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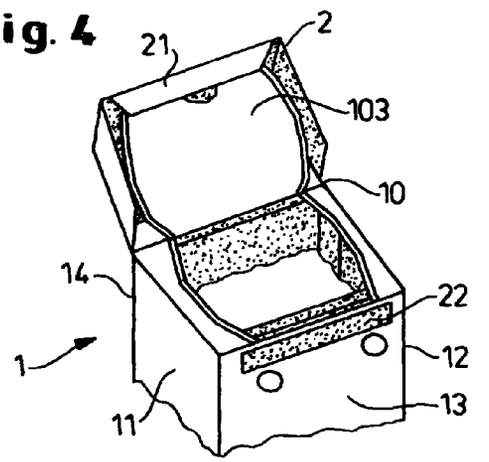
(54) Top fill carton with freshness seal and improved opening and re-closing features

(57) The invention relates to a carton (1) comprising top (10), bottom, left (11), right (12), front (13) and back (14) sides. Each of the left (11), right (12), front (13) and back (14) sides comprises a panel, whereby either of the left (110) or right (120) panels is associated along folding lines to both the back (140) and the front (130) panels.

The top side (10) comprises an inner (100) and an outer (101) top panel, the inner top panel (100) being associated along folding lines to the front panel (130) and to a top flap (102), the folding line between the top flap (102) and the inner top panel (100) corresponding to the edge between top (10) and the back (14) sides, the outer top panel (101) being associated along a folding line to the back panel (140) and being comprised in a lid (2) having re-closing means (21, 22).

The inner top panel (100) has opening means (3) in the region of the edge between the top (10) and the front (13) sides.

Fig. 4



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Description

Technical field

[0001] The invention relates to carton board containers for granular materials and more particularly to such cartons which are top-fill cartons.

Background of the invention

[0002] Various types of containers are formed from carton board. Typical containers made from carton board, also simply called cartons, have a substantially parallelepipedal shape with six sides and twelve edges, namely the top, bottom, back, front, left and right sides, the edges being defined by the two sides of which they are the intersection, for example the edge between the top and the back sides. For definition purposes, it will be considered in the following that when the carton is upright the top and bottom sides are in the horizontal plane, the four other sides being vertical. We will consider that if the front side of the upright carton is facing an observer, the left side is on to the left of the observer and the right side on to the right of the observer, the back side being invisible for the observer.

[0003] Cartons are usually folded and glued from a die cut. A die cut, or blank, is a flat structure which has not been folded or glued. At least three main steps appear in the folding-gluing-filling process. In a first main step, the die cut is folded and glued to form a sleeve. A sleeve is substantially a four sided structure structured like a six sided carton of which two opposite sides are not folded or glued. In the sleeve structure, four of the twelve edges of the carton have been folded, these four edges being in a parallel direction to each other. It should be noted that usually the remaining eight edges all have their direction in a plane perpendicular to the direction of the four folded ones. The sleeve structure has the advantage that it can be flattened. As a consequence, sleeves can be stored or shipped easily. In a second main step, the carton is erected from the sleeve, which means that one of the two opposite sides which were not folded and glued during the sleeve step is now folded, four more edges being consequently formed. At this stage, the carton cannot be flattened anymore. However, it can be filled through the last non folded side. In the last step, the last non folded side is folded and glued, so forming the four last edges. In summary, when preparing a carton, the structure goes through successive stages, namely the die cut, followed by the sleeve, which subsequently is formed into an erected carton, before the closed carton stage. Each of these stages is separated by one main folding-gluing step.

[0004] There are two alternative ways of forming the sleeve from the die cut, because a choice can be made of the two opposite sides which will be left unfolded and unglued. In a first way, these two side may be the top and bottom sides. In a second way the right and left sides or the back and front sides will be left open. In theory, it is considered equivalent to choose back/front or left/right because these sides are differentiated only as a convention. However, the top/bottom sides are normally perpendicular to gravity when the carton is in its upright position.

[0005] In the first way of forming the sleeve, the sleeve will be formed of the front, left, back and right sides, or of any circular permutation of these, while the top and bottom sides will be left opened. In this case, the carton is usually erected by folding the bottom, and then by folding the top after filling. This way avoids having to turn the carton around after the filling process when the filling is made by means of gravity, because the carton is already upright when filled.

[0006] In the second way of forming the sleeve, the sleeve will be formed, for example, of the front, top, back and bottom sides, or of any circular permutation of these, while the left and right sides will be left opened. In this case, the carton is erected by folding indifferently the left or the right side, the left for example, the erected carton being filled through the right side, which should consequently be at the top of the carton during filling. Finally, the carton will be closed. After closing, the carton may have to be turned around in upright position, with the top side on the top.

[0007] As explained above, the eight edges which are not being folded to form the sleeve have their direction in a plane perpendicular to the direction of the four edges folded to form the sleeve. This means that in the die cut form, the four sleeve folded edges are in one direction and the eight others in the substantially perpendicular direction. By definition, the direction of the eight edges is called the main folding direction or axial direction because most of the folding is made along this direction. The other direction is the transverse directian. Normally, the four edges of the transverse direction should be the sleeve forming edges. As an example, in the first way for folding a sleeve, the front/left, left/back, back/right and right/front edges would be along the transverse direction, while in the second way of folding a sleeve, the front/fop, top/back, back/bottom and bottom/front edges would be along the transverse direction.

[0008] The first way of forming the sleeve is most commonly used, particularly because it allows use of bigger sizes cartons on standard lines. Indeed, standard lines of production for cartons allow passage of carton having a limited size in the direction perpendicular to the displacement direction and comprised in the horizontal plane, while the dimension of the carton along the direction of displacement is limited by the number of cartons which have to be produced per unit of time at a given speed of the line. Therefore, the direction along which the carton can be most easily made larger is preferably the direction of gravity when the carton is on the filling line. This direction correspond to a side for a side-fill carton, and to the height for a top fill carton. When it is

preferred to have higher cartons rather than small cartons with a bigger side, use of the top-fill carton is preferred when using cartons containing a larger volume. The top-fill carton corresponds to the first way of forming the sleeve.

[0009] As in the first way for folding a sleeve, the front/left, left/back, back/right and right/front edges would be along the transverse direction, the corresponding edges will correspond to folding lines, apart from the edge which is formed for forming the sleeve. This means that for top fill cartons, either of the left or right panels is associated with an edge along folding lines to both the back and front panels. This is not the case for a side fill carton as the left and right sides are made of flaps which are normally linked to one panel only.

[0010] In order to render a carton sift proof and robust, a carton can include an inner top panel as well as an outer top panel. Such a structure with an inner and an outer panel allows to form a lid with the outer top panel, which can be reclosed, while having a robust top side with a double panel and improving sift proofness, for example for granular materials. Such a carton is disclosed in EP-A-0 433 738 filed by Unilever on the 1st of december 1990, whereby the inner top panel is associated with an edge along a folding line to the front panel and also associated with an edge along a folding line to a top flap, whereby the folding line between the top flap and the inner top panel corresponds to the top/back edge of the carton.

[0011] The present invention concerns a carton, the carton comprising top and bottom sides opposing each other, left and right sides opposing each other, and front and back sides opposing each other, whereby:

a) the left side comprises a left panel and the right side comprises a right panel and
b) the front side comprises a front panel and the back side comprises a back panel and
c) either of the left or right panels is associated with an edge along folding lines to both the back and the front panels and
d) the top side comprises an inner and an outer top panel and
e) the inner top panel is associated with an edge along a folding line to the front panel and
f) the inner top panel is associated with an edge along a folding line to a top flap comprised in the top side, the folding line between the top flap and the inner top panel corresponding to the edge between the top and the back sides and
g) the outer top panel is associated with an edge along a folding line to the back panel and
h) the carton comprises a lid, the lid comprising the outer top panel and
i) the lid comprises re-closing means.

[0012] Among the advantages of top fill cartons with an inner top panel is that their height can be set freely without incurring fundamental modifications of a standard folding line, while being robust and sift proof.

[0013] While having these and other advantages, existing top fill cartons with an inner top panel have disadvantages. For example, wide access to the inside of the carton is hindered by the fact that the inner top panel is in the way on the side opposite to the lid when the carton is opened. In addition, re-closure of the carton requires several operations rendering it quite complex. Indeed, the inner top panel should firstly be put back in place, before lowering the lid, and thirdly engaging part of the lid in an opening allowing to hold the lid in place.

[0014] The invention seeks to provide a top fill carton of the above mentioned kind which can be easily opened and re-closed, and which allows the user to have good access to the inside of the carton.

Summary of the invention

[0015] In accordance with the invention, this object is accomplished in a carton of the above kind characterised in that

j) the inner top panel comprises opening means in the region of the edge between the top and the front sides.

[0016] A carton formed in accordance with the invention has a number of advantages. Since the inner top panel comprises opening means in the region of the edge between the top and the front side, the opening will be rendered easier and more practical, as the user does not need to catch a tongue in the corner between the lid and the inner top panel, but can open the carton in the region of the edge between the inner top panel and the front panel. As a result, the inner top panel will open towards the same side as the lid, thus providing an improved access to the content of the carton as the inner top panel will not be in the way of the user. Additionally, re-closure is facilitated as the user simply needs to re-close the lid, the lid pushing back the inner top panel in the closed position without requiring a direct action of the user for this purpose.

Brief description of the drawings

[0017] The invention will now be described by way of example and with reference to the accompanying drawings in which:

Figure 1 is a plan view of a die cut for making a carton according to the invention.

Figure 2 is a plan view of a liner which, in combination with the die cut of Figure 1, may be used to reinforce a carton according to the invention.

Figure 3 is a partial perspective view illustrating the upper part of a carton according to the invention made from the die cut of Figure 1, the carton having an opened lid and a closed inner top panel.

Figure 4 is a partial perspective view illustrating the upper part of the carton of Figure 3, the carton having an opened lid and a opened inner top panel.

Figure 5 is a plan view of another die cut for making a carton according to the invention.

Figure 6 is a partial perspective view illustrating the upper part of a carton according to the invention made from the die cut of Figure 5, the carton having an opened lid and a closed inner top panel.

Figure 7 is a plan view of yet another die cut for making a carton according to the invention.

Figure 8 is a partial perspective view illustrating the upper part of a carton according to the invention made from the die cut of Figure 7, the carton having an opened lid and a closed inner top panel.

Figure 9 is a plan view of a further die cut for making a carton according to the invention.

Figure 10 is a partial perspective view illustrating the upper part of a carton according to the invention made from the die cut of Figure 9, the carton having an opened lid and a closed inner top panel.

Figure 11 is a plan view of an additional die cut for making a carton according to the invention.

Figure 12 is a partial perspective view illustrating the upper part of a carton according to the invention made from the die cut of Figure 11, the carton having an opened lid and a closed inner top panel.

Description of the preferred embodiments

[0018] The carton of the present invention is preferably made of cardboard or corrugated board, but other materials could also be used. Such cartons are usually used for housing granular materials, but other materials such as tablets or wipes could also be contained in such cartons. The cartons normally have a parallelepipedal shape with six sides. The sides can be defined as a top, bottom, left, right, back and front sides. The top side is on the top of the carton when the carton is in its upright position, the bottom side being opposite to the top side. For the purpose of the description, the front and back sides are opposing sides and the left and right side are opposite sides as well. Each of these sides can be made of several layers of material. Each of the sides is usually of a substantially rectangular shape, each side being limited at its borders by four edges. The structure of the carton is due to links which can exist between different layers of different sides through the edges. For example, if the front side is made of a single layer, this layer may be linked to the left side through the edge between the two sides, the link and the edge being provided by a folded line or/and by glue. The layers which compose the sides of the carton may be of different sorts. If such a layer is covering a complete side, it is called a panel, and is said as corresponding to the side it covers. When a layer covers a side only partially, it is called a flap, and it is said that it corresponds to the side it covers. However, a flap may be extended up to the panel size, in which case it is a long flap. Long flaps are particularly used for contributing to the rigidity of the structure. Flaps and panels can also comprise cut outs allowing use of a minimum amount of materials. Panels or flaps can be said as associated to another layer, which means that they have a side in common with this layer through a folded line or score line, in doing so describing an edge of the carton. Each side may comprise one or more panels, one or more flaps, or a combination of these. In the present application, the panels may have in their denomination the name of the side of which they cover the surface, for example the right panel corresponds to the right side, their position being given in their denomination if several panels are corresponding to one side, such as the outer top panel and the inner top panel in case of the top side, the inner panel being closer to the inside of the carton. In the present application the flaps may have in their denomination the name of the side with which they correspond once the carton is folded, followed of the name of the flap or panel with which they are associated. For example, the top flap associated with an edge along a folding line to the inner top panel is forming part of the top side in the folded carton and is physically attached the inner top panel with a folding line. It should be noted that the side denomination, namely left, right, top, bottom, back and front, are conventional denominations which are introduced for ease of explanation, and should not be limiting. In order to complete the structure, some flaps and panels may be linked to each other not by folding lines but an adhesive. The adhesive can be applied in different ways. For example, cold ,water or solvent based glue can be used, applied with rollers or glue guns, but also hot melt glue, whether applied with glue guns or other glue applicators.

[0019] The carton according to the invention comprises a left side, a right side, a front side and a back side, each of which comprising a panel. Indeed, these sides are not made of flaps only because the carton is a top fill carton, so that the sleeve is formed from these four sides, the top and/or bottom being left opened. In order to form the sleeve, the die cut is folded, so that the left panel is linked to the back panel, the back panel to the right panel, the right panel to the front panel and the front panel to the left panel. Therefore, four edges are

formed, three of these with a folding line, the last one being normally made by gluing a glue flap to close the sleeve. As three of these edges are formed from folding lines, either of the left or right panels is associated with an edge along folding lines to both the back and the front panels. According to the invention, this defines a top fill carton structure.

[0020] The carton according to the invention further comprises a top side comprising an inner and an outer panel. This allows to reinforce the structure of the carton and to allow making a sift proof carton while having a lid which remains easy to open. Reinforcement of the top side of the carton with an inner panel also allows reduce the amount of packaging materials released in the environment. Indeed, as the carton is reinforced on the top side, the other sides can be made of a thinner material without negative consequences on the solidity of the top side, which is particularly exposed to potential damages which may be caused for example by handling of the carton. The inner panel is linked to the front panel with an edge along a folding line and with another edge along another folding line to a top flap comprised in the top side, the folding line between the top flap and the inner top panel corresponding to the edge between the top and the back sides. In this manner, the carton is made sift proof at least along the top/ back and top/ front edges. Typically, the top flap is glued to the outer top panel to form part of the top side. The outer top panel is itself linked to the back panel with an edge along a folding line. Furthermore, the carton comprises a lid, the lid comprising the outer top panel as well as re-closing means. Typically, the lid is hinged along the folding line between the outer top panel and the back panel. According to the invention, the carton further comprises opening means in the region of the edge between the top and the front sides. As the opening means are located on the top side on the edge opposite to the back/ top edge which usually serves as a hinge for the lid, opening of the inner top panel of the carton is facilitated because of an easier access.

[0021] In a preferred embodiment according to the invention, the carton further comprises a left and a right top shoulder having a supporting surface, the inner top panel being supported by the shoulders, the supporting surfaces being enlarged towards the corners of the inner top panel, to provide efficient support while allowing easy access. Indeed, the addition of such shoulders which can be glued to the inner top panel allows to further link the inner top panel to the rest of the structure, thus providing improved solidity as well as sift-proofness if desired. Such shoulders should be enlarged towards the corners because the corners will advantageously be reinforced by these shoulders, as the corners are usually weak points of the structure, while the shoulders are preferably narrower in the middle region of the left/top and right/top edges, so as not to hinder access to the inside of the carton by the user.

[0022] In another preferred embodiment according to the invention, the carton is such that the opening means is a line of weakness provided on the inner top panel and intersecting the edge between the top and the front sides. Such a line of weakness may be obtained by perforation or semi-perforations, reversed or not, for example. Typically, the line of weakness will take the form of an indentation such as a semi-circle for example, the diameter of which is positioned on the top/front edge, pressure exerted onto the semi-circle allowing introduction of a finger, for example, so that the inner panel is lifted, all or in part. Other contours are convenient for the line of weakness.

[0023] The important factor according to the invention is that the opening means is away from the back/top edge which preferably serves as a hinge for the lid. It should be noted that it is further preferred that the line following the top/front edge between the inner top panel and the front panel is a line of weakness between the left/top/front and right/top/front corners. This line may advantageously be interrupted by the indentation, so that the inner top panel can be maintained re-closed, when the line of weakness has been torn off, by means of the friction between the part of the carton on one side of the line of weakness which is linked to the lifted part and the other part of the carton on the other side of the line of weakness.

[0024] If the carton according to the invention has supporting shoulders and a line of weakness as described above, it is further preferred that the carton has left and right lines of weakness provided on the inner top panel, respectively following the contour of the left and right top supporting shoulders, defining a hinged part for the inner top panel. In this manner, the left line of weakness follows the contour of the left shoulder and the right line of weakness follows the contour of the right shoulder so that when the inner top panel is lifted opened, a maximised access to the inside of the carton is provided. In a more general manner, it is preferred that part of the inner top panel may be partially detached, the partially detached part being hinged, the hinge corresponding to the edge between the top and the back sides of the carton.

[0025] In a further preferred embodiment according to the invention, the re-closing means of the carton is a snap lock mechanism. Such a mechanism is already known in the art. Typically, the snap lock is made of a snap flap and of a snap tab, the snap flap being associated with an edge along a folding line to the outer top panel. In this manner, according to a preferred aspect of the invention, the hinged part of the inner top panel clicks behind the flap once opened. Indeed, if the inner top panel is opened by lifting a hinged part of the same inner top panel, the hinge corresponding to the back/top edge, the part can interlock with the snap flap when hinged if it has a length between the back/top and front/top edges which is at least equal to the difference between the length of the outer top panel between the back/top and front/top edges and the width of the snap

flap along this same direction perpendicular to the back/top and front/top edges. Other types of snap lock systems can be used in replacement, in combination or in addition to this type, whereby the snap lock mechanism is for example provided on the left/top and/or right/top edges. Yet another type of snap lock would be composed of a snap flap integrated in the inner top panel, the snap tab being for example in two parts, typically part of the lid and situated on the front side on the carton, interlocking with the snap flap when the lid is closed. In such a case, the snap flap would need to be folded back at first opening of the carton to thereafter interlock with the snap tab at re-closure. In a further embodiment, the snap lock is composed of a single non folded flap linked to the lid and which is cut out at the opening of the carton in a tab and in a flap part, the tab part remaining glued to the front side while the snap flap part remains linked to the lid, and whereby the tab and the snap flap interlock at re-closure of the carton.

[0026] In a most preferred embodiment of the carton according to the invention, the top flap is permanently fixed to the top side. This is a most preferred embodiment because it allows to obtain a maximised spring effect at opening of the carton. Indeed, the top flap is linked to the inner top panel with a folding line, so that it has a natural position which is in the plane of the inner top panel. In this case, because it is folded back to be glued on the top side, it will have a tendency to push the lid open when the re-closing means of the lid are release. Indeed, it will tend to go into its natural position. Furthermore, this tendency to open the lid will allow better locking of a snap lock when the carton is closed and the snap lock engaged. Indeed, it is an advantage of the carton according to the invention to allow easy opening as well as reliable re-closure of the carton. If the top flap is partly or completely removed, the spring effect will not be maximised.

[0027] It should be noted that the carton according to the invention may be a top fill carton comprising a liner, the liner covering the front, left, back and right sides of the carton. Such a liner may be used to reinforce the structure if required. The liner could also cover three of these sides only.

[0028] In another preferred embodiment of a carton according to the invention, the lid comprises a lid left flap on the left side, a lid front flap on the front side, a lid right flap on the right side, a first linking flap for linking the lid left and lid front flaps and a second linking flap for linking the lid right and lid front flaps. The linking flaps can advantageously be used as snap tabs if linked with a folding line to the lid left and lid right flaps. In a general manner, the linking flaps may be linked by a folding line to either of the lid front, lid left or lid right flaps, as long as the lid structure is maintained. Such a lid is preferred because it covers at least part of the front, left and right sides, so that it is better maintained in closed position and more readily protects the content of the carton.

[0029] Figure 1 illustrates a die cut for a carton 1 according to the invention, whereby the die cut is a one piece die cut, comprising lid left 201, lid right 202, lid front 203 and linking flaps 23, 24 as well as a snap tab 22 and a snap flap 21. The die cut also comprises supporting shoulders 111, 121, being enlarged towards the corners, together with an inner top panel 100 having a part 103 defined by left 31 and right 32 lines of weakness which are following the contour of the shoulders 111, 121 and which are made of a partial and of a reversed cut, together with an indentation 3 in the region of the front/top edge, the indentation 3 being delimited by a line of weakness intersecting the front/top edge, the left 31 and right 32 lines of weakness joining the indentation 3 by being continued along the front/top edge. It should also be noted that the carton 1 has a top flap 102 and a glue flap 5 for forming the sleeve, the glue flap 5 being linked to the back panel 140 and being for gluing to the right panel 120. The bottom side (not shown) can be formed from 4 flaps 151, 152, 153, 154, each linked to one of the left 110, right 120, back 140 and front 130 panels with a folding line. The die cut of Figure 1 may be combined with the liner 4 of Figure 2 for reinforcing the left 11, right 12, front 13 and back 14 sides. The die cut of Figure 1, together or not with the liner 4 of Figure 2, can be used to form a carton 1 according to the carton 1. illustrated in Figure 3 with an opened lid 2. The carton of Figure 3 can then be opened by pulling the hinged part 103 of the inner top panel 100, so that the hinged part 103 can click behind the snap flap 21 as illustrated in Figure 4.

[0030] Another preferred embodiment of a die cut for a carton 1 according to the invention is illustrated in figure 5, whereby the carton 1 does not have supporting shoulders, but has left and right ears 61, 62, the left ear 61 being associated to the inner top panel 100 through a folding line and being glued on the left side 11 of the carton 1, the right ear 62 being associated to the inner top panel 100 through a folding line and being glued on the right side 12 of the carton 1. Such ears 61, 62 ensure that the carton 1 is sift proof on the left/top and right/top edges.

[0031] A further embodiment of a die cut for making a carton 1 according to the invention is presented in Figure 7, the carton 1 obtained being illustrated in Figure 8. In this embodiment, the re-closing means 3 is a snap lock mechanism having two parts, a left and a right part, each part being formed from a cut out 25 in the lid 2 which can interlock with a extended tongue 26 which is part of the inner top panel 100. Sift proof-ness of the carton 1 along the left/top and right/top edges is provided by the link between supporting shoulders 111, 121 and the inner top panel 100.

[0032] An additional embodiment of a die cut is illustrated in Figure 9, for making a carton 1 according to the invention as illustrated in Figure 10. In this particular embodiment, the re-closing means is a snap lock mechanism, whereby a flap (27, 28) is linked to the lid front panel 203 via a folding line and partially glued onto the

front panel 130 when forming the carton 1, in such a manner that at opening, the glued part 27 of the flap remains glued on the front panel 130 to form a snap tab 27, while the non glued part 28 forms a snap flap 28 linked to the lid 2. Rupture between the snap flap 28 and the snap tab 27 is typically facilitated by lines of weakness. At re-closure, the snap flap 28 engages in the snap tab 27 to hold the lid 2 down.

[0033] In Figure 11, yet another embodiment of a die cut for forming a carton 1 according to the invention as illustrated in Figure 12 is presented. In this embodiment the means for re-closing the carton 1 is again a snap lock, whereby the snap flap 29 is originally part of the inner top panel 100, and whereby folding of this flap 29 allows locking with the linking flaps 23, 24 of the lid 2 when the lid 2 is re-closed.

Claims

1. A carton (1), the carton (1) comprising top (10) and bottom sides opposing each other, left (11) and right (12) sides opposing each other, and front (13) and back (14) sides opposing each other, whereby:

   a) the left side (11) comprises a left panel (110) and the right side (12) comprises a right panel (120) and
   b) the front side (13) comprises a front panel (130) and the back side (14) comprises a back panel (140) and
   c) either of the left (110) or right (120) panels is associated with an edge along folding lines to both the back (140) and the front (130) panels and
   d) the top side (10) comprises an inner (100) and an outer (101) top panel and
   e) the inner top panel (100) is associated with an edge along a folding line to the front panel (130) and
   f) the inner top panel (100) is associated with an edge along a folding line to a top flap (102) comprised in the top side (10), the folding line between the top flap (102) and the inner top panel (100) corresponding to the edge between the top (10) and the back (14) sides and
   g) the outer top panel (101) is associated with an edge along a folding line to the back panel (140) and
   h) the carton (1) comprises a lid (2), the lid (2) comprising the outer top panel (101) and
   i) the lid (2) comprises re-closing means (21, 22) and
   characterised in that:
   j) the inner top panel (100) comprises opening means (3) in the region of the edge between the top (10) and the front (13) sides.

2. The carton (1) according to claim 1, whereby the carton (1) comprises a left (121) and a right (122) top shoulder having a supporting surface, the inner top panel (100) being supported by the shoulders (121, 122), the supporting surface being enlarged towards the corners of the inner top panel (100), to provide efficient support while allowing easy access.

3. The carton (1) according to claim 1, whereby the opening means (3) is a line of weakness provided on the inner top panel (100) and intersecting the edge between the top (10) and the front (13) sides.

4. The carton (1) according to claims 2 and 3, whereby left (31) and right (32) lines of weakness are provided on the inner top panel (100), respectively following the contour of the left (111) and right (121) top supporting shoulders, defining a hinged part (103) for the inner top panel (100).

5. The carton (1) according to claim 1, whereby the re-closing means (21, 22) is a snap lock mechanism.

6. The carton (1) according to claim 1, whereby the lid (2) comprises a lid left flap (201) on the left side (11), a lid front flap (203) on the front side (13), a lid right flap (202) on the right side (12), a first linking flap (23) for linking the lid left (201) and lid front (203) flaps and a second linking flap (24) for linking the lid right (202) and lid front (203) flaps.

7. The carton (1) according to claims 4, 5 and 6, whereby the snap lock is made of a snap flap (21) and of a snap tab (22), the snap flap (21) being associated with an edge along a folding line to the lid front flap (203), whereby the hinged part (103) of the inner top panel (100) clicks behind the snap flap (21) once opened.

8. The carton (1) according to claim 1, whereby the top flap (102) is permanently fixed to the top side (10).

9. The carton (1) according to claim 1, whereby part (103) of the inner top panel (100) may be partially detached, the partially detached part (103) being hinged, the hinge corresponding to the edge between the top (10) and the back (14) sides of the carton (1).

10. The carton (1) according to claim 1, whereby the carton (1) is a top fill carton comprising a liner (4), the liner (4) covering at least three of the front (13), left (11), back (14) and right (12) sides.

Fig.1

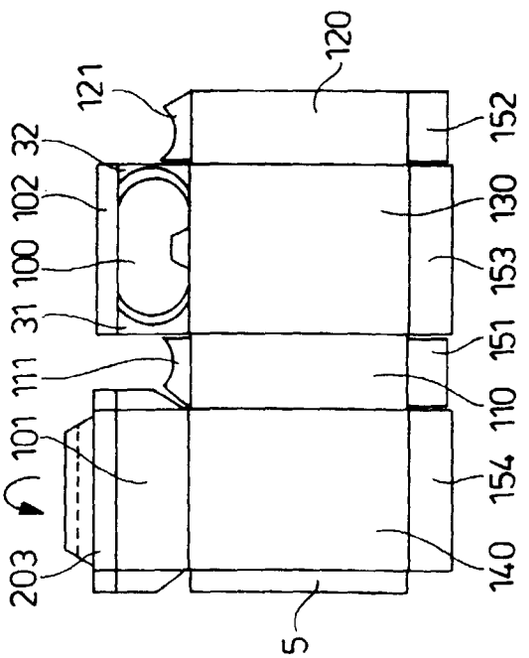


Fig.2

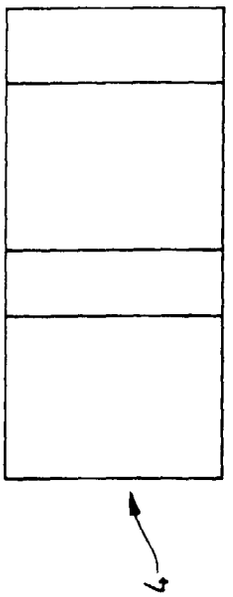


Fig.3

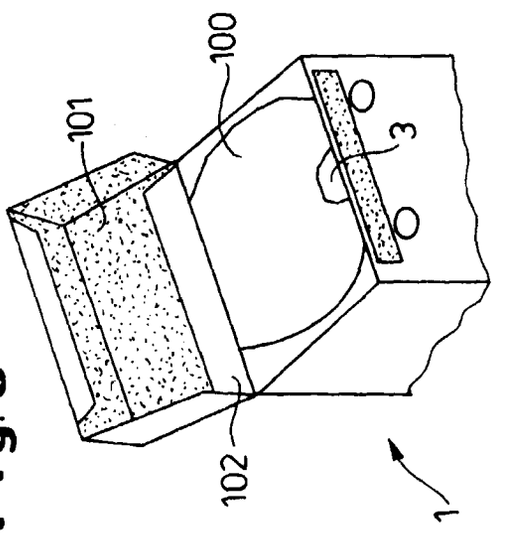


Fig.4

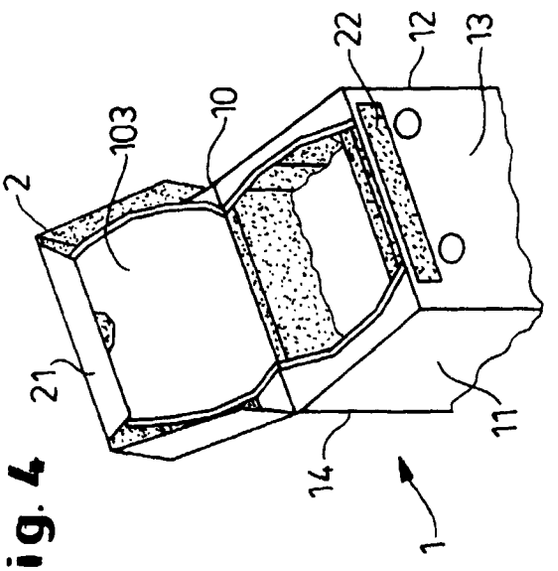


Fig.7

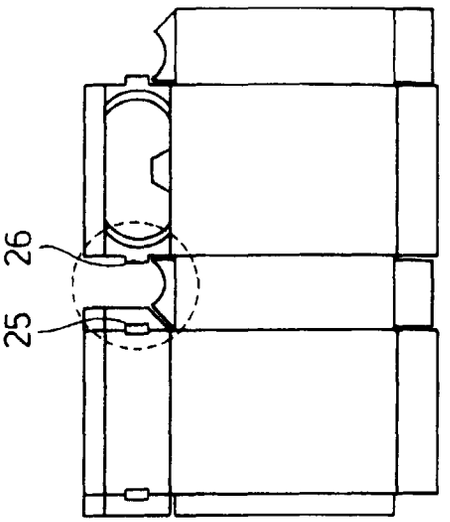


Fig.8

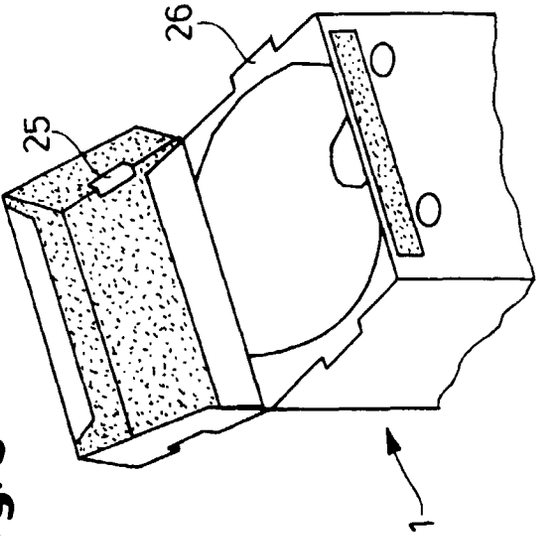


Fig.5

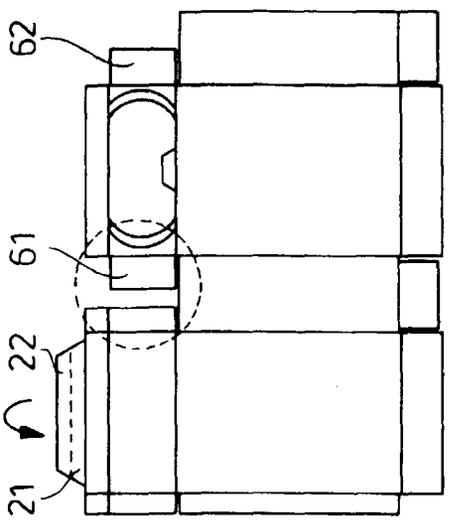


Fig.6

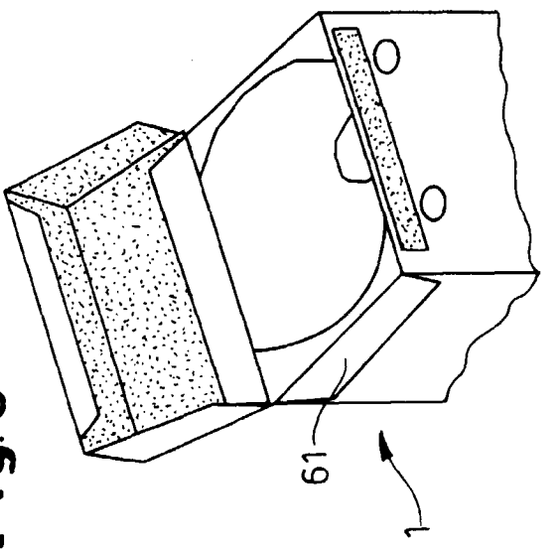


Fig.11

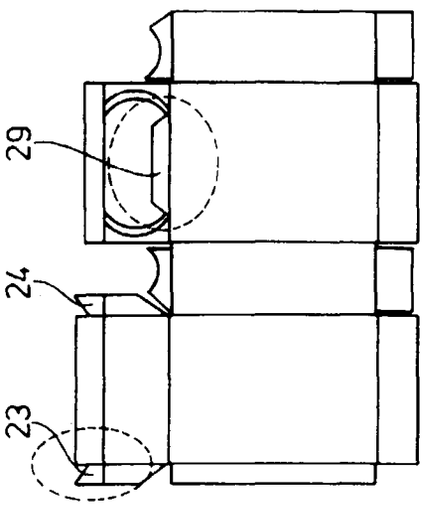


Fig.12

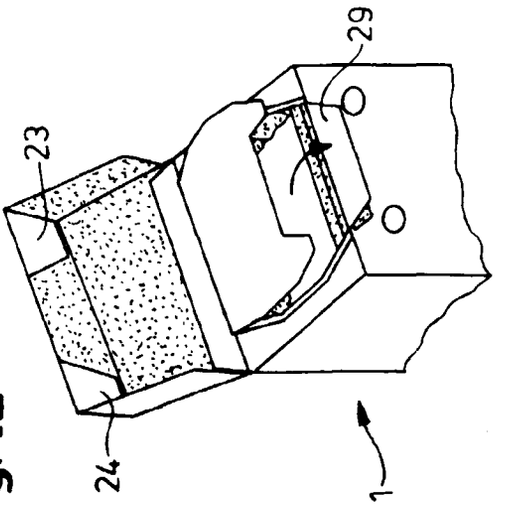


Fig.9

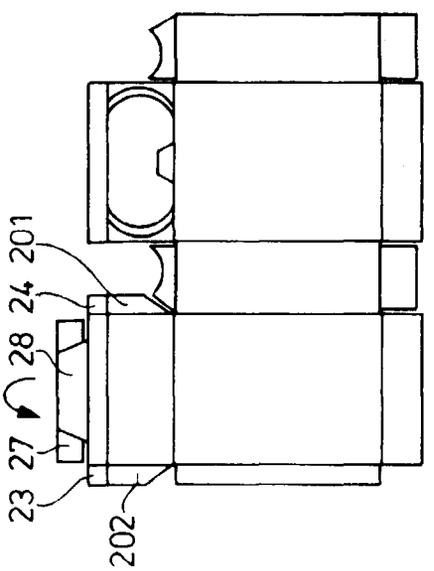
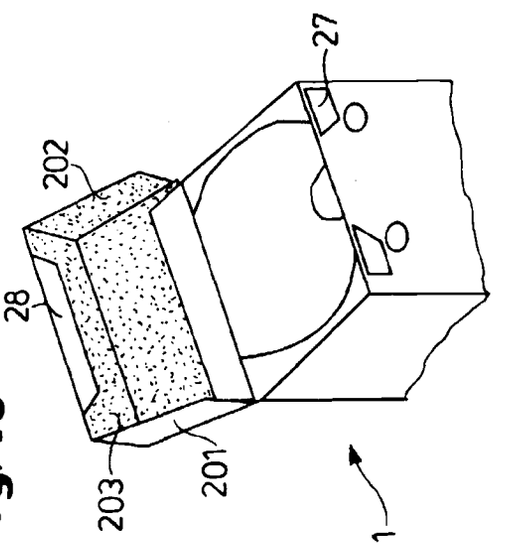


Fig.10



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EUROPEAN SEARCH REPORT

Application Number
EP 98 87 0105

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X Y	FR 2 106 882 A (CHUCHANA) 5 May 1972 * the whole document *	1-3,6,8 4,5,9,10	B65D5/70
Y	US 3 958 748 A (THE PROCTER & GAMBLE) 25 May 1976 * column 6, line 3-50; figures 4,5 *	4,5,9	
Y	US 3 960 312 A (HOERNER WALDORF) 1 June 1976 * column 2, line 31-52; figures 2-4 *	10	
A	CH 601 064 A (ZEILER) 30 June 1978 * column 2, line 5-20; figures 3,4 *	7	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6) B65D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	7 October 1998	Lenoir, C

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