity communicates with the second containing cavity. Through these passage zones, the product contained in one containing cavity can pass into the other containing cavity, particularly if the container is folded along the edge of the separating element, so that the containing cavity from which one wishes the product to leave is higher above the other containing cavity.

[0029] In this manner, the products contained in the two containing cavities can come into contact with each other before the closure film is removed. This makes it possible to subject the products contained in the two containing cavities to a desired treatment, for example heating, while the container is still closed, that is, under good hygienic conditions.

[0030] In one embodiment, which is applicable to all the aspects of the invention, a folding line is provided, the folding line being arranged along at least one portion of the edge of the separating element, so as to allow the first containing cavity to be rotated relative to the second containing cavity.

[0031] The folding line acts as a hinge line.

[0032] Owing to the folding line, one of the two containing cavities can be brought more easily to a height higher than the other containing cavity, thereby facilitating the passage, by virtue of the force of gravity, of the product from one containing cavity to the other.

[0033] The invention can be better understood and implemented with reference to the accompanying drawings, which illustrate some non-limiting exemplary embodiments thereof, wherein:

Figure 1 is a perspective view of a package suitable for containing two distinct products;

Figure 2 is a top view of a container for forming the package of Figure 1;

Figure 3 is a section taken along plane III-III of Figure 2;

Figure 4 is an enlarged section, highlighting a detail of the container of Figure 2, taken along plane IV-IV of Figure 2;

Figure 5 is a section taken along plane V-V of Figure 3;

Figure 6 is a schematic perspective view, highlighting the package of Figure 1, during use.

[0034] Figure 1 shows a package 100 for containing at least two distinct products, particularly at least two distinct food products, intended to be mixed together before being used or consumed.

[0035] The food products contained in the package 100 may for example comprise a predetermined amount of precooked pasta and a condiment or sauce suitable for mixing with the pasta. The pasta and the sauce are intended to be mixed before opening the package 100. Thereafter, the package 100, which is still closed, and inside of which the two products have been mixed, can be put into an oven, for example a microwave oven, so as to heat the mixed products. Once the products contained in the package 100 have reached the desired temperature, the package 100 can be delivered to a user, who will open it and consume the products contained inside it, for example sauced pasta.

[0036] Packages of the type shown in Figure 1 can be used by ready-made meal distribution services, such as hospitals, schools, canteens, and so forth.

[0037] The package 100 comprises a container 1, suitable for receiving the products to be packaged, and a closure film 20 suitable for closing the container 1.

[0038] The container 1 can be made of a polymeric material, in a compact or foamed form. The polymeric material with which the container 1 is made, can be crystallized or non-crystallized. The polymeric material with which the container 1 is made, can be polystyrene, polyethylene, polypropylene, polyethylene terephthalate or other materials. This polymeric material can be coupled with one or more layers suitable for giving the container 1 certain desired properties, for example a layer having gas barrier properties, a heat-welding layer or other properties.

[0039] In an embodiment, the container 1 is made of foamed crystallized polyethylene terephthalate (PET).

[0040] The container 1 can be obtained starting from a sheet-material, for example by thermoforming. However, the container 1 can also be made by means of other production techniques, for example by injection moulding.

[0041] The container 1 comprises a first containing cavity 2, suitable for containing a first product 17, and a second containing cavity 3, suitable for containing a sec-

ond product 18.

[0042] The first product 17 may be a sauce for example, whereas the second product 18 may comprise pre-cooked pasta suitable for being mixed with the sauce contained in the first containing cavity 2. However, the container 1 is, in principle, also suitable for containing food products other than pasta and the relative sauce, or even non-food products.

[0043] The first containing cavity 2 and the second containing cavity 3 may differ in dimensions, as shown in the illustrated example, in which the first containing cavity 2 is smaller than the second containing cavity 3. Alternatively, the first containing cavity 2 and the second containing cavity 3 may be substantially of the same size.

[0044] The container 1 comprises a support base 4 suitable for being rested on a rest surface 6, for example a horizontal rest surface. The rest surface 6 is shown in Figure 3.

[0045] The support base 4 may extend into both the first containing cavity 2 and the second containing cavity 3. Alternatively, the support base 4 may be provided only in one of the two containing cavities 2, 3, usually in the containing cavity that is larger in size. In this latter case, only one of the two containing cavities comes into contact with the rest surface 6, whereas the other containing cavity remains in a suspended position. The support base 4 can be defined by a continuous support zone or by a plurality of support zones that are separated one from the other. The continuous support zone or the plurality of support zones separated one from the other, define a plane at which the container 1 can be rested on the rest surface 6.

[0046] The container 1 comprises a perimeter zone 5 along which the container 1 can be joined to the closure film 20. The closure film 20 may be for example of a polymeric type. The closure film 20 can be joined to the perimeter zone 5 by means of welding, for example by ultrasonic, radio frequency or heat-welding.

[0047] The perimeter zone 5 extends along an external perimeter of the container 1 and it has a closed loop conformation. The perimeter zone 5 can be shaped as a flat flange. In an unillustrated, alternative embodiment, the perimeter zone 5 can comprise a flat portion to which there is joined the closure film and a downwards-facing edge around the flat portion.

[0048] As shown in Figure 3, when the container 1 is resting on the rest surface 6, the perimeter zone 5 is at a height H with respect to the rest surface 6.

[0049] The container 1 comprises a separating element 7 for separating the first containing cavity 2 from the second containing cavity 3.

[0050] The separating element 7 has an edge 8, which, when the support base 4 is resting on the rest surface 6, delimits the separating element 7 from the above. The edge 8 can thus be defined as an upper edge of the separating element 7.

[0051] As shown in Figure 5, the separating element 7 can be shaped as an internally hollow projection, which

projects from the support base 4 towards the perimeter zone 5, that is, upwards.

[0052] The separating element 7 is laterally delimited by a first wall 9 and by a second wall 10. The first wall 9 and the second wall 10 of the separating element 7 are arranged on opposite ends of the edge 8.

[0053] The first wall 9 and the second wall 10 may both be flat.

[0054] The first wall 9 faces the first containing cavity 2. More precisely, the first wall 9 of the separating element 7 delimits the first containing cavity 2 towards the inside of the container 1.

[0055] The second wall 10 instead faces the second containing cavity 3. More precisely, the second wall 10 of the separating element 7 delimits the second containing cavity 3 towards the inside of the container 1.

[0056] The first containing cavity 2 is delimited laterally by first external walls 11, shown in Figures 2 and 5, in addition to the first wall 9.

[0057] Likewise, the second containing cavity 3 is delimited laterally by second external walls 12, in addition to the second wall 10.

[0058] The separating element 7 is arranged inside the contour of the container 1, this contour being delimited by the perimeter zone 5.

[0059] Along the edge 8 of the separating element 7, a protruding element 13 is obtained, the protruding element 13 projecting from the edge 8 and facing the opposite end with respect to the support base 4. In other words, when the support base 4 of the container 1 is resting on the rest surface 6, the protruding element 13 projects upwards from the edge 8.

[0060] The protruding element 13 is suitable for being placed in contact with the closure film 20 that is arranged for closing the container 1, so as to keep the closure film 20 at a distance from the portions of the edge 8 that are adjacent to the protruding element 13, for reasons that will be clarified in detail herein below.

[0061] The protruding element 13 is delimited by an upper surface 14, which in the illustrated example, is curved and convex, with a convexity facing upwards. In this manner, the upper surface 14 is substantially free of sharp edges, which allows the closure film 20 to come into contact with the protruding element 13 without the risk of breakage.

[0062] As shown in Figure 2, the protruding element 13 can have a plan-view shape that is approximately oval or circular.

[0063] However, it is also possible to provide a protruding element 13 of shapes differing from those described above.

[0064] Whatever shape it may have, the protruding element 13 can reach at the point of its maximum height, the same level defined by the perimeter zone 5. In other words, as shown in Figure 3, the protruding element 13, at the point of its maximum height, can be tangent to a plane P defined by the perimeter zone 5.

[0065] However, it is also possible to provide a pro-

truding element 13 that protrudes upwards with respect to the plane P defined by the perimeter zone 5.

[0066] On the other hand, the protruding element 13 can be slightly lower than the plane P defined by the perimeter zone 5, provided that the protruding element 13 projects from the edge 8 in such a manner as to succeed in keeping the closure film 20 at a distance from the edge 8, at least during use.

[0067] On the sides of the protruding element 13, the edge 8 has two depressed portions 15, that is, two portions that are lower with respect to the perimeter zone 5. In other words, as shown in Figure 3, when the support base 4 is resting on the rest surface 6, the edge 8 of the separating element 7 is at least partly arranged at a lower height with respect to the height H of the perimeter zone 5.

[0068] In the illustrated example, the points of the depressed portions 15 arranged further below are at a height L, which, as shown in Figure 3, is lower than the height H of the perimeter zone 5.

[0069] The depressed portions 15 may be symmetric and have the same depth with respect to the plane defined by the perimeter zone 5, as shown in Figure 3. Alternatively, it is also possible to provide two depressed portions 15 that are asymmetric with respect to each other. In particular, one of the two depressed portions 15 could be deeper than the other.

[0070] In the illustrated example, the edge 8 is delimited by a curved profile. In particular, the edge 8 is delimited by a concave profile, with a concavity facing upwards. The protruding element 13 projects from a central zone of the edge 8 and defines the two depressed portions 15 on the edge 8.

[0071] However, it is also possible to adopt geometries of the edge 8 and/or of the protruding element 13 differing from those shown in the Figures.

[0072] Along the edge 8, there is provided a folding line 16, along which the container 1 can be folded so as to allow the first containing cavity 2 to be rotated relative to the second containing cavity 3. The folding line 16 thus acts as a hinge line.

[0073] In the illustrated example, the folding line 16 is interrupted by the protruding element 13. In other words, the folding line 16 is provided on the depressed portions 15, whereas the protruding element 13 has no folding lines.

[0074] The folding line 16 does not extend along the perimeter zone 5.

[0075] As shown in Figure 4, the folding line 16 can be obtained by deforming the material forming the container 1 along the edge 8 of the separating element 7, so as to obtain a groove or a crease along the free edge 1. This groove or crease defines the folding line 16.

[0076] In the illustrated example, the perimeter zone 5 has a substantially quadrangular plan-view shape, for example substantially square, possibly having rounded corners. The separating element 7 extends, in plan view, along a line substantially parallel to a diagonal of the contour defined by the perimeter zone 5.

[0077] In this case, the first containing cavity 2 has a substantially triangular plan-view shape, possibly with a rounded vertex. The second containing cavity 3 also has an approximately triangular plan-view shape. In particular, the second containing cavity 3 has a pair of end lobes 21 arranged near opposite ends of the separating element 7, as shown in Figure 2.

[0078] The perimeter zone 5 and/or the separating element 7 could, however, have shapes other than that described hereinabove.

[0079] During the packaging process, the first product 17, for example the sauce, is inserted into the first containing cavity 2. The second product 18, for example the precooked pasta, is instead inserted into the second containing cavity 3. The container 1 is then closed by joining the closure film 20 to the container 1 at the perimeter zone 5.

[0080] The package 100 is thus obtained, in which the closure film 20 is detached from the separating element 7 at least along a portion of the edge 8. Indeed, the closure film 20 is not welded to the container 1 at the separating element 7. The edge 8 of the separating element 7 can thus be defined as a free edge.

[0081] When it is desired to consume the products contained in the container 1, the first containing cavity 2 is rotated with respect to the second containing cavity 3 about the folding line 16, so that the first containing cavity 2 is at least partially higher than the second containing cavity 3. In this manner, the product contained in the first containing cavity 2 can pass in the second containing cavity 3.

[0082] To rotate the first containing cavity 2 about the folding line 16, the user can press down with his/her thumbs on the closure film 20 over the second containing cavity 3, as shown in Figure 6. In particular, the user's thumbs can be positioned on the closure film 20 over the end lobes 21 of the second containing cavity 3. By doing this, the closure film 20, over the second containing cavity 3, is pressed by the user's fingers and can penetrate towards the interior of the second containing cavity 3. The closure film 20 is pulled tight over the first containing cavity 2 as a result.

[0083] Now pulled tight by the pressure exerted by the user's fingers, the closure film 20 comes into contact with the protruding element 13. The latter acts in the same manner as the fulcrum of a lever, facilitating rotation of the first containing cavity 2 about the folding line 16 with respect to the second containing cavity 3, as shown by the arrow F.

[0084] It has been verified experimentally that the pressure exerted by the user's fingers on the closure film 20 is normally sufficient to rotate the first containing cavity 2 about the folding line 16. However, should the pressure exerted by the user's fingers prove to be insufficient, owing for example to excessive thickness of the container 1, it is possible to assist the rotation of the first containing cavity 2 by pushing on the walls delimiting the first containing cavity 2 with other fingers, particularly with the

index and/or middle finger.

[0085] Furthermore, as it comes into contact with the closure film 20 when the latter is tightened due to the pressure exerted by the user, the protruding element 13 prevents the closure film 20 from adhering to the edge 8 of the separating element 7. In particular, the protruding element 13 keeps the closure film 20 at a distance from the edge 8 along portions of the edge 8 that are adjacent to the protruding element 13.

[0086] Thus beneath the closure film 20 and on the sides of the protruding element 13, two passage zones are determined, through which the first product 17, that is, the sauce, can leave the first containing cavity 2 to enter the second containing cavity 3.

[0087] The dimensions of the passage zones are increased if, as in the example illustrated, near the protruding element 13, the edge 8 of the separating element 7 has at least one depressed portion 15. In this case, the height of the passage zones is increased with respect to what would be the case if the edge 8 were flat and arranged at the same level as the perimeter zone 5.

[0088] When rotating about the folding line 16, the first containing cavity 2 is brought up higher than the second containing cavity 3. The first product 17 thus passes, by virtue of the force of gravity, from the first containing cavity 2 towards the second containing cavity 3, through the passage zones. If necessary, the user can facilitate the passage of the first product 17 into the second containing cavity 3 by tilting the package 100 as needed.

[0089] Inside the second containing cavity 3, the first product 17 comes into contact with the second product 18. The user can shake the package 100 so as to enable the first product 17 to mix with the second product 18 as homogeneously as possible.

[0090] The user can then put the package 100 into an oven, particularly a microwave oven, so as to heat the second product 18 mixed together with the first product 17, that is, in the illustrated example, the precooked and sauced pasta. Given that the package 100 is still closed, that is, the closure film 20 is still fixed to the container 1 along the perimeter zone 5, the contents of the package 100 can be heated up in a hygienic manner, without being contaminated in the oven or without splattering that can dirty the oven.

[0091] As an alternative, it is also possible to heat up the package 1 before mixing the first product 17 with the second product 18 and, after heating it, have the first product 17 pass from the first containing cavity 2 to the second containing cavity 3. The first product 17 and the second product 18 are mixed together in any case shortly before being consumed, so that the organoleptic properties of the sauced pasta are retained in a good state.

[0092] After being heated up, the package 100 can be opened and the contents can be consumed hot.

[0093] It has been verified experimentally that for certain typologies of the first product 17, the protruding element 13 may not be necessary. In order to permit the first product 17 to pass into the second containing cavity

3, it may in fact be sufficient that the edge 8 be depressed with respect to the perimeter zone 5 at least along part of the length of the edge 8.

[0094] The above applies particularly when the first product 17 flows easily and is devoid of solid parts of relatively large sizes, in which case a passage zone of reduced dimensions is sufficient for the first product 17 to be able to flow from the first containing cavity 2 into the second containing cavity 3. In this case, it suffices to utilize a separating element 7 having at least one depressed portion 15, for example in one middle region thereof, without adopting the protruding element 13. The depressed portion 15 can be defined for example as a concavity made on the separating element 7.

[0095] It is also possible that the edge 8 of the separating element 7 be depressed along the entire length thereof, with respect to the perimeter zone 5. For example, the edge 8 could be substantially rectilinear and extend at a lower height than the perimeter zone 5, as measured with respect to the support base 4.

[0096] For particularly fluid products, both the protruding element 13 and the depressed portions 15 could be superfluous. In other words, in some cases, the first product 17 is able to pass into the second cavity 3 simply because the edge 8 of the separating element 7 is detached from the closure film 20, that is, it is not welded to the closure film 20. In this case, the edge 8 can be flat and extend at the same level as the perimeter zone 5.

[0097] If the first product 17 instead contains solid parts of relatively large sizes, as in the case of sauces containing peas or pieces of meat, it is advisable to adopt the protruding element 13 and/or depress the edge 8 at least along one part of the length thereof so as to ensure that the passage zones are of sufficient height.

Claims

1. A container comprising a first containing cavity (2) and a second containing cavity (3), a separating element (7) for separating the first containing cavity (2) from the second containing cavity (3), a perimeter zone (5) suitable for being joined to a closure film (20) in order to close the container (1), the separating element (7) being delimited by an edge (8) that is depressed relative to the perimeter zone (5) at least along a portion (15) of said edge (8), a hinge line defined by a folding line (16) being provided along at least one region of the edge (8) of the separating element (7) so as to allow the first containing cavity (2) to be rotated relative to the second containing cavity (3), **characterized in that** a protruding element (13) projects from the edge (8) of the separating element (7).
2. A container according to claim 1, wherein said portion (15) has at least one point arranged at a height (L) that is lower than the height (H) of the perimeter

zone (5), when a support base (4) of the container (1) is resting on a rest surface (6).

3. A container according to claim 1 or 2, wherein said portion (15) is delimited by a concave profile. 5
4. A container according to any preceding claim, wherein the folding line (16) has the form of a groove extending along said at least one region of the edge (8) of the separating element (7). 10
5. A container according to any preceding claim, wherein the folding line (16) is arranged along said portion (15) in which the edge (8) is depressed with respect to the perimeter zone (5). 15
6. A container according to any preceding claim, wherein the folding line (16) is interrupted at the protruding element (13). 20
7. A container according to any preceding claim, wherein the protruding element (13) is delimited by a convex upper surface (14).
8. A container according to any preceding claim, wherein the protruding element (13) is interposed between two portions (15) of the edge (8) in which the edge (8) is depressed with respect to the perimeter zone (5). 25
30
9. A container according to any preceding claim, wherein the protruding element (13) projects from a central zone of the edge (8) of the separating element (7). 35
10. A container according to any preceding claim, wherein the perimeter zone (5) defines a substantially square contour of the container, the separating element (7) extending, in plan view, substantially parallel to a diagonal of said substantially square contour. 40
11. A container according to any preceding claim, wherein the protruding element (13) has a plan-view shape that is oval or circular. 45
12. A container according to any preceding claim, and made of a polymeric material, preferably selected from a group comprising: polystyrene, polyethylene, polypropylene and polyethylene terephthalate. 50
13. A package comprising a container (1) according to any preceding claim and a closure film (20) joined to the container (1) along the perimeter zone (5). 55

Fig. 1

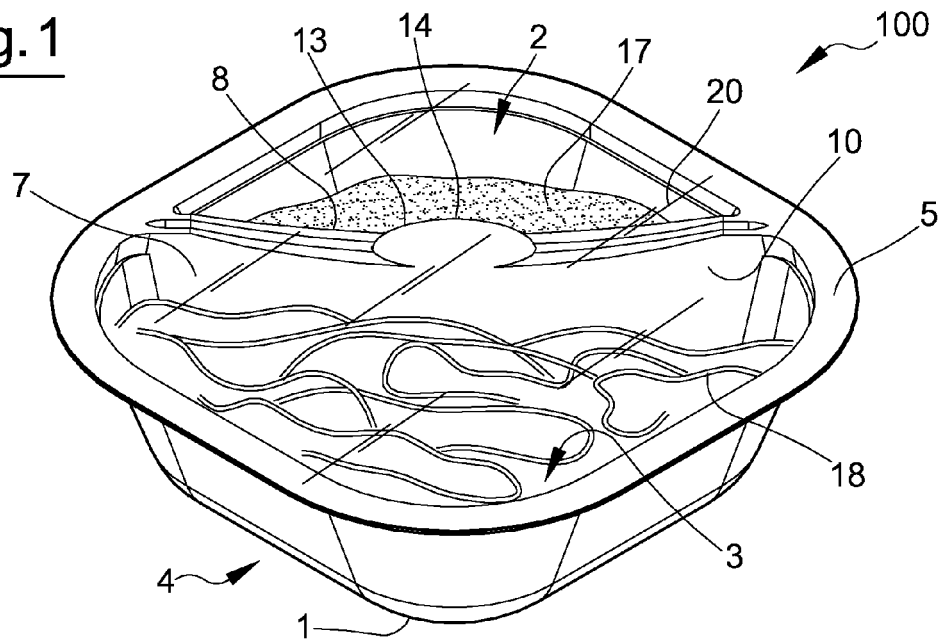


Fig. 2

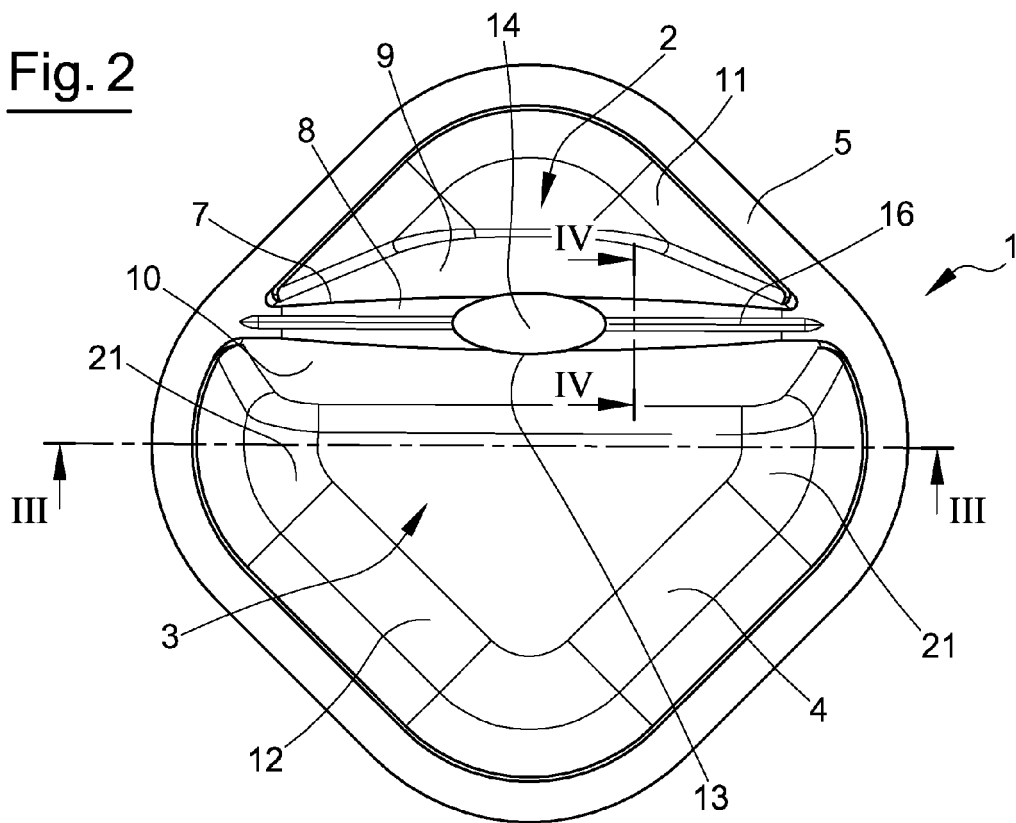


Fig. 3

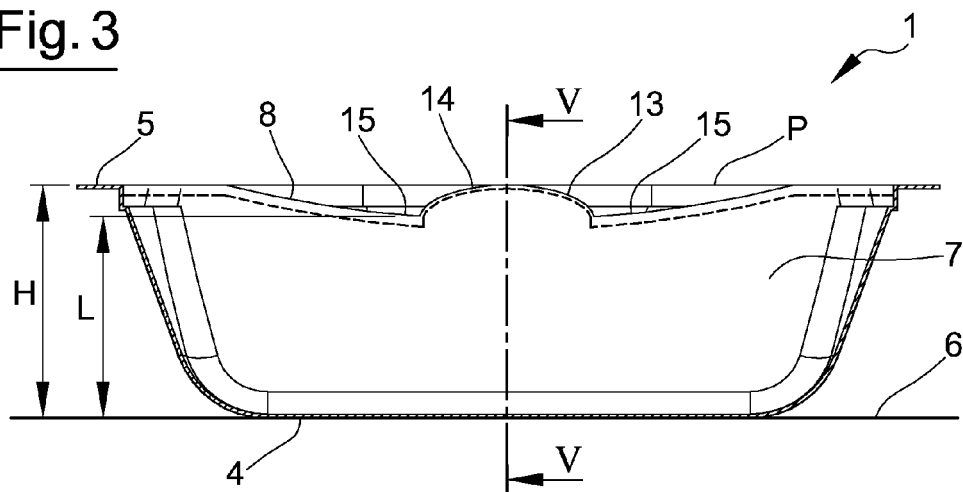


Fig. 4

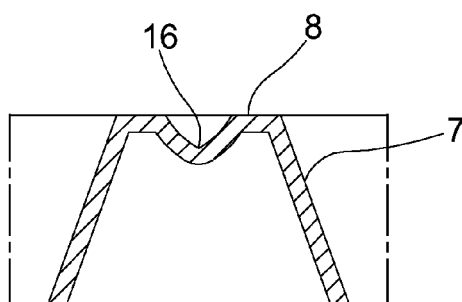


Fig. 5

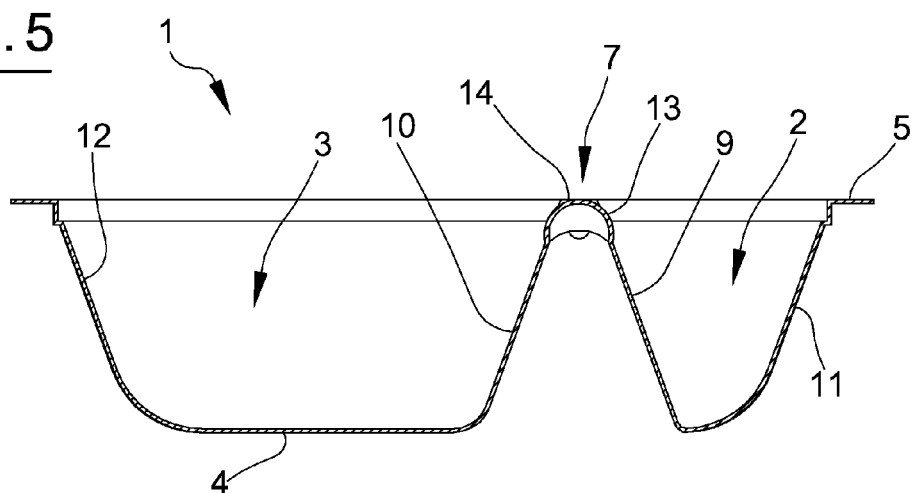
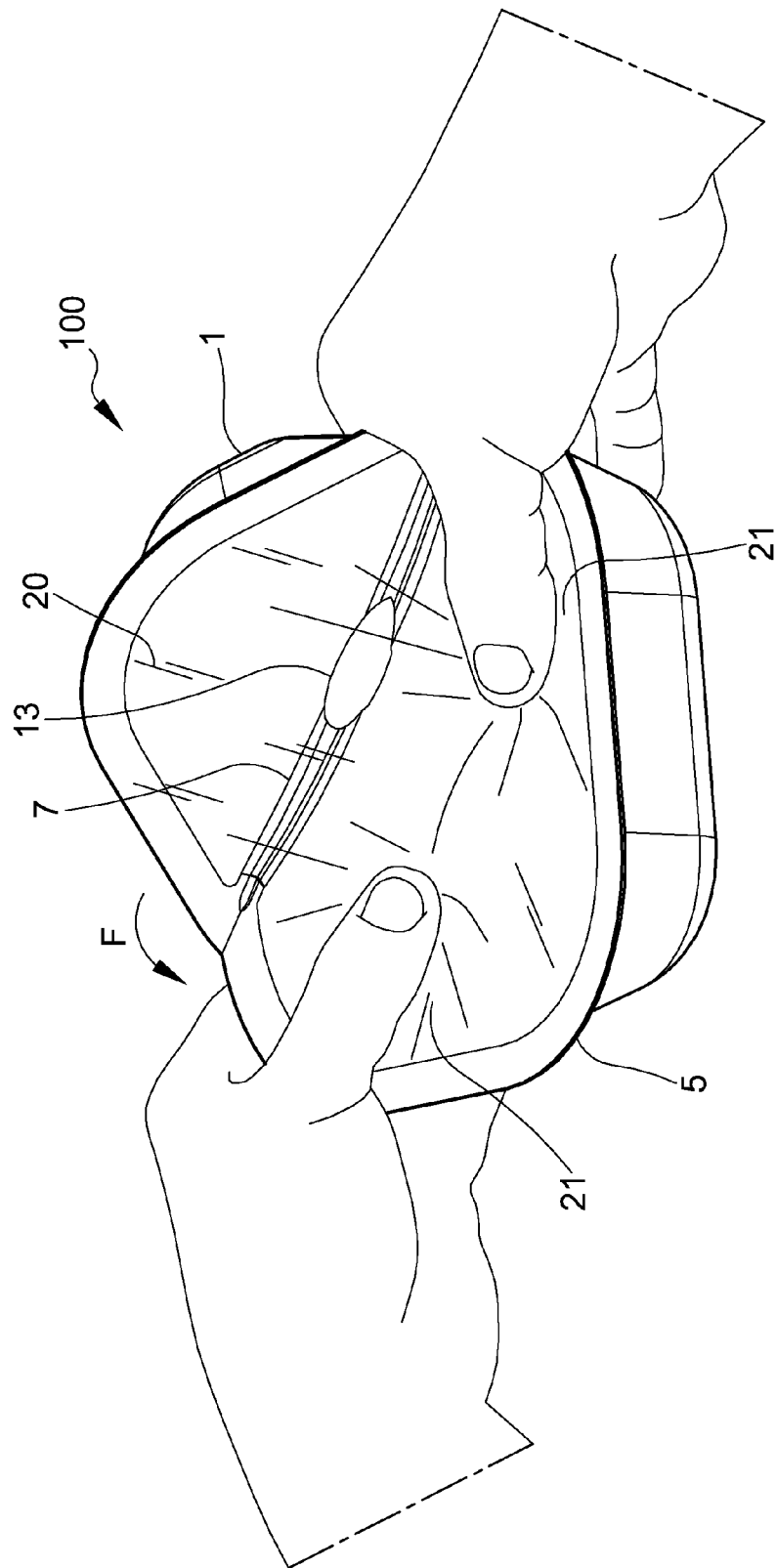


Fig. 6





EUROPEAN SEARCH REPORT

Application Number
EP 12 17 4771

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	DE 20 2008 008636 U1 (FROSTA AG [DE]) 28 August 2008 (2008-08-28)	1-5,7, 12,13	INV. B65D1/36
Y	* paragraph [0001] - paragraph [0016] *	10,11	B65D77/20
A	* paragraph [0026] - paragraph [0027]; figures 1-2 *	6,8,9	B65D81/32
X,D	FR 2 763 572 A1 (AUTOMATISME ASSISTANCE [FR]) 27 November 1998 (1998-11-27) * the whole document *	1,2,8,9, 12,13	
Y,D	WO 2008/053927 A1 (TACHIBANA PACKAGING CO LTD [JP]; SAITO MASAO [JP]) 8 May 2008 (2008-05-08)	10	
A	* the whole document *	1	
Y,D	US 2009/014348 A1 (STRANGE RANDALL GLENN [US] ET AL) 15 January 2009 (2009-01-15) * the whole document *	11	
A	US 2006/180483 A1 (SEKENDUR CARI L [US]) 17 August 2006 (2006-08-17) * paragraph [0049] - paragraph [0052]; figures 3, 4 *	1	TECHNICAL FIELDS SEARCHED (IPC)
A	EP 0 359 847 A1 (SUMITOMO BAKELITE CO [JP]) 28 March 1990 (1990-03-28) * the whole document *	1	B65D
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 27 September 2012	Examiner Mans-Kamerbeek, M
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			

 2
EPO FORM 1503 03.82 (P04C01)

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

EP 12 17 4771

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.

27-09-2012

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 202008008636 U1	28-08-2008	NONE	
FR 2763572 A1	27-11-1998	NONE	
WO 2008053927 A1	08-05-2008	CN 101583546 A	18-11-2009
		HK 1137715 A1	23-09-2011
		JP 4347407 B2	21-10-2009
		KR 20090081378 A	28-07-2009
		WO 2008053927 A1	08-05-2008
US 2009014348 A1	15-01-2009	NONE	
US 2006180483 A1	17-08-2006	NONE	
EP 0359847 A1	28-03-1990	EP 0359847 A1	28-03-1990
		US 4903842 A	27-02-1990

EPO FORM P0459

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

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

- FR 2763572 [0008] [0009]
- DE 202008008636 U [0010] [0011] [0013]
- WO 2008053927 A [0012] [0013]
- US 20090014348 A [0014] [0015]