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(54) **CARTON BLANK, CARTON AND METHOD OF FORMING THE CARTON**

KARTONZUSCHITT, KARTON UND VERFAHREN ZUM HERSTELLEN DES KARTONS
DECOUPE DE CARTON, CARTON, ET PROCEDE DE FORMATION DE CE CARTON

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Description

[0001] This invention is directed generally to a carton blank and a carton formed therefrom and more particularly to a fluid impermeable carton from which the material contained therein may be readily removed.

[0002] In order to protect moisture sensitive materials in a carton, there have been many kinds of fluid impervious cartons developed to protect such moisture sensitive materials from deleterious elements such as the humidity in the air. The vast majority of these leakproof cartons have an outer layer formed from a relatively rigid material and an inner layer formed from a relatively flexible fluid impervious material to provide the moisture protection. When it is desired to remove an amount of the material in the carton, it is necessary to open both the outer and inner layers. It is desirable that an opening be formed in both the outer and inner layers at the same time. Also, it is desirable that such an opening be located so that it is not necessary to make an oversized carton so that none of the material in the carton is spilled during the opening thereof.

[0003] Another desired advantage is that the structures associated with making the opening be of a nature that such structures may be returned to substantially the original position to further protect the material remaining in the carton.

[0004] U.S. Patent 5,857,614 is concerned with a carton formed from a carton blank so that the carton has an outer layer formed from a relatively rigid material and an inner layer formed from a relatively flexible fluid impervious material. The outer layer and the inner layer have superposed weakened portions secured together so that the carton may be opening along superposed weakened portions in one simultaneous operation.

[0005] Disclosed herein is a carton blank and a carton formed therefrom wherein the carton has a fluid impervious liner and a flip top lid and a pouring spout formed by securing an insert to the carton blank so that weakened portions in an outer layer of the carton and in the fluid impervious liner may be broken to form a pour spout for removing the material contained in the carton.

[0006] In a preferred embodiment, the carton blank comprises an outer layer comprising a first generally rectangular sheet of a relatively rigid material having an outer surface and an inner surface and a plurality of cut and fold lines formed therein for dividing the outer layer into a plurality of panels. The panels include at least a first sidewall panel that is integral with a second sidewall panel and a third sidewall panel and is joined thereto by opposite fold lines. First, second, and third top panels are integral with the first, second, and third sidewall panels and joined thereto by fold lines. A first inner layer comprising a second generally rectangular sheet of a relatively rigid material, that is substantially smaller than the first generally rectangular sheet of a relatively rigid material, has an outer surface and an inner surface and is located opposite to only portions of the first, second, that

third sidewall panels. The second generally rectangular sheet has a first partial sidewall panel integral with a second partial sidewall panel and a third partial sidewall panel and joined thereto by opposite fold lines. The first sidewall panel and the first partial sidewall panel have substantially the same width between the opposite fold lines thereof. The first, second and third partial sidewall panels have upper edge portions and lower edge portions with at least a portion of the first partial sidewall panel adjacent to the lower edge thereof being secured to at least a portion of the first sidewall panel. The upper edge portions are located adjacent to but spaced from the fold lines between the first, second and third sidewall panels and the first, second and third top panels. A second inner layer comprising a generally rectangular sheet of a relatively flexible fluid impervious material having an outer surface and an inner surface has at least portions of its outer surface secured to opposite portions of the inner surface of the outer layer and at least other portions of the outer surface of the second inner layer are secured to at least portions of the inner surface of the first inner layer. The second inner layer has a weakened portion located adjacent to but spaced from the upper edges and portions of the outer surface of the second inner layer surrounding the weakened portion are secured to opposite portions of the inner surface of the first inner layer. A continuous weakened portion is formed in portions of the first, second and third sidewall panels of the first generally rectangular sheet of a relatively rigid material so that an opening may be formed in the outer layer. As explained more fully below, the continuous weakened portion and the weakened portion may be broken to form an opening for the carton and a flip top lid for opening or closing the opening.

[0007] The continuous weakened portion has a first portion located in the first sidewall panel adjacent to but spaced above the at least a portion of the first sidewall panel and has end portions located in the opposite fold lines to form a frustum of a V, a second portion located in the second sidewall panel and extending at an acute angle between one of the end portions of the first portion and the fold line between the second sidewall panel and the second top panel and a third portion located in the third sidewall panel and extending at an acute angle between the other of the end portions of the first portion and the fold line between the third sidewall panel and the third top panel which when broken form the flip top lid.

[0008] The second top panel has opposite spaced apart fold lines extending in a direction substantially perpendicular to the fold line between the second top panel and the second sidewall panel with an arcuately shaped score line in the second top panel extending between the opposite spaced apart fold lines and the third top panel has opposite spaced apart fold lines extending in a direction substantially perpendicular to the fold line between said third top panel and said third sidewall panel with an arcuately shaped score line in the third top panel extending between the opposite spaced apart fold lines.

The opposite spaced apart fold lines in the second and third top panels are located so that they are in a superposed position when the third top panel is superposed over the second top panel and the arcuately shaped score lines in the second and third top panels extend in opposite directions when the third top panel is superposed over the second top panel.

[0009] The above carton blank also has a fourth sidewall panel integral with one of the second and third sidewall panels and joined thereto by a fold line, a glue tab panel is integral with the fourth sidewall panel and is joined thereto by a fold line and a fourth top panel is integral with the fourth sidewall panel and is joined thereto by a fold line. The carton blank also has a first, second, third and fourth bottom panels respectively integral with the first, second, third and fourth sidewall panels and joined thereto by fold lines. In a preferred embodiment, a first strip of a relatively flexible material is superposed over at least the first, second, third and fourth top panels and portions of the first, second, third and fourth sidewall panels adjacent to the fold lines between the top panels and the sidewall panels and is secured to portions of the outer surface of the second inner layer and a second strip of a relatively flexible material is superposed over at least the first, second, third and fourth bottom panels and portions of the first, second, third and fourth sidewall panels adjacent to the fold lines between the bottom panels and the sidewall panels and is secured to other portions of the outer surface of the second inner layer.

[0010] A dispensing carton having a flip top lid is formed from the above described carton blank and comprises the plurality of sidewall panels folded around the parallel fold lines and held in folded relationship by the glue tab panel to form a central body portion; the plurality of sidewall panels comprise at least one sidewall panel having integral second and third sidewall panels joined thereto by opposite fold lines; a first inner layer or inner insert having a first partial sidewall panel, a second partial sidewall panel and a third partial sidewall panel superposed over portions of the first, second and third sidewall panels; the insert having substantially parallel top and bottom edges. The first partial sidewall panel is secured to the first sidewall panel at a location adjacent to the lower edge thereof. A second inner layer comprising a continuous fluid impervious liner is provided for the carton and has a central body portion, a top portion and a bottom portion. In a preferred embodiment, a continuous strip of a relatively flexible material, such as a Kraft paper or other material having similar characteristics, is secured to each of the top portion and the bottom portion. The central body portion of the second inner layer is secured to the inner surface of the first, second, third and fourth sidewall panels and the inner surface of the first inner layer as explained more fully below. A plurality of bottom panels are integral with the plurality of sidewall panels and are joined thereto by fold lines. A plurality of top panels are integral with the plurality of sidewall panels and are joined thereto by fold lines. The above described con-

tinuous weakened portion is formed in portions of the first, second and third sidewall panels and the weakened portion is formed in the continuous fluid impervious liner in a portion thereof parallel to but spaced below the upper edge with the portion of the fluid impervious continuous liner surrounding the second weakened portion being secured to the inner insert or first inner layer so that the continuous weakened portion and the weakened portion when broken provide an opening and a flip top lid for the carton.

[0011] After the bottom has been formed in the carton by first folding of the bottom portion of the second inner layer to form a fluid impervious bottom portion which is then covered by the folding of the bottom panels and a desired material has been deposited in the carton, the top portion of the continuous fluid impervious liner is formed into a closed and folded fluid impervious configuration, such as a fin joint or seal, having a central body portion and two opposite outwardly extending portions. The fin joint has a central section and two opposite end sections. The top panels comprise two relatively long top panels and two relatively short top panels. One of the relatively long top panels is then folded to be superposed over the central section of the fin joint. Each of the two opposite end sections and the associated short top panels are then folded over and superposed over opposite end portions of the folded one of the relatively long top panels. The other of the two relatively long top panels is then folded and superposed over and secured to the folded over two relatively short top panels and the portion of the one of the two relatively long top panels located between the folded over two relatively short top panels.

[0012] One of the two relatively long top panels has opposite spaced apart fold lines extending in a direction substantially perpendicular to a portion of the fold line between the top panels and the sidewall panels with an arcuately shaped score line in the one of said two relatively long top panels extending between the opposite spaced apart fold lines and the other of the two relatively long top panels has opposite spaced apart fold lines extending in a direction substantially perpendicular to a portion of the fold line between the top panels and the sidewall panels with an arcuately shaped score line in the other of the two relatively long top panels extending between the opposite spaced apart fold lines. The opposite spaced apart fold lines in the one and other top panels are located so that they are in a superposed position when the one top panel is superposed over the other top panel; and the arcuately shaped score lines in the one and other top panels extend in opposite directions when the other top panel is superposed over the one top panel so that when the first and second continuous weakened portions are broken open, at least the superposed portions of the two relatively long top panels and one of the folded over two relatively short panel can be pivoted around the fold lines in the two relatively long top panels and the portions of the two relatively long top panels defined by the score lines are in a superposed relationship

to hold the flip top lid in an opened position.

[0013] A method for forming a secured together top portion for a container comprising at least an outer layer comprising a plurality of sidewall panels and a glue panel folded around fold lines and secured together; a plurality of bottom panels integral with said plurality of sidewall panels and joined thereto by fold lines; a plurality of top panels integral with said plurality of sidewall panels and joined thereto by fold lines and wherein the plurality of top panels comprise two relatively long top panels and two relatively short top panels; at least an inner layer comprising a flexible fluid impervious material having a central body portion, a bottom portion and a top portion wherein the central body portion is secured to at least portions of the plurality of sidewall panels and wherein the plurality of bottom panels and the bottom portion are folded and secured together to form an open ended carton ready to be filled with a desired material and wherein the fold lines between the plurality of top panels and the plurality of sidewall panels lie in a common plane and wherein, after the open ended carton has been filled with a desired material, the method comprises folding and continuously sealing together portions of the top portion in a fin joint so as to have a central body portion and two opposite outwardly extending portions lying substantially in the common plane with the central body portion and extending in a direction substantially parallel with the two relatively long top panels; the fin joint having a central section and two opposite end sections folding one of the two relatively long top panels to a location wherein it is superposed over the central section; folding each of the two relatively short top panels so that one of the two opposite end sections are located between of the two relatively short top panels and the spaced apart portions of the one of the two relatively long top panels; folding the other of the two relatively long top panels until it is superposed over the folded two relatively short top panels and the portion of the one of the two relatively long top panels located therebetween; and securing together facing portions of the other of the two relatively long top panels and the two relatively short top panels and the portion of the one of the two relatively long top panels.

[0014] The carton blank may have an outer layer of a relatively rigid material, a first inner layer of a relatively rigid material superposed over a portion of the outer layer and a second inner layer of a relatively flexible layer of a fluid impervious material is provided with first and second weakened portions so that, after a carton has been formed from the carton blank, filled with a desired material and sealed, the first weakened portion may be broken to form a flip top lid which when moved in an arcuate path will gradually sever the second weakened portion to form an opening in the carton so that an amount of the desired material may be removed from the carton.

[0015] The carton also may include a feature which allows the flip top lid to be securely re-closed after initial opening of the lid. The re-closing feature may include a hinge member which is originally formed within a wall of

the container. A portion of the hinge member may be attached, e.g., by gluing, to a portion of the lid such that, when the lid is initially opened, the hinge member is severed from the container wall, thus leaving a hole in the wall. When the lid is re-closed, the hinge member is able to engage within the opening formed in the container wall, thus releasably securing the lid in the closed position. Alternatively, the hinge may be retained on the container wall while a panel portion is removed from the wall via attachment to the lid. In this manner, when the lid is re-closed, the panel portion on the lid may engage with the hinge portion located on the container wall in order to releasably secure the lid in the closed position.

[0016] Illustrative and presently preferred embodiments are illustrated in the accompanying drawings in which:

Figure 1 is a top plan view of the outer surface of a carton blank;

Figure 2 is a top plan view of the inner surface of a carton blank with parts broken away;

Figures 3-5 are top plan views illustrating different steps in the formation of the top portion of a carton from a carton blank;

Figure 6 is an enlarged portion of Figure 5 illustrating one of the weakened portions;

Figure 7 is a perspective view of a closed carton;

Figure 8 is a perspective view of a partially opened carton; and

Figure 9 is an enlarged perspective view of a opened carton wherein the flip top lid is being retained in an opened position;

Figure 10 is a schematic elevational view with parts in section of a portion of the top of a carton prior to the formation of the opening therein;

Figure 11 is a schematic elevational view with parts in section and wherein the flip top lid has been formed and is partially opened; and

Figure 12 is a schematic elevational view with parts in section and wherein the flip top lid is being held in the opened position.

Figure 13 is a partial perspective view of a closed carton having a stay closed feature.

Figure 14 is a plan view of an insert member forming a part of the carton of Figure 13.

Figure 15 is a partial cross-sectional view taken along the line 15-15 in Figure 13.

Figure 16 is a partial cross-sectional view similar to Figure 15, but showing the carton in a partially open condition.

Figure 17 is a partial cross-sectional view similar to Figures 15 and 16, but showing the carton in a further open condition.

Figure 18 is a partial cross-sectional view similar to Figures 15-17, but showing the carton after it has been re-closed.

Figure 19 is a plan view of an insert member used in a carton having an alternative stay closed feature.

Figure 20 is a partial cross-sectional view, similar to Figures 15-18, but showing a carton including the insert member of Figure 19 in a partially open condition.

Figure 21 is a partial cross-sectional view similar to Figure 20, but showing the carton in a further open condition.

Figure 22 is a partial cross-sectional view similar to Figures 20 and 21, but showing the carton after it has been re-closed.

[0017] Figs. 1-22, in general, illustrate a method of opening and closing a container 280, 480. The method includes providing the container 280, 480 having a body portion having at least one wall 322, 422; a lid 382, 482 movably attached to the body portion; a panel 352, 354, 454 formed in the at least one wall of the body portion. The panel 352, 354, 454 may be attached to the lid 382, 482. The method may further include moving the lid 382, 482 to an open position by applying an opening force thereto, wherein the opening force causes the panel 352, 354, 454 to separate from the at least one wall 322, 422, thereby forming a hole 356, 456 in the at least one wall 322, 422; moving the lid 382, 482 to a closed position by applying a closing force thereto and releasably retaining the lid 382, 482 in the closed position by engaging at least a portion of the panel 352, 354, 454 with at least a portion of the wall 322, 422.

[0018] Figs. 1-22, further illustrate, in general, a container 280, 480 having a body portion having at least one wall 322, 422 and a lid 382, 482 movably attached to the body portion. The container 280, 480 may include a first condition before the container 280, 480 has initially been opened, a second open condition and a third re-closed condition. In the first condition, a panel 352, 354, 454 is attached to both the at least one wall 322, 422 of the body portion and the lid 382, 482. In the second condition, the panel 352, 354, 454 remains attached to the lid 382, 482 but has been removed from the at least one wall member 322, 422, thus leaving a hole 356, 456 in the at least one wall 322, 422. In the third condition, at least a portion of the panel 352, 354, 454 is releasably engaged with at least a portion of the wall 322, 422.

[0019] Figs. 1-22, further illustrate, in general, a method of opening and closing a container 280. The method may include providing the container 280 having a body portion having at least one wall 322; a lid 282 movably attached to the body portion and a hinge 352 movably attached to the lid 282. The method may further include moving the lid 282 to an open position by applying an opening force thereto; moving the lid 282 to a closed position by applying a closing force thereto and releasably retaining the lid 282 in the closed position by engaging at least a portion of the hinge 352 with at least a portion of the wall 322.

[0020] Figs. 1-22, further illustrate, in general a container 282 capable of moving between an open condition and a closed condition. The container 282 may include

a body portion having at least one wall 322; a lid 282 movably attached to the body portion and a hinge 352 movably attached to the lid 282. In the closed condition, at least a portion of the hinge 352 is engaged with at least a portion of the wall 322.

[0021] Figs. 1-22, further illustrate, in general a method of opening and closing a container 280, 480. The method may include providing the container 282 having a body portion having at least one wall 322, 422; a lid 282, 382 movably attached to the body portion; a hinge portion 352, 452 and a stationary portion 354, 422. The hinge portion 352, 452 is movably attached to the stationary portion 354, 422 via a score line 350, 441. The hinge portion 352, 452 is aligned with the stationary portion 354, 422. The method further includes moving the lid 282, 482 to an open position by applying an opening force thereto, wherein the opening force causes the hinge portion 352, 452 to misalign with the stationary portion 354, 422; moving the lid 282, 482 to a closed position by applying a closing force thereto and using the hinge portion 352, 452 to releasably retain the lid 282, 482 in the closed position.

[0022] Figs. 1-22, further illustrate, in general a container 280, 480 capable of moving between an open condition and a closed condition. The container 280, 480 may include a body portion having at least one wall 322, 422; a lid 282, 482 movably attached to the body portion; a hinge portion 352, 452 and a stationary portion 354, 422. The hinge portion 352, 452 is movably attached to the stationary portion 354, 422 via a score line 350, 441. The container 280, 480 includes a first condition before the container 280, 480 has initially been opened, a second open condition and a third re-closed condition. In the first condition, the hinge portion 352, 452 is aligned with the stationary portion 354, 422. In the second condition, the hinge portion 352, 452 is misaligned with the stationary portion 354, 422. In the third condition, the hinge portion 352, 452 releasably retains the lid 282, 482 in the re-closed condition.

[0023] Having thus described the container and method in general, they will now be described in further detail.

[0024] In Figure 1, there is illustrated the outer surface of a carton blank 2. The carton blank 2 has an outer layer which comprises a generally rectangular sheet of a relatively rigid material such as paperboard, a composite materials comprising a plastic film laminated to paperboard or any other conventional material used in forming cartons and has a plurality of integral sidewall panels 4, 6, 8 and 10 which are joined together by fold lines 12, 14 and 16 and a glue tab panel 18 integral with the sidewall panel 10 and joined thereto by a fold line 20. A plurality of bottom panels 22, 24, 26 and 28 are integral with the sidewall panels 4, 6, 8 and 10 and are joined thereto by fold lines 30, 32, 34 and 36 and are separated from each other by cut lines 38, 40 and 42. A plurality of top panels 44, 46, 48 and 50 are integral with the sidewall panels 4, 6, 8 and 10 and are joined thereto by fold lines 52, 54, 56 and 58 and are separated from each other by cut lines

60, 62, 64 and 66. The cut lines 60 and 62 are spaced apart to form an opening 68 therebetween. The top panel 44 has a pair of spaced apart opposite fold lines 70 and 72 and an arcuate shaped perforated line 74 which, when broken, forms a tab portion 76. The top panel 48 has a pair of spaced apart opposite fold lines 78 and 80 and an arcuate shaped perforated line 82 which, when broken, forms a tab portion 84. A first weakened portion 86 has a first end point 88 in the fold line 56 and a second end point 90 in the fold line 14. A second weakened portion 92 has a first end point 94 in the fold line 52 and a second end point 96 in the fold line 12. A third weakened portion 98 extends between the second end points 90 and 96 and is shaped as a frustum of a V. As illustrated in Figure 1, the weakened portions 86, 92 and 98 form portions 4a, 6a and 8a in the sidewall panels 4, 6 and 8. An opening tab 100 is formed in the sidewall panel 6 by a perforated line 102 and extensions 104 and 106 thereof which extensions 104 and 106 are parallel to but spaced slightly from portions of the fold lines 12 and 14. A tab portion 108 extends from a fold line 110 for purposes described below.

[0025] In Figure 2, there is illustrated the inner surface of a carton blank 2. The portions illustrated in Figure 2 that correspond to Figure 1 have been identified with the same reference numerals. A first inner layer comprising a generally rectangularly shaped insert 120 has a partial sidewall panel 122 superposed over a portion of the sidewall panel 6; a partial sidewall panel 124 superposed over a portion of the sidewall panel 4 and a partial sidewall panel 126 superposed over a portion of the sidewall panel 8. The partial sidewall panel 124 and the partial sidewall panel 126 are integral with the partial sidewall panel 122 and are joined thereto by the fold lines 128 and 130 which are substantially superposed over portions of the fold lines 12 and 14. The insert 120 has an upper edge 132 that is spaced slightly from the fold line 54 and portions of the fold lines 52 and 56 and a lower edge 134. The portion of the partial sidewall panel 122 adjacent to the lower edge 134 is secured to the opposite facing inner surface of the sidewall panel 6 by a suitable adhesive 136. The first inner layer or insert 120 is preferably formed from the same type of material as the outer layer.

[0026] A second inner layer of the carton blank 2 comprises a generally rectangular sheet 140 of a fluid impervious material comprising a central body portion 142 that is superposed over at least portions of the portions of the sidewall panels 4, 6, 8 and 10 located between but spaced slightly from the fold lines 52, 54, 56 and 58 and the fold lines 30, 32, 34 and 36 and a corresponding portion of the glue tab panel 18 and all of the insert 120. The generally rectangular sheet 140 is preferably formed from a plastic material, such as polyethylene, a kraft paper covered with polyethylene or other materials having similar characteristics. At least portions of the central body portion 142 are secured to facing portions of the insert 120 and the sidewall panels 4, 6, 8 and 10 and the glue tab panel 18. The generally rectangular sheet 140

has a top portion 144 that extends from the central body portion 142 and is superposed over at least portions of the top panels 44, 46, 48 and 50 and the glue tab panel 18. In a preferred embodiment, the top portion 144 is superposed over and secured to an elongated strip 146 of a relatively flexible material, such as a kraft paper or other materials having similar characteristics. The generally rectangular sheet 140 had a bottom portion 148 that extends from the central body portion 142 and is superposed over at least portions of the bottom panels 22, 24, 26 and 28 and the glue tab panel 18. The bottom portion 148 is superposed over and secured to a strip 150 of a relatively flexible material as described above. In some instances, the strips 146 and 150 may be omitted so that the top 144 and bottom 148 portions comprise only portions of the sheet 140 of a fluid impervious material. As illustrated in Figure 2, two of the edges of the generally rectangular sheet 140 are located in alignment with the edge of the glue tab panel 18 and the edge of the sidewall panel 4 but in some instances such edges may be offset a desired distance.

[0027] Figures 3-5 illustrate steps in forming a closed and sealed end for a carton formed from the carton blank 2 described in relation to Figures 1 and 2. The sidewall panels 4, 6, 8 and 10 are folded around the fold lines 12, 14 and 16 and secured together by a suitable arrangement between the glue tab panel 18 and a portion of the sidewall panel 4 or portions of the sheet 140 associated with the structures to form an open ended structure (not shown).

The bottom panels 22, 24, 26 and 28 and the bottom portion 148 with or without the strip 150 have been folded and secured together to form a closed fluid impervious bottom end for the carton. The carton is then filled with a desirable material and the top portion 144 with or without the strip 146 has been folded and sealed together to form a closed fin joint. The fin joint is formed from the top portion 144 that extends upwardly from a common plane formed by the fold lines 52, 54, 56 and 58 and comprises portions of the generally rectangular sheet 140 that extend from the sidewall panels 4, 6, 8 and 10 to form an open top portion. The portions of the generally rectangular sheet adjacent to the open top portion are secured together to form two sealed together layers having a central section 160 and two opposite end sections 162 and 164. The extensions of the top portion 144 from the sidewall panels 4 and 8 are also formed into generally horizontal portions 166 and 168 that lie in a common plane generally parallel to the above-described common plane. The generally horizontal portions 166 and 168 comprise a single thickness of the generally rectangular sheet 140. The extensions of the top portion 144 from the sidewall panels 6 and 10 and the glue tab panel 18 are also formed into triangular end sections 152 and 154 illustrated in Figures 3 and 4 by two reference numerals which comprise two thicknesses of the generally rectangular sheet 140. The triangular end sections 152 and 154 also lie in a plane parallel to the common planes described above.

As illustrated in Figure 3, the central section 160 and the end sections 162 and 164 of the fin joint have been folded over so that they lie substantially in the common plane formed by the fold lines 52, 54, 56 and 58. Therefore, the fin joint has a central section comprising the central section 160 and the portions 166 and 168 and two opposite end sections comprising the end sections 162 and 164 and the triangular portions 152 and 154. In Figure 4, the top panel 44 is folded around fold line 52 until it is superposed over a major portion of the central section comprising the central body portion 160 and the portions 166 and 168 but is not secured thereto. The top panel 50 is then folded around fold line 58 so that it is superposed over a portion of the top panel 44 and the end sections 154 and 164 are sandwiched in between. These portions are not adhesively secured together. The top panel 46, preferably at the same time, is folded around fold line 54 so that it is superposed over a portion of the top panel 44 and the open portion formed by the cut line 60 and the end sections 154 and 162 are sandwiched in between. These portions are not adhesively secured together. The structure prior to folding over the top panel 46 is illustrated in Figure 5. The top panel 48 is then folded around fold line 56 until it is superposed over the top panels 44 and 50 and the central portion of the top panel 44. At least the facing portions of the top panels 48, 46, 50 and 44 are secured together. The fold lines 78 and 80 are superposed over the fold lines 70 and 72 and the tab portions 76 and 84 extend in opposite directions.

[0028] In Figure 6, there is illustrated part of the structures for forming the flip top lid for the carton as described below. The generally rectangular sheet 140 is superposed over the inner surface of the outer layer of the carton blank 2 of Figure 2 and is secured thereto by a suitable adhesive illustrated by the dotted portion. The generally rectangular sheet 140 also is superposed over the generally rectangular first inner layer or insert 120. A weakened portion 170 having end portions 172 and 174 is formed in the generally rectangular sheet 140. In a preferred embodiment, the length of the weakened portion 170 between the end portions 172 and 174 is less than the distance between the fold lines 72 and 80 as illustrated in Figure 6. The weakened portion 170 is surrounded by an adhesive, illustrated by the more heavily dotted area, to preserve the fluid tightness between the portion of the generally rectangular sheet 140 and the first inner layer or insert 120. The weakened portion 170 may comprise a cut line or a perforated line and may be formed using a heated cutting apparatus (not shown) so that, as the weakened portion 170 is made, the portions of the generally rectangular sheet 140 surrounding the weakened portion 170 are secured to the first inner layer or insert 120. In another embodiment, a coating of a suitable adhesive, such as a conventional hot or cold melt adhesive, may be used as long as the fluid impervious characteristic of the second inner layer or generally rectangular sheet 140 is maintained. The weakened portion

164 is preferably located as close as possible to the upper edge 132 of the first inner layer or insert 120 for purposes described below. The location of the weakened portion 164 as shown in Figure 6 is for illustration purposes only.

[0029] A carton 180 formed from the carton blank 2 of Figures 1 and 2 and having its top portion formed as illustrated in Figures 3-5 is illustrated in Figures 7-9. In Figure 7, the carton 180 is one that has been filled with the desired material as described above. In Figure 8, the flip top lid 182 having portions 4a, 6a and 8a secured from the sidewall panels 4, 6 and 8 and the tab portion 108 has been partially opened. As illustrated in Figure 8, the opening tab 100 has been removed by applying a force thereto at the fold line 14 and severing it along the perforated lines 104, 102, 98 and 106. Another force has been applied to the tab 108 to sever the outer layer along the perforated lines 86 and 92. At the same time, the force separates the weakened portion 170 since the portion 162 located between the folded over top panel 46 and the top panel 44 applies the force to the weakened portion 170. The tab portion 84 has separated along the score line 82 as the flip top lid 182 moves upwardly in a pivoted manner through an arcuate path defined by the fold lines 78 and 80. The pivotal movement of the flip top lid 182 is continued until the outer surface (not numbered) of the tab portion 84 faces the outer surface (not numbered) of the tab portion 76. This pivotal movement is generally about 120 degrees. In Figure 9, the flip top lid 182 is held in an opened position by the cooperation between outer surfaces of the tab portions 76 and 84 which generally is about 90 degrees so that an amount of the desired material may be removed from the carton 180. After an amount of the desired material has been removed from the carton 180, a force is applied to the flip top lid 182 to return it generally to the position illustrated in Figure 7 but with the opening tab 100 removed.

[0030] Figures 10-12 illustrate the location of the various components at different times during the formation of the opening in the carton 180. In Figure 10, the carton 180 has not been opened. In Figure 11, the carton 180 has been partially opened. In Figure 12, the carton 180 has been fully opened and the flip top lid 182 is being held in an opened position so that an amount of the desired material may be removed from the carton 180. In Figure 12, the flip top lid 182 has been moved to a partially opened position. Part of the weakened portion 170 has been severed. The portion of the weakened portion 170 between the panels 6 and 6a and part of the weakened portion 170 between the panels 4 and 4a and 8 and 8a has been separated. Since the end sections of the fin joint are sandwiched between portions of the top panels 44 and 46, a force is applied to the end sections 152 and 162 and portions of the portions 166 and 168 of the fin joint to pull these portions downwardly through the opening 68 formed by the cut line 60. In Figure 12, the weakened portion 170 has been completely severed and a large portion of the end sections 152 and 162 and the portions 166 and 168 of the fin joint have been moved

through the opening 68. As described above, the contact between the outer surfaces of the tab portions 76 and 84 holds the flip top lid 182 in the opened position so that an amount of the desired material may be removed from the carton 180. In Figures 10-12, the strips 146 and 150 of a relatively flexible material are not shown but would be included in a preferred embodiment.

[0031] Figs. 13-18 illustrate a carton 280. The carton 280 may be substantially identical to the carton 80 previously described with respect to Figs. 1-12, except that the carton 280 is provided with a flip top lid 382 having a feature to allow the lid to be securely re-closed after initial opening, as will be described in further detail below. Because the carton 280 is similar in many aspects to the carton 80, the same reference numerals are used in Figs. 13-18 to refer to like features illustrated in Figs. 1-12.

[0032] As noted above, the carton 280 may be formed in a substantially identical manner to that described with respect to the carton 80 previously described with respect to Figs. 1-12. With reference to Fig. 13, the carton 280 may, however, include an insert member 320 which is modified relative to the insert member 120 previously described with respect to the carton 80. Fig. 14 illustrates the modified insert member 320 in further detail.

[0033] Referring now to Fig. 14, the insert member 320 may have a partial sidewall panel 322; a partial sidewall panel 324 and a partial sidewall panel 326. The partial sidewall panel 324 and the partial sidewall panel 326 may be integral with the partial sidewall panel 322 and may be joined thereto by the fold lines 328 and 330. The insert member 320 has an upper edge 332. The insert member 320 may, for example, be formed from the same material as previously described with respect to the insert member 120. A cutout portion 340 may be provided in the partial sidewall panel 322 of the insert member 320 as shown. The cutout portion 340 may generally be defined by an upper cut line 342 and a lower cut line 344. The cut lines 342, 344 may extend completely through the material forming the insert member 320 such that, together, the cut lines 342, 344 will form an opening 356 in the insert member 320 after the cutout portion 340 is removed, as will be described in further detail herein. A pair of uncut areas may be located between the cut lines 342 and 344 forming retention tabs 346 and 348. The retention tabs 346, 348 serve to retain the cutout portion to the remainder of the insert member 320 during manufacture of the carton 280 in a manner as will be described in further detail herein.

[0034] With continued reference to Fig. 14, a score line 350 may be provided as shown, dividing the cutout portion 340 into an upper (as viewed in Fig. 14) hinge portion 352 and a lower stationary portion 354. The cutout portion 340 may, for example, have a height "a" of about 1.0 inch and a width "b" of about 1.5 inches and may, for example, be generally elliptical in shape. The score line 350 may, for example, be located a distance "c" of about 0.6 inch above the lower edge of the cutout 340. The lower edge of the cutout 340, in turn, may be located a distance "d"

of about 1.85 inch below the upper edge 332 of the insert member 320.

[0035] The insert member 320 may be assembled into the carton blank 2 in substantially the same manner as previously described with respect to the insert member 120, see Fig. 2. When assembling the insert member 320, however, adhesive 360, Fig. 15, may be supplied between the insert member stationary portion 354, Fig. 14, and the carton blank sidewall panel 6, Fig. 2. In addition, although the rectangular sheet 140 may be secured to the insert member 320 around the periphery of the cutout portion 340, the sheet 140 is not secured to the cutout portion 340 itself. Securing the rectangular sheet 140 to the insert member 320 and to the remainder of the carton blank 2 may be accomplished using a conventional glue or by any other conventional attachment mechanism.

[0036] After the insert member 320 has been attached to the carton blank 2, as described above, the carton blank may be erected into the carton 280, as illustrated in Fig. 13.

[0037] Fig. 15 is a cross-sectional view of the carton 280, taken along the line 15-15 of Fig. 13. Figs. 13 and 15 both illustrate the carton 280 before the flip top lid 382 has initially been opened. Figs. 16-18 illustrate a sequence of operations through which the flip top lid 382 is opened and then re-closed.

[0038] The carton 280 may be initially opened in generally the same manner as the carton 80, previously described. Specifically, to initially open the carton 280, the opening tab 100, Figs. 13 and 15, may be removed. The tab 108 may then be pulled upwardly, severing the outer layer of the carton 280 along the perforated lines 86 and 92, to the position illustrated in Fig. 16. Referring now to Fig. 16, it can be seen that the movement described above has also caused the cutout portion 340 to separate from the insert member 320, due to the adhesive 360 located between the flip top lid 382 and the stationary portion 354 of the cutout portion 340. Specifically, with reference to Fig. 14, the upward movement of the flip top lid 382 has caused the retention tabs 346 and 348 to tear, thus allowing the cutout portion 340 to completely separate from the remainder of the insert member 320. Referring again to Fig. 16, the upward movement of the flip top lid 382 also causes the hinge portion 352 of the cutout portion 340 to bend about the score line 350, due to the interaction between the hinge portion 352 and the upper edge of the opening 356. As can be appreciated from Fig. 16, although separation of the cutout portion 340 forms the opening 356 through the insert member 320, the sheet 140 still spans the opening 356.

[0039] Fig. 17 illustrates the flip top lid 382 in a further opened condition. Referring to Fig. 17, it can be seen that the hinge portion 352 is completely disengaged from the opening 356, but still maintains a nonaligned orientation with respect to the stationary portion 354. The hinge portion 352 is biased toward this nonaligned orientation due to the score line 350 and the bending action

imposed on the hinge portion 352 during opening of the lid 382, as illustrated in Fig. 16.

[0040] After the desired amount of product has been dispensed from the open carton 280, the flip top lid 382 may be re-closed. This re-closed condition is illustrated in Fig. 18. As can be seen from Fig. 18, when the flip top lid is returned to its closed position, the hinge portion 352 will engage beneath the upper edge of the opening 356. This engagement, in turn, causes the lid 382 to resist reopening and, thus, tends to maintain the lid in its closed condition, as illustrated in Fig. 18.

[0041] When it is desired to reopen the flip top lid 382, e.g., to dispense further product from the container 280, the tab 108 may again be pulled upwardly, thus causing the flip top lid 382 to once again move through the sequence illustrated in Figs. 16 and 17. As can be appreciated from the above, the cutout portion 340 serves to maintain the flip top lid 382 in its closed position after the lid has initially been opened but allows the lid to be reopened when desired.

[0042] It is noted that, in addition to holding the lid in its closed position, the stay-closed feature described above also results in an audible "click" when the lid reaches its closed position. This click is caused when, as the lid is moving downwardly to its closed position, the hinge portion 352 springs into the opening 356. This feature is beneficial in that it provides a user of the carton 280 with an audible signal indicating that the lid has reached its fully closed position. The audible click discussed above is caused, in part, by the hinge portion 352 springing past the edge of the opening 356. The volume of the audible click is also, however, enhanced by the hinge portion 352 forcefully contacting the sheet 140, as illustrated in Fig. 18. Accordingly, the existence of the sheet 140 in the vicinity of the opening 356 enhances the audible signal provided.

[0043] The existence of the sheet 140 in the vicinity of the opening 356 is also advantageous in that it seals the opening 356 and, thus, prevents product housed within the carton 280 from exiting the carton through the opening 356. The existence of the sheet 140 is further advantageous in that it prevents the hinge portion 352 from penetrating too far into the opening 356, see Fig. 16. In some situations, such excessive penetration by the hinge portion 352 may interfere with proper reopening of the flip top lid 382. As can be appreciated with reference to Fig. 16, in limiting the penetration by the hinge portion 352, the sheet 140 imposes a resilient force (in the direction of the arrow 362) on the flip top lid 382. This resilient force causes the flip top lid 382 to be biased toward its closed position until the hinge portion 352 disengages from the opening 356 during opening of the flip top lid 382. This biasing of the flip top lid, in turn, causes the flip top lid to tend to remain in its closed position until a sufficient opening force is applied and, thus, serves to resist accidental opening of the flip top lid 382.

[0044] Although, as described above, the existence of the sheet 140 is beneficial in many respects, the carton

280 may, alternatively, be manufactured without the sheet 140. In this case, a relatively small section of material may be provided in order to cover the opening 356. This small section of material may be attached, e.g., by gluing, to the partial sidewall panel 322 of the insert member 320, Fig. 14, in the vicinity of the opening 356. The small section of material may, for example, be formed from the same material as the sheet 140.

[0045] The stay closed feature described above is extremely advantageous in that it is easy to manufacture. Specifically, the use of the cutout 340 does not require that any extra folds be provided in the insert member 320. Such folds add complexity when erecting a carton and it is, thus, desirable to minimize them. Referring, for example, to Fig. 17, it can be seen that the hinge portion 352 is partially folded about the score line 350. In other words, the hinge portion 352 is non-aligned with the stationary portion 354. This non-aligned configuration enables the hinge portion 352 to spring into the opening 356 when the flip top lid 382 is re-closed (see Fig. 18) and, thus, is important to proper operation of the stay closed feature. As can be appreciated with respect to Figs. 15 and 16, this folding of the hinge portion 352 is caused by the opening of the flip top lid 382. In other words, before the flip top lid is initially opened (Fig. 15), the hinge portion 352 is not folded about the score line 350. Rather, the opening force supplied to the flip top lid 382 by a user causes the folding to occur. Accordingly, the fold does not have to be formed on the production line for forming the carton 280. This, in turn, simplifies the carton forming process.

[0046] The described stay closed feature is further advantageous in that no additional material is required in its formation. Specifically, as described above, the cutout portion 340, which includes the hinge portion 352, is removed from an existing portion of the insert member 320. Accordingly, no additional material is required to form the cutout portion 340. Additionally, because the cutout portion 340 is located on the inside of the flip top lid panel 6a, it is never readily visible to a consumer of the product packaged within the carton 280. Accordingly, the design of the stay closed feature described herein facilitates the aesthetic appearance of the carton.

[0047] It is noted that, although the stay-closed feature has been described in conjunction with the stay open feature of Figs. 1-12 for illustration purposes, it is to be understood that either the stay closed feature or the stay open feature could, alternatively, be used independently of each other. It is further noted that, although, for illustration purposes, the stay closed feature is illustrated as being elliptical in shape, it could, alternatively, be any other shape, such as rectangular or round.

[0048] Figs. 19-22 illustrate an alternative embodiment of the stay closed feature in which the hinge portion remains attached to the insert member. Referring first to Fig. 19, an insert member 420 may be provided which is similar to the insert member 320 previously described with respect to Figs. 13-18. The insert member 420 may

have a partial sidewall panel 422; a partial sidewall panel 424 and a partial sidewall panel 426. The partial sidewall panel 424 and the partial sidewall panel 426 may be integral with the partial sidewall panel 422 and may be joined thereto by the fold lines 428 and 430. The insert member 420 has an upper edge 432. The insert member 420 may, for example, be formed from the same material as previously described with respect to the insert members 120 and 320. A latch mechanism 440 may be provided in the partial sidewall panel 422 of the insert member 420 as shown. The latch mechanism 440 may generally be defined by an upper score line 441, a first cut line 442 and a second cut line 444. A third cut line 450 may extend across the latch mechanism 440 and intersecting both the first and second cut lines 442, 444, as shown, dividing the latch mechanism 440 into an upper (as viewed in Fig. 19) hinge portion 452 and a lower stationary portion 454. The cut lines 442, 444, 450 may extend completely through the material forming the insert member 420 such that, together, the cut lines 442, 444, 450 will form an opening 456 in the insert member 420 after the stationary portion 454 is removed, as will be described in further detail herein. A pair of uncut areas may be located within the cut line 450 forming retention tabs 446 and 448. A further retention tab 449 may be provided between the first and second cut lines 442, 444, as shown. The retention tabs 446, 448, 449 serve to retain the stationary portion 454 to the remainder of the hinge portion 452 and the remainder of the insert member 420 during manufacture of a carton embodying the insert member 420.

[0049] The insert member 420 may be assembled into the carton blank 2 in substantially the same manner as previously described with respect to the insert member 320. Specifically, when assembling the insert member 420, adhesive 460, Fig. 20, may be supplied between the insert member stationary portion 454 and the carton blank sidewall panel 6, Fig. 2. In a manner similar to that described with respect to the insert member 320, the rectangular sheet 140 may be secured to the insert member 420 around the periphery of the latch mechanism 440 but not to the latch mechanism itself. Securing the rectangular sheet 140 to the insert member 420 and to the remainder of the carton blank 2 may be accomplished using a conventional glue or by any other conventional mechanism.

[0050] After the insert member 420 has been attached to the carton blank 2, as described above, the carton blank may be erected into a carton 480 having a flip top lid 482, as illustrated in Figs. 20-22. Figs. 20-22, in a similar manner to Figs. 16-18, illustrate a sequence of operations through which the flip top lid 482 is opened and then re-closed.

[0051] The carton 480 may be initially opened in generally the same manner as the cartons 80 and 280, previously described. Specifically, to initially open the carton 480, the opening tab 100, Figs. 13 and 15, may be removed. The tab 108, e.g., Fig. 20, may then be pulled

upwardly, severing the outer layer of the carton 480 along the perforated lines 86 and 92, to the position illustrated in Fig. 20. Referring now to Fig. 20, it can be seen that the movement described above has also caused the stationary portion 454 to separate from the insert member 420, due to the adhesive 460 located between the flip top lid 482 and the stationary portion 454 of the cutout portion 440. Specifically, with reference to Fig. 19, the upward movement of the flip top lid 482 has caused the retention tabs 446, 448 and 449 to tear, thus allowing the stationary portion 454 to completely separate from the remainder of the insert member 420. Referring again to Fig. 20, the upward movement of the flip top lid 482 also causes the hinge portion 452 to bend about the score line 441. As can be appreciated from Fig. 20, although separation of the stationary portion 454 and bending of the hinge portion 452 about the score line 441 forms the opening 456 through the insert member 420, the sheet 140 still spans the opening 456.

[0052] Fig. 21 illustrates the flip top lid 482 in a further opened condition. Referring to Fig. 21, it can be seen that the hinge portion 452 maintains a nonaligned orientation with respect to the remainder of the insert member partial sidewall panel 422. The hinge portion 452 is biased toward this nonaligned orientation due to the score line 441 and the bending action imposed on the hinge portion 452 during opening of the lid 482, as illustrated in Fig. 20.

[0053] After the desired amount of product has been dispensed from the open carton 480, the flip top lid 482 may be re-closed. This re-closed condition is illustrated in Fig. 22. As can be seen from Fig. 22, when the flip top lid is returned to its closed position, the hinge portion 452 will engage above the upper edge of the stationary portion 454.

This engagement, in turn, causes the lid 482 to resist reopening and, thus, tends to maintain the lid in its closed condition.

[0054] When it is desired to reopen the flip top lid 382, e.g., to dispense further product from the container 480, the tab 108 may again be pulled upwardly, thus causing the flip top lid 482 to once again move through the sequence illustrated in Figs. 20 and 21. As can be appreciated from the above, the latch mechanism 440 serves to maintain the flip top lid 482 in its closed position after the lid has initially been opened.

[0055] As in the embodiment of Figs. 13-18, the existence of the sheet 140 in the vicinity of the opening 456 is advantageous in that it seals the opening 46 and, thus, prevents product housed within the carton 480 from exiting the carton through the opening 456. Although the existence of the sheet 140 is beneficial in many respects, the carton 480, like the carton 280, may, alternatively, be manufactured without the sheet 140. In this case, a relatively small section of material may be provided in order to cover the opening 456. This small section of material may be attached, e.g., by gluing, to the partial sidewall panel 422 of the insert member 420, Fig. 19, in the vicinity

of the opening 456. The small section of material may, for example, be formed from the same material as the sheet 140.

[0056] As in the embodiment of Figs. 13-18, the stay closed feature of Figs. 19-22 is extremely advantageous in that it is easy to manufacture. Specifically, the use of the latch mechanism 440 does not require that any extra folds be provided in the insert member 420. Such folds add complexity when erecting a carton and it is, thus, desirable to minimize them. Referring, for example, to Fig. 21, it can be seen that the hinge portion 452 is partially folded about the score line 441. In other words, the hinge portion 452 is non-aligned with the remainder of the partial sidewall panel 422 of the insert member 420. This non-aligned configuration enables the hinge portion 452 to spring into contact with the stationary portion 454 when the flip top lid 482 is re-closed (see Fig. 22) and, thus, is important to proper operation of the stay closed feature. As can be appreciated with respect to Fig 20, this folding of the hinge portion 452 is caused by the opening of the flip top lid 482. In other words, before the flip top lid is initially opened, the hinge portion 452 is not folded about the score line 441. Rather, the opening force supplied to the flip top lid 482 by a user causes the folding to occur. Accordingly, the fold does not have to be formed on the production line for forming the carton 480. This, in turn, simplifies the carton forming process.

[0057] The described stay closed feature is further extremely advantageous in that no additional material is required in its formation. Specifically, as described above, the latch mechanism 440, which includes the hinge portion 452, is removed from an existing portion of the insert member 420. Accordingly, no additional material is required to form the latch mechanism 440.

[0058] It is noted that, although the stay-closed feature of Figs. 19-22 has been described in conjunction with the stay open feature of Figs. 1-12 for illustration purposes, it is to be understood that either the stay closed feature or the stay open feature could, alternatively, be used independently of each other. It is further noted that, although, for illustration purposes, the stay closed feature of Figs. 19-22 is illustrated as being elliptical in shape, it could, alternatively, be any other shape, such as rectangular or round.

Claims

1. A carton blank (2) including an outer layer having a plurality of cut and fold lines formed therein for dividing said outer layer into a plurality of panels and an inner layer, **characterized in that** the outer layer comprises a first generally rectangular sheet of a rigid material and having an outer surface and an inner surface, said outer layer having at least a first sidewall panel (6) being integral with a second sidewall panel (8) and a third sidewall panel (4) and joined thereto by opposite fold lines (12, 14), a first top panel

(46) integral with said first sidewall panel and joined thereto by a fold line (54), a second top panel (48) integral with said second sidewall panel and joined thereto by a fold line (52), a third top panel (44) integral with said third sidewall panel and joined thereto by a fold line (56), a first inner layer (120) comprising a second generally rectangular sheet of a rigid material having an outer surface and an inner surface, said second generally rectangular sheet being opposite to portions of said first, second, and third sidewall panels (6, 8, 4), said second generally rectangular sheet having at least a first partial sidewall panel (122) integral with a second partial sidewall panel (126) and a third partial sidewall panel (124) and secured thereto by opposite fold lines (128, 130), said first sidewall panel (6) and said first partial sidewall panel (122) having substantially the same width between said opposite fold lines thereof, said second generally rectangular sheet having an upper edge portion (132) and a lower edge portion (134), at least a portion of said first partial sidewall panel (122) adjacent to said lower edge being secured to at least a portion of said first sidewall panel (6), said upper edge portion (132) being located adjacent to but spaced from said fold lines (52, 54, 56) between said first, second, and third sidewall panels and said first, second, and third top panels, and **in that** a second inner layer (140) comprises a generally rectangular sheet of a flexible fluid impervious material and having an outer surface and an inner surface, at least portions of said outer surface of said second inner layer being secured to opposite portions of said inner surface of said outer layer, at least other portions of said outer surface of said second inner layer being secured to at least portions of said inner surface of said first inner layer, said second inner layer having a weakened portion (170) located adjacent to but spaced apart from said upper edge portion (132) of said first inner layer (120), portions of said outer surface of said second inner layer (140) surrounding said weakened portion being secured to opposite portions of said inner surface of said first inner layer, and a continuous weakened portion (98, 86, 92) in portions of said first, second and third sidewall panels (6, 8, 4) for cooperating with said weakened portion (170) in forming an opening in a carton (180) formed from said outer layer and said first and second inner layers so that said weakened portions may be broken to form an opening in said carton and a flip top lid (182) for opening or closing said opening.

2. A carton blank according to claim 1, **characterized in that** said continuous weakened portion includes a first portion (98) located in said first sidewall panel (6) adjacent to but spaced from said at least a portion of said first sidewall panel and having end portions (90, 96) located in said opposite fold lines (12, 14), a second portion (86) located in said second sidewall

panel (8) and extending at an acute angle between one of said end portions (90) and said fold line (56) between said second sidewall panel and said second top panel (48), and a third portion (92) located in said third sidewall panel (4) and extending at an acute angle between the other of said end portions (96) and said fold line (52) between said third sidewall panel and said third top panel (44).

3. A carton blank according to claim 1, **characterized in that** said cut lines (60, 62) between said first and third top panels (46, 44) are spaced apart so that an open space (68) is formed between said first and third top panels.

4. A carton blank according to claim 1, **characterized in that** said second top panel (48) has opposite spaced apart fold lines (78, 80) extending in a direction substantially perpendicular to said fold line (56) between said second top panel and said second sidewall panel (8), and an arcuate shaped score line (82) in said second top panel extending between said opposite spaced apart fold lines, **in that** said third top panel (44) has opposite spaced apart fold lines (70, 72) extending in a direction substantially perpendicular to said fold line (52) between said third top panel and said third sidewall panel (4), and an arcuate shaped score line (74) in said third top panel extending between said opposite spaced apart fold lines.

5. A carton blank according to claim 4, **characterized in that** said opposite spaced apart fold lines (78, 80, 70, 72) in said second and third top panels (48, 44) are located so that they are in a superposed position when said third top panel is superposed over said second top panel, and said arcuate shaped score lines (84, 74) in said second and third top panels extend in opposite directions when said third top panel is superposed over said second top panel.

6. A carton blank according to claim 1, **characterized in that** said carton blank has a fourth sidewall panel (10) integral with one of said second and third sidewall panels (8, 4) and joined thereto by a fold line (16), a glue tab panel (18) integral with said fourth sidewall panel (10) and joined thereto by a fold line, a fourth top panel (50) integral with said fourth sidewall panel and joined thereto by a fold line (58), first, second, third, and fourth bottom panels (24, 26, 22, 28) respectively integral with said first, second, third and fourth sidewall panels and joined thereto by fold lines (32, 30, 34, 36), a first strip of a flexible material (146) superposed over at least said first, second, third, and fourth top panels and portions of said first, second, third, and fourth sidewall panels adjacent to said fold lines between said top panels and said sidewall panels and secured to portions of said outer

surface of said second inner layer, and a second strip of a flexible material (150) superposed over at least said first, second, third and fourth bottom panels and portions of said first, second, third, and fourth sidewall panels adjacent to said fold lines between said bottom panels and said sidewall panels and secured to other portions of said outer surface of said second inner layer.

7. A carton blank according to claim 6, **characterized in that** said continuous weakened portion includes a first portion (98) located in said first sidewall panel (6) adjacent to but spaced from a portion of said lower edge and having end portions (90, 96) located in said opposite fold lines (12, 14), a second portion (86) located in said second sidewall panel (8) and extending at an acute angle between one of said end portions (90) and said fold line (56) between said second sidewall panel and said second top panel (48), and a third portion (92) located in said third sidewall panel (4) and extending at an acute angle between the other of said end portions (96) and said fold line (52) between said third sidewall panel and said third top panel (44).

8. A carton blank according to claim 7, **characterized in that** said cut lines (60, 62) between said first and third top panel (46, 44) are spaced apart so that an open space (68) is formed between said first and third top panels.

9. A carton blank according to claim 8, **characterized in that** said second top panel (48) has opposite spaced apart fold lines (78, 80) extending in a direction substantially perpendicular to said fold line (56) between said second top panel and said second sidewall panel (8), **in that** an arcuate shaped score line (82) in said second top panel extends between said opposite spaced apart fold lines, **in that** said third top panel (44) has opposite spaced apart fold lines (70, 72) extending in a direction substantially perpendicular to said fold line (52) between said third top panel and said third sidewall panel (4), **in that** an arcuate shaped score line (74) in said third top panel extends between said opposite spaced apart fold lines, and **in that** said opposite spaced apart fold lines in said second and third top panels are located so that they are in a superposed position when said third top panel is superposed over said second top panel, said arcuate shaped score lines in said second and third top panels extending in opposite directions when said third top panel is superposed over said second top panel.

10. A carton blank according to claim 1, **characterized in that** said weakened portion (170) has opposite end portions (172, 174), and **in that** the distance between said opposite end portions is less than the

distance between one of said opposite spaced part fold lines (80) in said second top panel (48) and the corresponding one of said opposite spaced apart fold lines (72) in said third top panel (44).

11. A dispensing carton including a plurality of sidewall panels folded around parallel fold lines, **characterized in that** said sidewall panels are held in folded relationship by a glue tab panel to form a central body portion, said plurality of sidewall panels comprising at least one sidewall panel (6) having integral second and third sidewall panels (8, 4) joined thereto by opposite fold lines (12, 14) and comprising a rigid material, **in that** said carton (180) further includes an inner insert (120) having at least a first partial sidewall panel (122), a second partial sidewall panel (126) and a third partial sidewall panel (124) superposed over portions of said first, second, and third sidewall panels, said insert having top and bottom edges (132, 134) and comprising a rigid material, said first partial sidewall panel being secured to facing portions of said first sidewall panel at a location adjacent to said bottom edge a continuous fluid impervious liner (140) for said carton having a central body portion (142), a top portion (144), and a bottom portion (148), the liner comprising a flexible fluid impervious material, a plurality of bottom panels (22, 24, 26) integral with said plurality of sidewall panels and joined thereto by fold lines (30, 32, 34), a plurality of top panels (44, 46, 48) integral with said plurality of sidewall panels and joined thereto by fold lines (52, 54, 56), the top edge of the inner insert being adjacent to but spaced from the fold lines joining the sidewall panels and the top panels, said bottom portion and said bottom panels being folded and secured together in a fluid tight relationship, said top portion and said top panels being folded and secured together in a fluid tight relationship, a first continuous weakened portion (98, 86, 92) in portions of said first, second and third sidewall panels, a second continuous weakened portion (170) in said continuous fluid impervious liner in a portion thereof spaced from said top edge, the portion of said fluid impervious liner surrounding said second weakened portion being secured to said insert, and said first and second weakened portions when broken providing an opening and flip top lid (182) for said carton.
12. A dispensing carton according to claim 11, further **characterized by** one of said plurality of top panels comprising a second top panel (48) integral with said second sidewall panel (8), said second top panel having opposite spaced apart fold lines (78, 80) extending in a direction substantially perpendicular to said fold line (56) between said second top panel and said second sidewall panel, an arcuate shaped score line (82) in said second top panel extending between said opposite spaced apart fold lines, an-

other one of said plurality of top panels comprising a third top panel (44) integral with said third sidewall panel (4), said third top panel having opposite spaced apart fold lines (70, 72) extending in a direction substantially perpendicular to said fold line between said third top panel and said third sidewall panel, and an arcuate shaped score line (74) in said third top panel extending between said opposite spaced apart fold lines.

13. A dispensing carton according to claim 12, **characterized in that** said opposite spaced apart fold lines (70, 72, 78, 80) in said second and third top panels (44, 48) are in a superposed position, and said arcuate shaped scored lines (74, 84) in said second and third top panels extend in opposite directions.
14. A dispensing carton according to claim 11, **characterized in that** said top portion (144) of said continuous fluid impervious liner (140) is formed into a closed and folded configuration to form a fin joint having a central body portion and two opposite outwardly extending portions and wherein said central body portion has been folded over one of said two outwardly extending portions, said top panels comprising two relatively long top panels (44, 48) and two relatively short top panels (46, 50), said fin joint having a central section and two opposite end sections, one of said relatively long top panels being superposed over said central section, each of said two opposite end sections being folded and superposed over at least portions of opposite end portions of said one of said relatively long top panels, each of said relatively short top panels being folded over and superposed over one of said folded over two opposite end sections, and the other of said two relatively long top panels being folded over, superposed over, and secured to said folded over two relatively short top panels and the portion of said one of said two relatively long top panels located between said folded over two relatively short top panels.
15. A dispensing carton according to claim 14, **characterized in that** one of said plurality of top panels includes a second top panel (48) integral with said second sidewall panel (8), said second top panel having opposite spaced apart fold lines (78, 80) extending in a direction substantially perpendicular to said fold line between said second top panel and second sidewall panel, **in that** an arcuate shaped score line (84) in said second top panel extends between said opposite spaced apart fold lines, **in that** another one of said plurality of top panels includes a third top panel (44) integral with said third sidewall panel (4), said third top panel having opposite spaced apart fold lines (70, 72) extending in a direction substantially perpendicular to said fold line between said third top panel and said third sidewall

panel, and **in that** an arcuate shaped score line (74) in said third top panel extends between said opposite spaced part fold lines.

16. A dispensing carton according to claim 15, **characterized in that** said opposite spaced apart fold lines (70, 72, 78, 80) in said second and third top panels (4, 8) are in a superposed position, and **in that** said arcuate shaped score lines (74, 84) in said second and third top panels extend in opposite directions. 5 10
17. A dispensing carton according to claim 16, **characterized in that** said two relatively short top panels (46, 50) are folded and superposed over at least portions of said one of said relatively long top panels (44, 48) so that at least portions of said folded over opposite end sections are sandwiched therebetween, and **in that** said one of said relatively long top panels is dimensioned so that at least a portion of one of said folded over end sections is not sandwiched between one of said folded over said two relatively short top panels and said one of said two relatively long top panels. 15 20
18. A dispensing carton according to claim 17, further **characterized by** a flip top lid (182) formed by separating said first and second continuous weakened portions (98, 86, 92, 170), said flip top lid being pivotally mounted on said two relatively long top panels (44, 48) by said superposed fold lines (70, 72, 78, 80) for movement between an opened and a closed position, and apparatus (76, 84) associated with each of said two relatively long top panels for holding said flip top lid in said opened position. 25 30 35
19. A dispensing carton according to claim 18, **characterized in that** said apparatus includes a tab portion (76, 84) in each of said two relatively long top panels (44, 48) formed by breaking said arcuately shaped score lines (74, 84), and at least portions of said tab portions being in a contacting relationship. 40

Patentansprüche

1. Kartonzuschnitt (2) mit einer äußeren Schicht mit einer Mehrzahl von Schnitt- und Falzlinien, die darin ausgebildet sind, um die genannte äußere Schicht in eine Mehrzahl von Feldern zu unterteilen, und mit einer inneren Schicht, **dadurch gekennzeichnet, dass** die äußere Schicht eine erste allgemein rechteckige Lage aus einem starren Material umfasst und mit einer äußeren Oberfläche und einer inneren Oberfläche, wobei die genannte äußere Schicht mindestens ein erstes Seitenwandfeld (6) aufweist, das integral mit einem zweiten Seitenwandfeld (8) und mit einem dritten Seitenwandfeld (4) ausgebildet und durch gegenüberliegende Falzlinien (12, 14) damit 45 50 55

verbunden ist, mit einem ersten oberen Feld (46), das integral ist mit dem genannten ersten Seitenwandfeld und durch eine Falzlinie (54) damit verbunden, mit einem zweiten oberen Feld (48), das integral mit dem genannten zweiten Seitenwandfeld ist und mit diesem durch eine Falzlinie (52) verbunden ist, mit einem dritten oberen Feld (44), das integral mit dem genannten dritten Seitenwandfeld ist und mit diesem durch eine Falzlinie (56) verbunden ist, mit einer ersten inneren Schicht (120), die eine zweite, allgemein rechteckige Lage aus einem starren Material mit einer äußeren Oberfläche und einer inneren Oberfläche umfasst, wobei die genannte zweite, allgemein rechteckige Lage gegenüber von Abschnitten der genannten ersten, zweiten und dritten Seitenwandfelder (6, 8, 4) liegt, wobei die genannte zweite, allgemein rechteckige Lage mindestens ein erstes Teilseitenwandfeld (122) aufweist, das integral mit einem zweiten Teilseitenwandfeld (126) und einem dritten Teilseitenwandfeld (124) ist und durch entgegengesetzte Falzlinien (128, 130) daran gesichert ist, wobei das genannte erste Seitenwandfeld (6) und das genannte erste Teilseitenwandfeld (122) im Wesentlichen die gleiche Breite zwischen den genannten gegenüberliegenden Falzlinien aufweist, wobei die genannte zweite, allgemein rechteckige Lage einen ersten oberen Kantenabschnitt (132) und einen unteren Kantenabschnitt (134) aufweist, wobei zumindest ein Teilstück des genannten ersten Teilseitenwandfelds (122) angrenzend an die genannte untere Kante an mindestens einem Teilstück des genannten ersten Seitenwandfelds (6) gesichert ist, wobei der genannte obere Kantenabschnitt (132) angrenzend und mit Zwischenabstand zu den genannten Falzlinien (52, 54, 56) zwischen den genannten ersten, zweiten und dritten Seitenwandfeldern und den genannten ersten, zweiten und dritten oberen Feldern angeordnet ist, und wobei eine zweite innere Schicht (140) eine allgemein rechteckige Lage aus einem flexiblen, Fluid undurchlässigen Material umfasst und mit einer äußeren Oberfläche und einer inneren Oberfläche, wobei zumindest Teilstücke der genannten äußeren Oberfläche der genannten zweiten inneren Schicht an entgegengesetzten Teilstücken der genannten inneren Oberfläche der genannten äußeren Schicht gesichert sind, wobei zumindest weitere Teilstücke der genannten äußeren Oberfläche der genannten zweiten inneren Schicht zumindest an Teilstücken der genannten inneren Oberfläche der genannten ersten inneren Schicht gesichert sind, wobei die genannte zweite innere Schicht einen schwächeren Abschnitt (170) aufweist, der angrenzend an und mit Zwischenabstand zu dem genannten oberen Kantenabschnitt (132) der genannten ersten inneren Schicht (120) angeordnet ist, wobei Teilstücke der genannten äußeren Oberfläche der genannten zweiten inneren Schicht (140), welche den genannten schwächeren

- Abschnitt umgibt, an gegenüberliegenden Teilstücken der genannten inneren Oberfläche der genannten ersten inneren Schicht gesichert sind, und mit einem ununterbrochenen schwächeren Abschnitt (98, 86, 92) in Teilstücken der genannten ersten, zweiten und dritten Seitenwandfelder (6, 8, 4), um mit dem genannten schwächeren Abschnitt (170) bei der Bildung einer Öffnung in einem aus der genannten äußeren Schicht und den genannten ersten und zweiten inneren Schichten ausgebildeten Karton (180) zusammenzuarbeiten, so dass die genannten schwächeren Abschnitte zerbrochen werden können, so dass eine Öffnung in dem genannten Karton ausgebildet wird, und mit einem oberen Klappdeckel (182) zum Öffnen und Schließen der genannten Öffnung.
2. Kartonzuschnitt nach Anspruch 1, **dadurch gekennzeichnet, dass** der genannte ununterbrochene schwächere Abschnitt ein erstes Teilstück (98) aufweist, das in dem genannten ersten Seitenwandfeld (6) angrenzend an und mit Zwischenabstand zu dem genannten mindestens einen Teilstück des genannten ersten Seitenwandfelds angeordnet ist und Endstücke (90, 96) aufweist, die in den genannten gegenüberliegenden Falzlinien (12, 14) angeordnet sind, mit einem zweiten Teilstück (76), das in dem genannten zweiten Seitenwandfeld (8) angeordnet ist und sich in einem spitzen Winkel zwischen einem der genannten Endstücke (90) und der genannten Falzlinie (56) zwischen dem genannten zweiten Seitenwandfeld und dem genannten oberen Feld (48) erstreckt, und mit einem dritten Teilstück (92), das in dem genannten dritten Seitenwandfeld (4) angeordnet ist und sich in einem spitzen Winkel zwischen dem anderen der genannten Endstücke (96) und der genannten Falzlinie (52) zwischen dem genannten dritten Seitenwandfeld und dem genannten dritten oberen Feld (44) erstreckt.
3. Kartonzuschnitt nach Anspruch 1, **dadurch gekennzeichnet, dass** die genannten Schnittlinien (60, 62) zwischen den genannten ersten und dritten oberen Feldern (46, 44) mit Zwischenabstand angeordnet sind, so dass ein freier Raum (68) zwischen den genannten ersten und dritten oberen Feldern gebildet wird.
4. Kartonzuschnitt nach Anspruch 1, **dadurch gekennzeichnet, dass** das genannte zweite obere Feld (48) gegenüberliegende, mit Zwischenabstand angeordnete Falzlinien (78, 80) aufweist, die sich in eine Richtung erstrecken, die im Wesentlichen senkrecht zu der genannten Falzlinie (56) zwischen dem genannten zweiten oberen Feld und dem genannten zweiten Seitenwandfeld (8) verläuft, und mit einer bogenförmigen Kerblinie (82) in dem genannten zweiten oberen Feld, die sich zwischen den genannten gegenüberliegenden, mit Zwischenabstand angeordneten Falzlinien erstreckt, wobei das genannte dritte obere Feld (44) gegenüberliegende, mit Zwischenabstand angeordnete Falzlinien (70, 72) aufweist, die sich in eine Richtung erstrecken, die im Wesentlichen senkrecht zu der genannten Falzlinie (52) zwischen dem genannten dritten oberen Feld und dem genannten dritten Seitenwandfeld (4) ist, und mit einer bogenförmigen Kerblinie (74) in dem genannten dritten oberen Feld, die sich zwischen den genannten gegenüberliegenden, mit Zwischenabstand angeordneten Falzlinien erstreckt.
5. Kartonzuschnitt nach Anspruch 4, **dadurch gekennzeichnet, dass** die genannten gegenüberliegenden, mit Zwischenabstand angeordneten Falzlinien (78, 80, 70, 72) in den genannten zweiten und dritten oberen Feldern (48, 44) so angeordnet sind, dass sie sich an einer sich überlagernden Position befinden, wenn das genannte dritte obere Feld sich über dem genannten zweiten oberen Feld befindet, und wobei sich die genannten bogenförmigen Kerblinien (84, 74) in den genannten zweiten und dritten oberen Feldern in entgegengesetzte Richtungen erstrecken, wenn das genannte dritte obere Feld das genannte zweite obere Feld überlagert.
6. Kartonzuschnitt nach Anspruch 1, **dadurch gekennzeichnet, dass** der genannte Kartonzuschnitt ein viertes Seitenwandfeld (10) aufweist, das integral mit einem der genannten zweiten und dritten Seitenwandfelder (8, 4) ausgebildet und mit diesem durch eine Falzlinie (16) verbunden ist, mit einem Klebestreifenfeld (18), das integral mit dem genannten vierten Seitenwandfeld ist und mit diesem durch eine Falzlinie (58) verbunden ist, mit ersten, zweiten, dritten und vierten unteren Feldern (24, 26, 22, 28), die entsprechend integral mit den genannten ersten, zweiten, dritten und vierten unteren Seitenwandfeldern sind und mit diesen durch Falzlinien (32, 30, 34, 36) verbunden sind, wobei ein erster Streifen aus einem flexiblen Material (146) zumindest die genannten ersten, zweiten, dritten und vierten oberen Felder und Teilstücke der genannten ersten, zweiten, dritten und vierten Seitenwände angrenzend an die genannten Falzlinien zwischen den genannten oberen Feldern und den genannten Seitenwandfeldern überlagert, angrenzend an die genannten Falzlinien zwischen den genannten oberen Feldern und den genannten Seitenwandfeldern und gesichert an Teilstücke der genannten äußeren Oberfläche der genannten zweiten inneren Schicht, und mit einem zweiten Streifen aus einem flexiblen Material (150), der zumindest die genannten ersten, zweiten, dritten und vierten unteren Felder und Teilstücke der genannten ersten, zweiten, dritten und vierten Seitenwandfelder angrenzend an die genannten Falzlinien zwischen den genannten unteren Feldern und den

genannten Seitenwandfeldern überlagert und gesichert an anderen Teilstücken der genannten äußeren Oberfläche der genannten zweiten inneren Schicht.

7. Kartonzuschnitt nach Anspruch 6, **dadurch gekennzeichnet, dass** der genannte ununterbrochene schwächere Abschnitt ein erstes Teilstück (98) aufweist, das sich in dem genannten ersten Seitenwandfeld (6) angrenzend an und mit Zwischenabstand zu einem Teilstück der genannten unteren Kante angeordnet befindet und Endstücke (90, 96) aufweist, die in den genannten gegenüberliegenden Falzlinien (12, 14) angeordnet sind, mit einem zweiten Teilstück (86), das in dem genannten zweiten Seitenwandfeld (8) angeordnet ist und sich in einem spitzen Winkel zwischen einem der genannten Endstücke (90) und der genannten Falzlinie (56) zwischen dem genannten zweiten Seitenwandfeld und dem genannten zweiten oberen Feld (48) erstreckt, und mit einem dritten Teilstück (92), das in dem genannten dritten Seitenwandfeld (4) angeordnet ist und sich in einem spitzen Winkel zwischen dem anderen der genannten Endstücke (96) und der genannten Falzlinie (52) zwischen dem genannten dritten Seitenwandfeld und dem genannten dritten oberen Feld (44) erstreckt.
8. Kartonzuschnitt nach Anspruch 7, **dadurch gekennzeichnet, dass** die genannten Schnitlinien (60, 62) zwischen dem genannten ersten und dritten oberen Feld (46, 44) mit Zwischenabstand angeordnet sind, so dass ein freier Raum (68) zwischen den genannten ersten und dritten oberen Feldern gebildet wird.
9. Kartonzuschnitt nach Anspruch 8, **dadurch gekennzeichnet, dass** das genannte zweite obere Feld (48) gegenüberliegende, mit Zwischenabstand angeordnete Falzlinien (78, 80) aufweist, die sich in eine Richtung erstrecken, die im Wesentlichen senkrecht zu der genannten Falzlinie (56) zwischen dem genannten zweiten oberen Feld und dem genannten zweiten Seitenwandfeld (8) ist, wobei sich eine bogenförmige Kerblinie (82) in dem genannten zweiten oberen Feld zwischen den genannten mit Zwischenabstand angeordneten Falzlinien erstreckt, wobei das genannte dritte obere Feld (44) gegenüberliegende, mit Zwischenabstand angeordnete Falzlinien (70, 72) aufweist, die sich in eine Richtung erstrecken, die im Wesentlichen senkrecht zu der genannten Falzlinie (52) zwischen dem genannten dritten oberen Feld und dem genannten dritten Seitenwandfeld (4) ist, wobei sich eine bogenförmige Kerblinie (74) in dem genannten dritten oberen Feld zwischen den genannten gegenüberliegenden, mit Zwischenabstand angeordneten Falzlinien erstreckt, und wobei die genannten gegenüberliegenden, mit

Zwischenabstand angeordneten Falzlinien in den genannten zweiten und dritten oberen Feldern so angeordnet sind, dass sie sich an einer sich überlagernden Position befinden, wenn das genannte dritte obere Feld das genannte zweite obere Feld überlagert, wobei sich die genannten bogenförmigen Kerblinien in den genannten zweiten und dritten oberen Feldern in entgegengesetzte Richtungen erstrecken, wenn das genannte dritte obere Feld das genannte zweite obere Feld überlagert.

10. Kartonzuschnitt nach Anspruch 1, **dadurch gekennzeichnet, dass** der genannte schwächere Abschnitt (170) gegenüberliegende Endstücke (172, 174) aufweist, und wobei der Abstand zwischen den genannten gegenüberliegenden Endstücken kleiner ist als der Abstand zwischen einer der genannten entgegengesetzten, mit Zwischenabstand angeordneten Falzlinien (80) in dem genannten zweiten oberen Feld (48) und der entsprechenden einen der genannten entgegengesetzten, mit Zwischenabstand angeordneten Falzlinien (72) in dem genannten dritten oberen Feld (44).
11. Spenderkarton mit einer Mehrzahl von Seitenwandfeldern, die um parallele Falzlinien gefalzt sind, **dadurch gekennzeichnet, dass** die genannten Seitenwandfelder durch ein Klebestreifenfeld in einer gefalteten Beziehung gehalten werden, so dass ein zentraler Körperabschnitt gebildet wird, wobei die genannte Mehrzahl von Seitenwandfeldern mindestens ein Seitenwandfeld (6) mit integralen zweiten und dritten Seitenwandfeldern (8, 4) umfasst, die damit durch entgegengesetzte Falzlinien (12, 14) verbunden sind und aus einem starren Material bestehen, wobei der genannte Karton (180) ferner einen inneren Einsatz (120) aufweist, der zumindest ein erstes Teilseitenwandfeld (122), ein zweites Teilseitenwandfeld (126) und ein drittes Teilseitenwandfeld (124) aufweist, welche Teilstücke der genannten ersten, zweiten und dritten Seitenwandfelder überlagern, wobei der genannte Einsatz obere und untere Kanten (132, 134) aufweist und ein starres Material umfasst, wobei das genannte erste Teilseitenwandfeld an dazu ausgerichteten Teilstücken des genannten ersten Seitenwandfelds an einer Position angrenzend an die genannte untere Kante gesichert ist, wobei eine ununterbrochene, Fluid undurchlässige Abdeckung (140) für den genannten Karton ein zentrales Körperteilstück (142), ein oberes Teilstück (144) und ein unteres Teilstück (148) aufweist, wobei die Abdeckung mindestens ein flexibles, Fluid undurchlässiges Material umfasst, wobei eine Mehrzahl von unteren Feldern (22, 24, 26) integral mit der genannten Mehrzahl von Seitenwandfeldern ausgebildet und damit durch Falzlinien (30, 32, 34) verbunden ist, wobei eine Mehrzahl von oberen Feldern (44, 46, 48) integral mit der genannten Mehrzahl von

Seitenwandfeldern ausgebildet und damit durch Falzlinien (52, 54, 56) verbunden ist, wobei die obere Kante des inneren Einsatzes angrenzend an und mit Zwischenabstand zu den Falzlinien angeordnet ist, welche die Seitenwandfelder und die oberen Felder miteinander verbinden, wobei der genannte untere Abschnitt und die genannten unteren Felder in einem fluiddichten Verhältnis gefaltet und miteinander verbunden sind, mit einem ersten ununterbrochenen schwächeren Abschnitt (98, 86, 92) in Teilstücken der genannten ersten, zweiten und dritten Seitenwandfelder, mit einem zweiten ununterbrochenen schwächeren Abschnitt (170) in der genannten ununterbrochenen, Fluid undurchlässigen Abdeckung in einem Teilstück dessen, mit Zwischenabstand zu der genannten obere Kante angeordnet" wobei das Teilstück der genannten Fluid undurchlässigen Abdeckung, welches den genannten zweiten schwächeren Abschnitt umgibt, an dem genannten Einsatz gesichert ist, und wobei die genannten ersten und zweiten Abschnitte, wenn sie zerbrochen werden, eine Öffnung und einen oberen Klappdeckel (182) für den genannten Karton bereitstellen.

12. Spenderkarton nach Anspruch 11, ferner **dadurch gekennzeichnet, dass** ein Feld der genannten Mehrzahl von oberen Feldern ein zweites oberes Feld (48) umfasst, das integral mit dem genannten zweiten Seitenwandfeld (8) ist, wobei das genannte zweite obere Feld gegenüberliegende, mit Zwischenabstand angeordnete Falzlinien (78, 80) aufweist, die sich in eine Richtung erstrecken, die im Wesentlichen senkrecht ist zu der genannten Falzlinie (56) zwischen dem genannten zweiten oberen Feld und dem genannten zweiten Seitenwandfeld, wobei sich eine bogenförmige Kerblinie (82) in dem genannten zweiten oberen Feld zwischen den genannten gegenüberliegenden, mit Zwischenabstand angeordneten Falzlinien erstreckt, wobei ein anderes Feld der genannten Mehrzahl von oberen Feldern ein drittes oberes Feld (44) umfasst, das integral mit dem genannten dritten Seitenwandfeld (4) ausgebildet ist, wobei das genannte dritte obere Feld gegenüberliegende, mit Zwischenabstand angeordnete Falzlinien (70, 72) aufweist, die sich in eine Richtung erstrecken, die im Wesentlichen senkrecht ist zu der genannten Falzlinie zwischen dem genannten dritten oberen Feld und dem genannten dritten Seitenwandfeld, und wobei sich eine bogenförmige Kerblinie (74) in dem genannten dritten oberen Feld zwischen den genannten gegenüberliegenden, mit Zwischenabstand angeordneten Falzlinien erstreckt.
13. Spenderkarton nach Anspruch 12, ferner **dadurch gekennzeichnet, dass** sich die genannten gegenüberliegenden, mit Zwischenabstand angeordneten Falzlinien (70, 72, 78, 80) in den genannten zweiten

und dritten oberen Feldern (44, 48) an einer sich überlagernden Position befinden, und wobei sich die genannten bogenförmigen Kerblinien (74, 84) in den genannten zweiten und dritten oberen Feldern in entgegengesetzte Richtungen erstrecken.

14. Spenderkarton nach Anspruch 11, ferner **dadurch gekennzeichnet, dass** der obere Abschnitt (144) der genannten ununterbrochenen, Fluid undurchlässigen Abdeckung (140) in einer geschlossenen und gefalteten Konfiguration ausgebildet ist, so dass eine Flossenverbindung mit einem zentralen Körperteilstück und zwei gegenüberliegenden, sich auswärts erstreckenden Teilstücken gebildet wird, und wobei das genannte zentrale Körperteilstück über eins der genannten beiden sich auswärts erstreckenden Teilstücke gefaltet ist, wobei die genannten oberen Felder zwei verhältnismäßig lange obere Felder (44, 48) und zwei verhältnismäßig kurze obere Felder (46, 50) umfassen, wobei die genannte Flossenverbindung einen zentralen Abschnitt und zwei gegenüberliegende Endabschnitte aufweist, wobei eines der genannten verhältnismäßig langen oberen Felder den genannten zentralen Abschnitt überlagert, wobei jeder der genannten beiden gegenüberliegenden Endabschnitte über zumindest Teilstücke gegenüberliegender Endstücke des genannten einen der genannten verhältnismäßig langen oberen Felder gefaltet ist und diese überlagert, wobei jedes der verhältnismäßig kurzen oberen Felder über einen der genannten gefalteten beiden gegenüberliegenden Endabschnitte gefaltet ist oder diesen überlagert, und wobei das andere der genannten zwei verhältnismäßig langen oberen Felder über zwei verhältnismäßig kurze obere Felder gefaltet ist, diese überlagert und an diesen gesichert ist sowie an das Teilstück des genannten einen der genannten zwei verhältnismäßig langen oberen Felder, das zwischen den genannten gefalteten beiden verhältnismäßig kurzen oberen Feldern angeordnet ist.

15. Spenderkarton nach Anspruch 14, ferner **dadurch gekennzeichnet, dass** ein Feld der genannten Mehrzahl von oberen Feldern ein zweites oberes Feld (48) aufweist, das integral mit dem genannten zweiten Seitenwandfeld (8) ausgebildet ist, wobei das genannte zweite obere Feld gegenüberliegende, mit Zwischenraum angeordnete Falzlinien (78, 80) aufweist, die sich in eine Richtung erstrecken, die im Wesentlichen senkrecht zu der genannten Falzlinie zwischen dem genannten zweiten oberen Feld und dem zweiten Seitenwandfeld erstreckt, wobei sich eine bogenförmige Kerblinie (84) in dem genannten zweiten oberen Feld zwischen den genannten gegenüberliegenden, mit Zwischenabstand angeordneten Falzlinien erstreckt, wobei ein weiteres Feld der genannten Mehrzahl von oberen Feldern

ein drittes oberes Feld (44) aufweist, das integral mit dem genannten dritten Seitenwandfeld (4) ausgebildet ist, wobei das genannte dritte obere Feld gegenüberliegende, mit Zwischenabstand angeordnete Falzlinien (70, 72) aufweist, die sich in eine Richtung erstrecken, die im Wesentlichen senkrecht zu der genannten Falzlinie zwischen dem genannten dritten oberen Feld und dem genannten dritten Seitenwandfeld ist, und wobei sich eine bogenförmige Kerblinie (74) in dem genannten dritten oberen Feld zwischen den genannten gegenüberliegenden, mit Zwischenabstand angeordneten Falzlinien erstreckt.

16. Spenderkarton nach Anspruch 15, ferner **dadurch gekennzeichnet, dass** sich die genannten gegenüberliegenden, mit Zwischenabstand angeordneten Falzlinien (70, 72, 78, 80) in den genannten zweiten und dritten oberen Feldern (4, 8) an einer sich überlagernden Position befinden, und wobei sich die genannten bogenförmigen Kerblinien (74, 84) in den genannten zweiten und dritten Feldern in entgegengesetzte Richtungen erstrecken.

17. Spenderkarton nach Anspruch 16, ferner **dadurch gekennzeichnet, dass** die genannten zwei verhältnismäßig kurzen oberen Felder (46, 50) über zumindest Teilstück des genannten einen Felds der genannten verhältnismäßig langen oberen Felder (44, 48) gefaltet sind und diese überlagern, so dass zumindest Teilstücke der genannten gefalteten gegenüberliegenden Endabschnitte in einer Sandwich-Anordnung dazwischen angeordnet sind, und wobei das genannte eine Feld der genannten verhältnismäßig langen oberen Felder so bemessen ist, dass zumindest ein Teilstück eines der genannten gefalteten Endabschnitte nicht in Sandwich-Anordnung zwischen einem der genannten gefalteten zwei verhältnismäßig kurzen oberen Felder und dem genannten einen Feld der genannten zwei verhältnismäßig langen oberen Felder angeordnet ist.

18. Spenderkarton nach Anspruch 17, ferner **gekennzeichnet durch** einen oberen Klappdeckel (182), der **durch** das Separieren der genannten ersten und zweiten ununterbrochenen schwächeren Abschnitte (98, 86, 92, 170) ausgebildet ist, wobei der genannte obere Klappdeckel schwenkbar an den genannten zwei verhältnismäßig langen oberen Feldern (44, 48) **durch** die genannten überlagernden Falzlinien (70, 72, 78, 80) angebracht ist, für eine Bewegung zwischen einer geöffneten und geschlossenen Position, und wobei mit einer Vorrichtung (76, 84), die jedem der genannten zwei verhältnismäßig langen Felder zugeordnet ist, zum Halten des genannten oberen Klappdeckels an der genannten offenen Position.

19. Spenderkarton nach Anspruch 18, **dadurch ge-**

kennzeichnet, dass die genannte Vorrichtung einen Streifenabschnitt (76, 84) in jedem der genannten zwei verhältnismäßig langen oberen Felder (44, 48) aufweist, der durch Zerbrechen der genannten bogenförmigen Kerblinien (74, 84) gebildet wird, und wobei sich zumindest Teilstücke der genannten Streifenabschnitte in einem sich berührenden Verhältnis zueinander stehen.

Revendications

1. Découpe de carton (2) comprenant une couche externe ayant une pluralité de lignes de découpe et de pliage qui y sont formées pour diviser ladite couche externe en une pluralité de panneaux et une couche interne, **caractérisée en ce que** la couche externe comprend une première feuille généralement rectangulaire d'un matériau rigide et ayant une surface externe et une surface interne, ladite couche externe ayant au moins un premier panneau latéral (6) solidaire d'un deuxième panneau latéral (8) et d'un troisième panneau latéral (4) et joint à ceux-ci par des lignes de pliage opposées (12, 14), un premier panneau supérieur (46) solidaire dudit premier panneau latéral et joint à celui-ci par une ligne de pliage (54), un deuxième panneau supérieur (48) solidaire dudit deuxième panneau latéral et joint à celui-ci par une ligne de pliage (52), un troisième panneau supérieur (44) solidaire dudit troisième panneau latéral et joint à celui-ci par une ligne de pliage (56), une première couche interne (120) comprenant une seconde feuille généralement rectangulaire d'un matériau rigide ayant une surface externe et une surface interne, ladite seconde feuille généralement rectangulaire étant opposée à des parties desdits premier, deuxième et troisième panneaux latéraux (6, 8, 4), ladite seconde feuille généralement rectangulaire ayant au moins un premier panneau latéral partiel (122) solidaire d'un deuxième panneau latéral partiel (126) et d'un troisième panneau latéral partiel (124) et fixé à ceux-ci par des lignes de pliage opposées (128, 130), ledit premier panneau latéral (6) et ledit premier panneau latéral partiel (122) ayant sensiblement la même largeur entre leurs lignes de pliage opposées, ladite seconde feuille généralement rectangulaire ayant une partie de bord supérieure (132) et une partie de bord inférieure (134), au moins une partie dudit premier panneau latéral partiel (122) adjacente audit bord inférieur étant fixée à au moins une partie dudit premier panneau latéral (6), ladite partie de bord supérieure (132) étant située à côté de mais espacée desdites lignes de pliage (52, 54, 56) entre lesdits premier, deuxième et troisième panneaux latéraux, et **en ce qu'**une seconde couche interne (140) comprend une feuille généralement rectangulaire d'un matériau souple, imperméable aux fluides et ayant une surface externe et une sur-

- face interne, au moins des parties de ladite surface extérieure de ladite seconde couche interne étant fixées à des parties opposées de ladite surface interne de ladite couche externe, au moins d'autres parties de ladite surface externe de ladite seconde couche interne étant fixées à au moins des parties de ladite surface interne de ladite première couche interne, ladite seconde couche interne ayant une partie affaiblie (170) située à côté, mais séparée de ladite partie de bord supérieure (132) de ladite première couche interne (120), des parties de ladite surface externe de ladite seconde couche interne (140) entourant ladite partie affaiblie étant fixées à des parties opposées de ladite surface interne de ladite première couche interne, et une partie affaiblie continue (98, 86, 92) dans des parties desdits premier, deuxième et troisième panneaux latéraux (6, 8, 4) pour coopérer avec ladite partie affaiblie (170) en formant un ouverture dans un carton (180) formé à partir de ladite couche externe et desdites première et seconde couches internes de telle sorte que lesdites parties affaiblies puissent être brisées pour former une ouverture dans ledit carton et un couvercle à abattant (182) pour ouvrir ou fermer ladite ouverture.
2. Découpe de carton selon la revendication 1, **caractérisée en ce que** ladite partie affaiblie continue comprend une première partie (98) située dans ledit premier panneau latéral (6) adjacente à mais espacée de ladite au moins une partie dudit premier panneau latéral et ayant des parties d'extrémité (90, 96) situées dans lesdites lignes de pliage opposées (12, 14), une seconde partie (86) située dans ledit deuxième panneau latéral (8) et s'étendant à un angle aigu entre l'une desdites parties d'extrémité (90) et ladite ligne de pliage (56) entre ledit deuxième panneau latéral et ledit deuxième panneau supérieur (48), et une troisième partie (92) située dans ledit troisième panneau latéral (4) et s'étendant à un angle aigu entre l'autre desdites parties d'extrémité (96) et ladite ligne de pliage (52) entre ledit troisième panneau latéral et ledit troisième panneau supérieur (44).
 3. Découpe de carton selon la revendication 1, **caractérisée en ce que** lesdites lignes de découpe (60, 62) entre lesdits premier et troisième panneaux supérieurs (46, 44) sont espacées de telle sorte qu'un espace ouvert (68) est formé entre lesdits premier et troisième panneaux supérieurs.
 4. Découpe de carton selon la revendication 1, **caractérisée en ce que** ledit deuxième panneau supérieur (48) a des lignes de pliage espacées opposées (78, 80) s'étendant dans un sens sensiblement perpendiculaire à ladite ligne de pliage (56) entre ledit deuxième panneau supérieur et ledit deuxième panneau latéral (8), et une ligne de repère de forme arquée (82) dans ledit deuxième panneau supérieur s'étendant entre lesdites lignes de pliage espacées opposées, **en ce que** ledit troisième panneau supérieur (44) a des lignes de pliage espacées opposées (70, 72) s'étendant dans un sens sensiblement perpendiculaire à ladite ligne de pliage (52) entre ledit troisième panneau supérieur et ledit troisième panneau latéral (4), et une ligne de repère de forme arquée (74) dans ledit troisième panneau supérieur s'étendant entre lesdites lignes de pliage espacées opposées.
 5. Découpe de carton selon la revendication 4, **caractérisée en ce que** lesdites lignes de pliage espaces opposées (78, 80, 70, 72) dans lesdits deuxième et troisième panneaux supérieurs (48, 44) sont situées de sorte à être dans une position superposée lorsque ledit troisième panneau supérieur est superposé sur ledit deuxième panneau supérieur, et lesdites lignes de repère de forme arquée (84, 74) dans lesdits deuxième et troisième panneaux supérieurs s'étendent dans des sens opposés lorsque ledit troisième panneau supérieur est superposé sur ledit deuxième panneau supérieur.
 6. Découpe de carton selon la revendication 1, **caractérisée en ce que** ladite découpe de carton a un quatrième panneau latéral (10) solidaire de l'un desdits deuxième et troisième panneaux latéraux (8, 4) et joint à ceux-ci par une ligne de pliage (16), un panneau à onglets à coller (18) solidaire dudit quatrième panneau latéral (10) et joint à celui-ci par une ligne de pliage, un quatrième panneau supérieur (50) solidaire dudit quatrième panneau latéral et joint à celui-ci par une ligne de pliage (58), des premier, deuxième, troisième et quatrième panneaux de fond (24, 26, 22, 28) solidaires respectivement desdits premier, deuxième, troisième et quatrième panneaux latéraux et joints à ceux-ci par des lignes de pliage (32, 30, 34, 36), une première bande d'un matériau souple (146) superposée sur au moins lesdits premier, deuxième, troisième et quatrième panneaux supérieurs et des parties desdits premier, deuxième, troisième et quatrième panneaux latéraux adjacentes auxdites lignes de pliage entre lesdits panneaux supérieurs et lesdits panneaux latéraux et fixées à des parties de ladite surface externe de ladite seconde couche interne, et une seconde bande d'un matériau souple (150) superposée sur au moins lesdits premier, deuxième, troisième et quatrième panneaux de fond et des parties desdits premier, deuxième, troisième et quatrième panneaux latéraux adjacentes auxdites lignes de pliage entre lesdits panneaux de fond et lesdits panneaux latéraux et fixées à d'autres parties de ladite surface externe de ladite seconde couche interne.
 7. Découpe de carton selon la revendication 6, **carac-**

- térisée en ce que ladite partie affaiblie continue comprend une première partie (98) située dans ledit premier panneau latéral (6) adjacente à mais espacée d'une partie dudit bord inférieur et ayant des parties d'extrémité (90, 96) situées dans lesdites lignes de pliage opposées (12, 14), une seconde partie (86) située dans ledit deuxième panneau latéral (8) et s'étendant à un angle aigu entre l'une desdites parties d'extrémité (90) et ladite ligne de pliage (56) entre ledit deuxième panneau latéral et ledit deuxième panneau supérieur (48), et une troisième partie (92) située dans ledit troisième panneau latéral (4) et s'étendant à un angle aigu entre l'autre desdites parties d'extrémité (96) et ladite ligne de pliage (52) entre ledit troisième panneau latéral et ledit troisième panneau supérieur (44).
8. Découpe de carton selon la revendication 7, **caractérisée en ce que** lesdites lignes de découpe (60, 62) entre lesdits premier et troisième panneaux supérieurs (46, 44) sont espacées de telle sorte qu'un espace ouvert (68) est formé entre lesdits premier et troisième panneaux supérieurs.
9. Découpe de carton selon la revendication 8, **caractérisée en ce que** ledit deuxième panneau supérieur (48) a des lignes de pliage espacées opposées (78, 80) s'étendant dans un sens sensiblement perpendiculaire à ladite ligne de pliage (56) entre ledit deuxième panneau supérieur et ledit deuxième panneau latéral (8), **en ce qu'**une ligne de repère de forme arquée (82) dans ledit second panneau supérieur s'étend entre lesdites lignes de pliage espacées opposées, **en ce que** ledit troisième panneau supérieur (44) a des lignes de pliage espacées opposées (70, 72) s'étendant dans un sens sensiblement perpendiculaire à ladite ligne de pliage (52) entre ledit troisième panneau supérieur et ledit troisième panneau latéral (4), **en ce qu'**une ligne de repère de forme arquée (74) dans ledit troisième panneau supérieur s'étend entre lesdites lignes de pliage espacées opposées, et **en ce que** lesdites lignes de pliage espacées opposées dans lesdits deuxième et troisième panneaux supérieurs sont situées de sorte à être dans une position superposée lorsque ledit troisième panneau supérieur est superposé sur ledit deuxième panneau supérieur, lesdites lignes de repère de forme arquée dans lesdits deuxième et troisième panneaux supérieurs s'étendant dans des sens opposés lorsque ledit troisième panneau supérieur est superposé sur ledit deuxième panneau supérieur.
10. Découpe de carton selon la revendication 1, **caractérisée en ce que** ladite partie affaiblie (170) a des parties d'extrémité opposées (172, 174), et **en ce que** la distance entre lesdites parties d'extrémité opposées est inférieure à la distance entre l'une desdites lignes de pliage espacées opposées (80) dans ledit deuxième panneau supérieur (48) et celle correspondante desdites lignes de pliage espacées opposées (72) dans ledit troisième panneau supérieur (44).
11. Carton de distribution comprenant une pluralité de panneaux latéraux repliés autour de lignes de pliage parallèles, **caractérisé en ce que** lesdits panneaux latéraux sont tenus en relation pliée par un panneau à onglets à coller pour former une partie de corps centrale, ladite pluralité de panneaux latéraux comprenant au moins un panneau latéral (6) ayant des deuxième et troisième panneaux latéraux (8, 4) joints à celui-ci par des lignes de pliage opposées (12, 14) et comprenant un matériau rigide, **en ce que** ledit carton (180) comprend en outre une pièce rapportée interne (120) ayant au moins un premier panneau latéral partiel (122), un deuxième panneau latéral partiel (126) et un troisième panneau latéral partiel (124) superposés sur des parties desdits premier, deuxième et troisième panneaux latéraux; ladite pièce rapportée ayant des bords supérieur et inférieur (132, 134) et comprenant un matériau rigide, ledit premier panneau latéral partiel étant fixé à des parties faisant face dudit premier panneau latéral à un emplacement adjacent audit bord inférieur, une doublure continue imperméable aux fluides (140) pour ledit carton ayant une partie de corps centrale (142), une partie supérieure (144), et une partie inférieure (148), la doublure comprenant un matériau souple imperméable aux fluides, une pluralité de panneaux de fond (22, 24, 26) solidaires de ladite pluralité de panneaux latéraux et joints à ceux-ci par des lignes de pliage (30, 32, 34), une pluralité de panneaux supérieurs (44, 46, 48) solidaires de ladite pluralité de panneaux latéraux et joints à ceux-ci par des lignes de pliage (52, 54, 56), le bord supérieur de la pièce rapportée interne étant adjacent à mais espacé des lignes de pliage joignant les panneaux latéraux et les panneaux supérieurs, ladite partie inférieure et lesdits panneaux de fond étant pliés et fixés ensemble dans une relation étanche, ladite partie supérieure et lesdits panneaux supérieurs étant pliés et fixés ensemble dans une relation étanche, une première partie affaiblie continue (98, 86, 92) dans des parties desdits premier, deuxième et troisième panneaux latéraux, une seconde partie affaiblie continue (170) dans ladite doublure continue imperméable aux fluides dans une partie de celle-ci espacée dudit bord supérieur, la partie de ladite doublure imperméable aux fluides entourant ladite seconde partie affaiblie étant fixée à ladite pièce rapportée, et lesdites première et deuxième parties affaiblies une fois cassées offrant une ouverture et un couvercle à abattant (182) pour ledit carton.
12. Carton de distribution selon la revendication 11, **ca-**

- ractérisé en outre en ce que** l'un de ladite pluralité de panneaux supérieurs comprend un deuxième panneau supérieur (48) solidaire dudit deuxième panneau latéral (8), ledit second panneau supérieur ayant des lignes de pliage espacées opposées (78, 80) s'étendant dans un sens sensiblement perpendiculaire à ladite ligne de pliage (56) entre ledit deuxième panneau supérieur et ledit deuxième panneau latéral, une ligne de repère de forme arquée (82) dans ledit deuxième panneau supérieur s'étendant entre lesdites lignes de pliage espacées opposées, **en ce qu'**un autre de ladite pluralité de panneaux supérieurs comprend un troisième panneau supérieur (44) solidaire dudit troisième panneau latéral (4), ledit troisième panneau supérieur ayant des lignes de pliage espacées opposées (70, 72) s'étendant dans un sens sensiblement perpendiculaire à ladite ligne de pliage entre ledit troisième panneau supérieur et ledit troisième panneau latéral, et une ligne de repère de forme arquée (74) dans ledit troisième panneau supérieur s'étendant entre lesdites lignes de pliage espacées opposées.
13. Carton de distribution selon la revendication 12, **caractérisé en ce que** lesdites lignes de pliage espacées opposées (70, 72, 78, 80) dans lesdits deuxième et troisième panneaux supérieurs (44, 48) sont dans une position superposée, et lesdites lignes de repère de forme arquée (74, 84) dans lesdits deuxième et troisième panneaux supérieurs s'étendent dans des sens opposés.
14. Carton de distribution selon la revendication 11, **caractérisé en ce que** ladite partie supérieure (144) de ladite doublure continue imperméable aux fluides (140) est formée dans une configuration fermée et repliée pour former un joint à ailette ayant une partie de corps centrale et deux parties opposées s'étendant vers l'extérieur et dans lequel ladite partie de corps centrale a été repliée sur l'une desdites deux parties s'étendant vers l'extérieur, lesdits panneaux supérieurs comprenant deux panneaux supérieurs relativement longs (44, 48) et deux panneaux supérieurs relativement courts (46, 50), ledit joint à ailette ayant une section centrale et deux sections d'extrémité opposées, l'un desdits panneaux supérieurs relativement longs étant superposé sur ladite section centrale, chacune desdites deux sections d'extrémité opposées étant pliée et superposée sur au moins des parties d'extrémité opposées dudit panneau supérieur relativement long, chacun desdits panneaux supérieurs relativement courts étant replié et superposé sur l'une desdites deux sections d'extrémité opposées repliées, et l'autre desdits deux panneaux supérieurs relativement longs étant replié sur, superposé sur et fixé auxdits deux panneaux supérieurs relativement courts repliés et la partie d'un desdits deux panneaux supérieurs relativement
- longs situés entre lesdits deux panneaux supérieurs relativement courts repliés.
15. Carton de distribution selon la revendication 11, **caractérisé en ce que** l'un de ladite pluralité de panneaux supérieurs comprend un deuxième panneau supérieur (48) solidaire dudit deuxième panneau latéral (8), ledit deuxième panneau supérieur ayant des lignes de pliage espacées opposées (78, 80) s'étendant dans un sens sensiblement perpendiculaire à ladite ligne de pliage entre ledit deuxième panneau supérieur et ledit deuxième panneau latéral, **en ce qu'**une ligne de repère de forme arquée (84) dans ledit deuxième panneau supérieur s'étend entre lesdites lignes de pliage espacées opposées, **en ce qu'**une autre de ladite pluralité de panneaux supérieurs comprend un troisième panneau supérieur (44) solidaire dudit troisième panneau latéral (4), ledit troisième panneau supérieur ayant des lignes de pliage espacées opposées (70, 72) s'étendant dans un sens sensiblement perpendiculaire à ladite ligne de pliage entre ledit troisième panneau supérieur et ledit troisième panneau latéral, et **en ce qu'**une ligne de repère de forme arquée (74) dans ledit troisième panneau supérieur s'étendant entre lesdites lignes de pliage espacées opposées.
16. Carton de distribution selon la revendication 15, **caractérisé en ce que** lesdites lignes de pliage espacées opposées (70, 72, 78, 80) dans lesdits deuxième et troisième panneaux supérieurs (4, 8) sont dans une position superposée, et **en ce que** lesdites lignes de repère de forme arquée (74, 84) dans lesdits deuxième et troisième panneaux supérieurs s'étendent dans des sens opposés.
17. Carton de distribution selon la revendication 16, **caractérisé en ce que** lesdits deux panneaux supérieurs relativement courts (46, 50) sont pliés et superposés sur au moins des parties de l'un desdits panneaux supérieurs relativement longs (44, 48) de sorte qu'au moins des parties desdites sections d'extrémité opposées repliées sont prises en sandwich entre eux, et **en ce que** l'un desdits panneaux supérieurs relativement longs est dimensionné de sorte qu'au moins une partie de l'une desdites sections d'extrémité repliées n'est pas prise en sandwich entre l'un desdits deux panneaux supérieurs relativement courts et l'un desdits panneaux supérieurs relativement longs.
18. Carton de distribution selon la revendication 17, **caractérisé en outre par** un couvercle à abattant (182) formé en séparant lesdites première et deuxième parties continues affaiblies (98, 86, 92, 170), ledit couvercle à abattant étant monté de manière pivotante sur lesdits deux panneaux supérieurs relativement longs (44, 48) par lesdites lignes de pliage su-

perposées (70, 72, 78, 80) pour un mouvement entre une position ouverte et fermée, et un appareil (76, 84) associé à chacun desdits deux panneaux supérieurs relativement longs pour tenir ledit couvercle à abattant dans ladite position ouverte.

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19. Carton de distribution selon la revendication 18, **caractérisé en ce que** ledit appareil comprend une partie à onglet (76, 84) dans chacun desdits deux panneaux supérieurs relativement longs (44, 48) formés en cassant lesdites lignes de repère de forme arquée (74, 84), et au moins des parties desdites parties à onglet étant dans une relation de contact.

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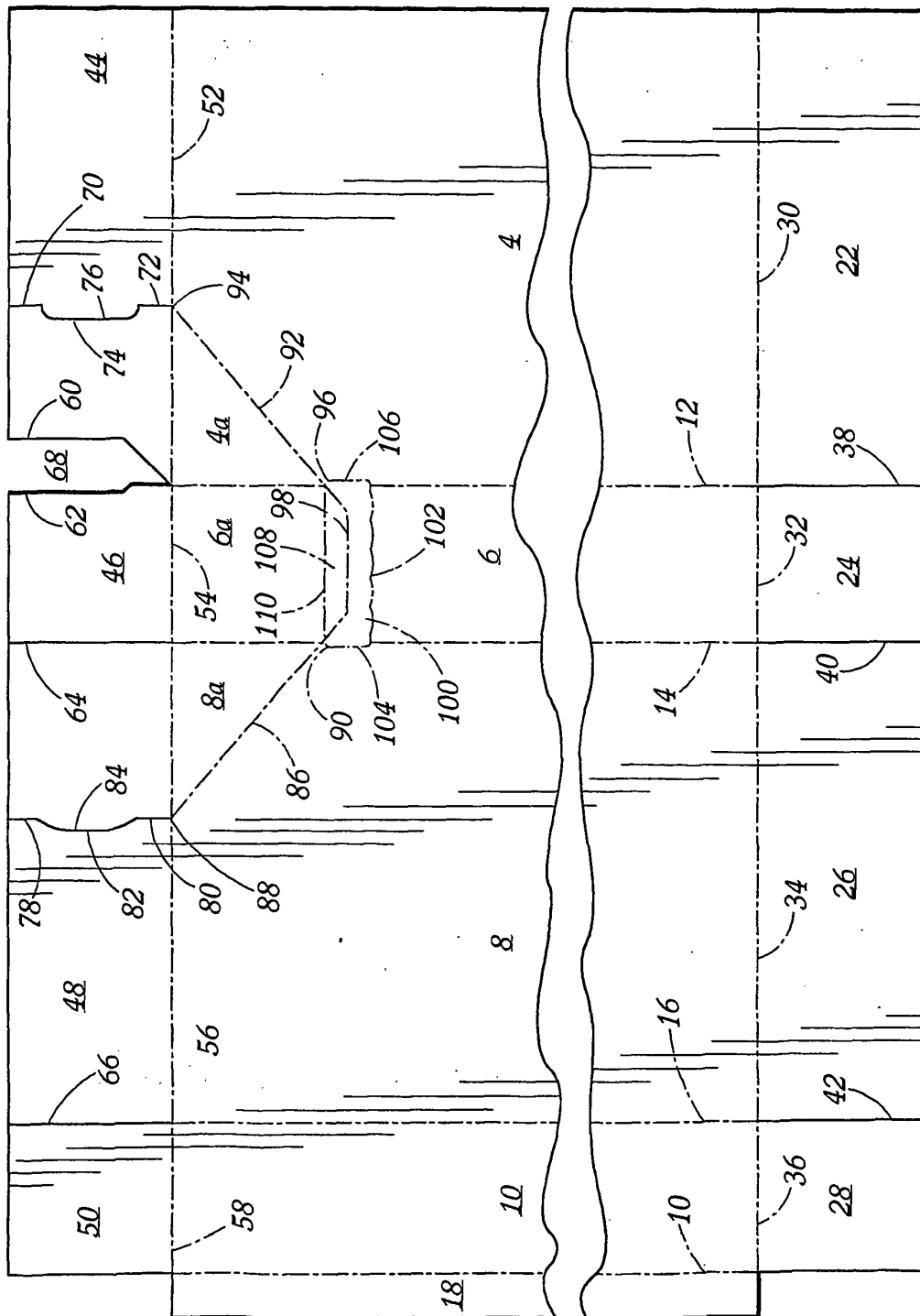


Figure 1



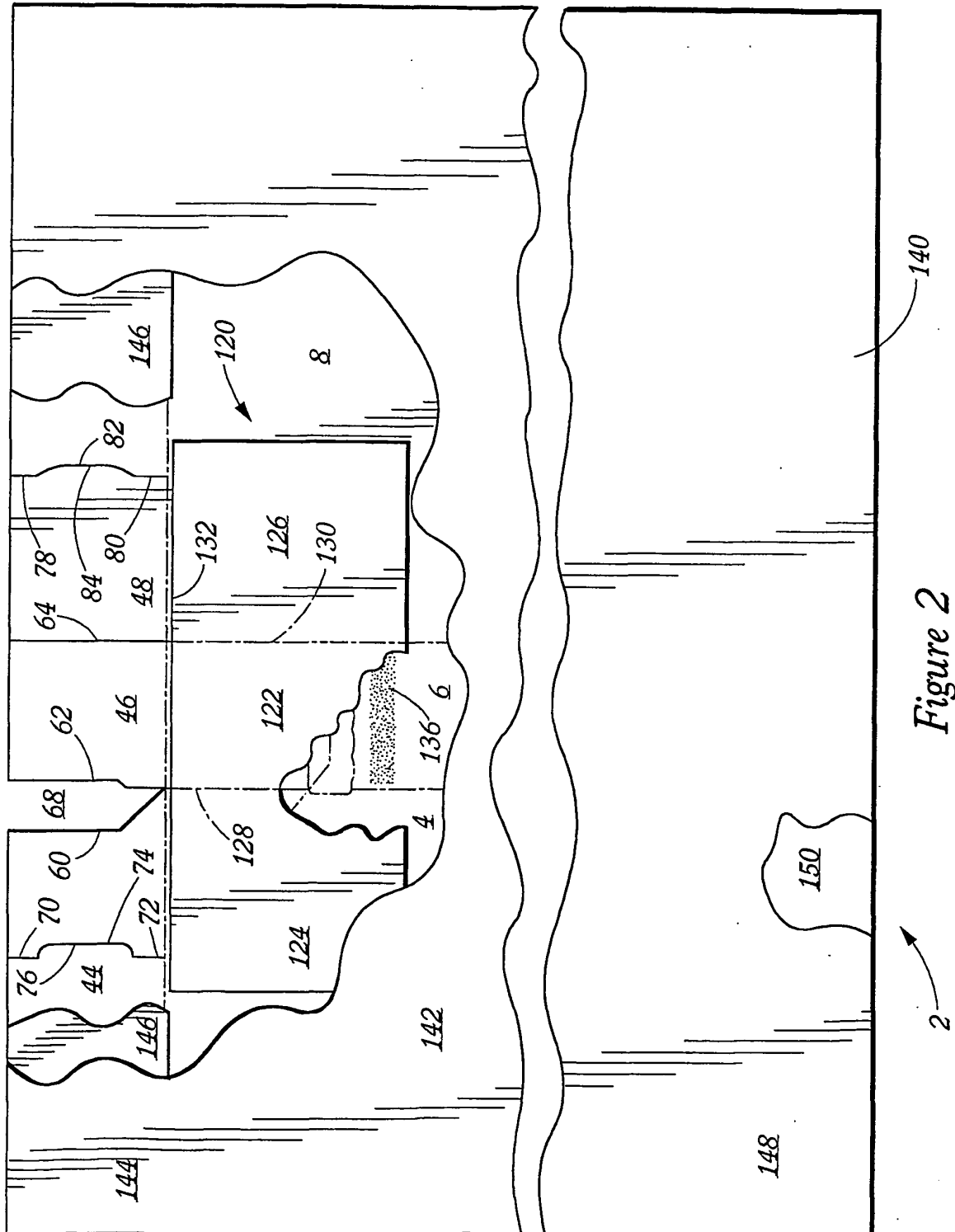


Figure 2

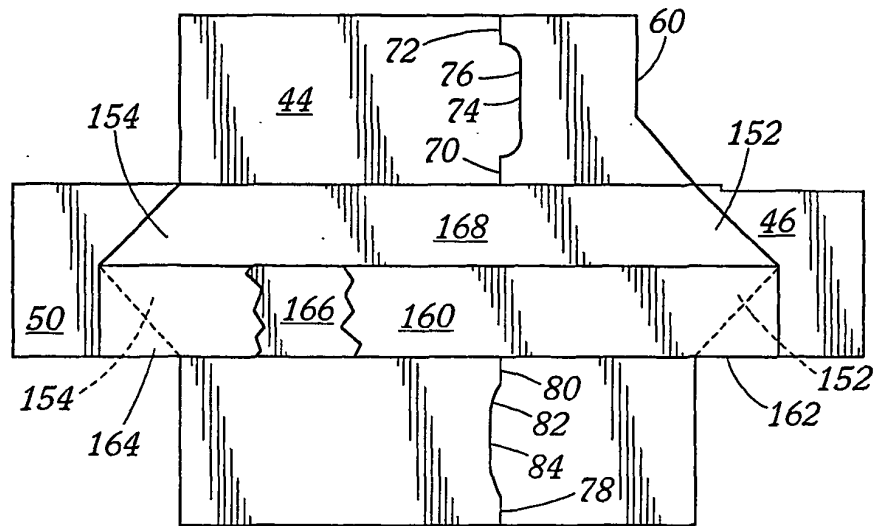


Figure 3

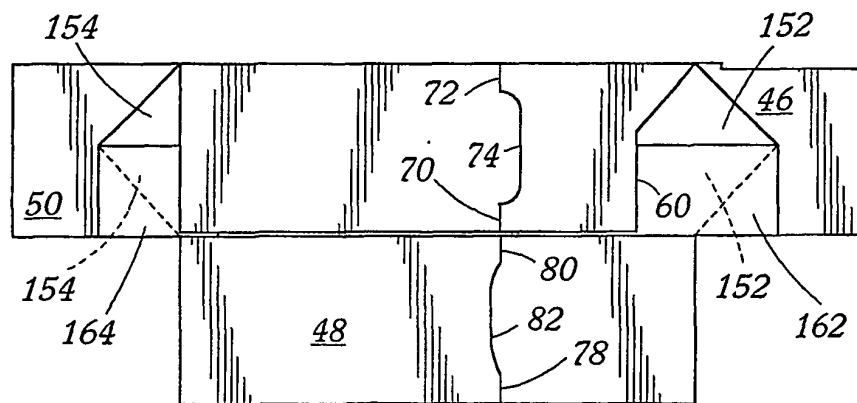


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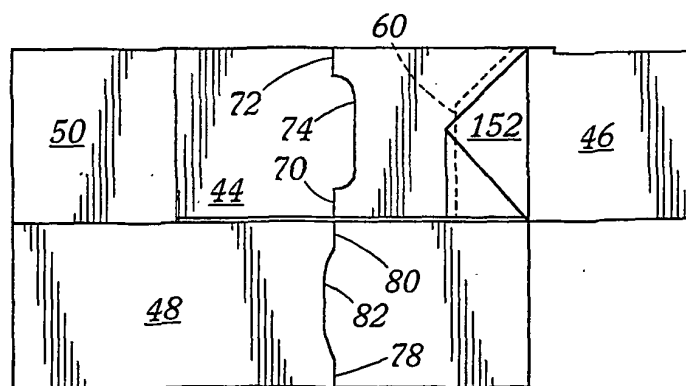
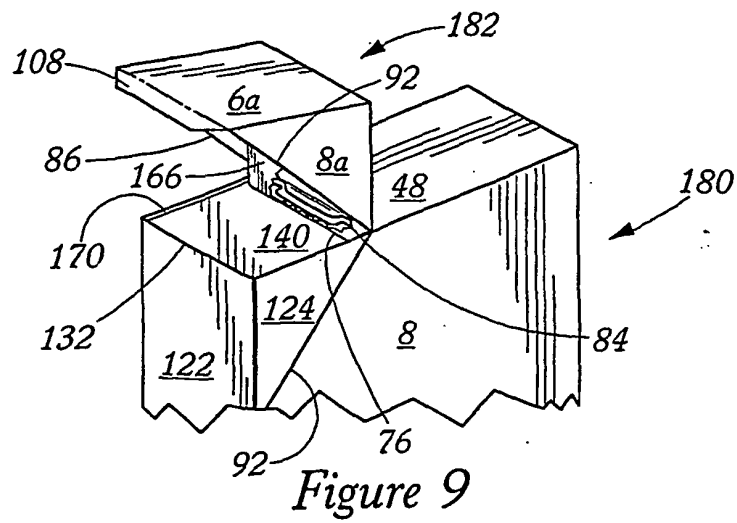
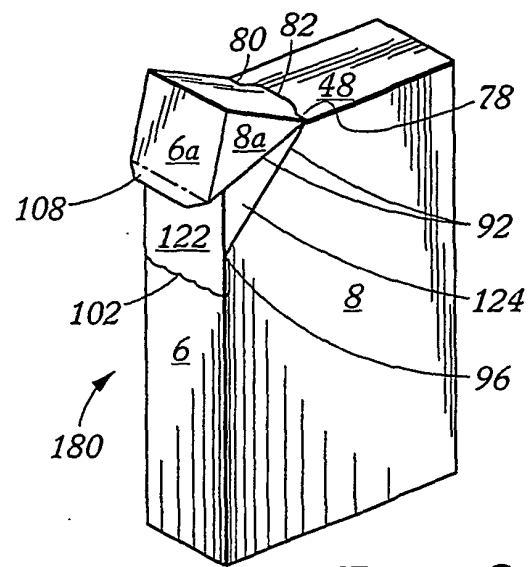
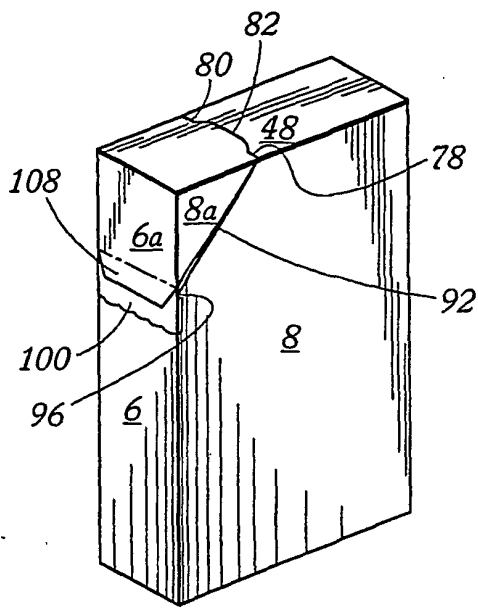
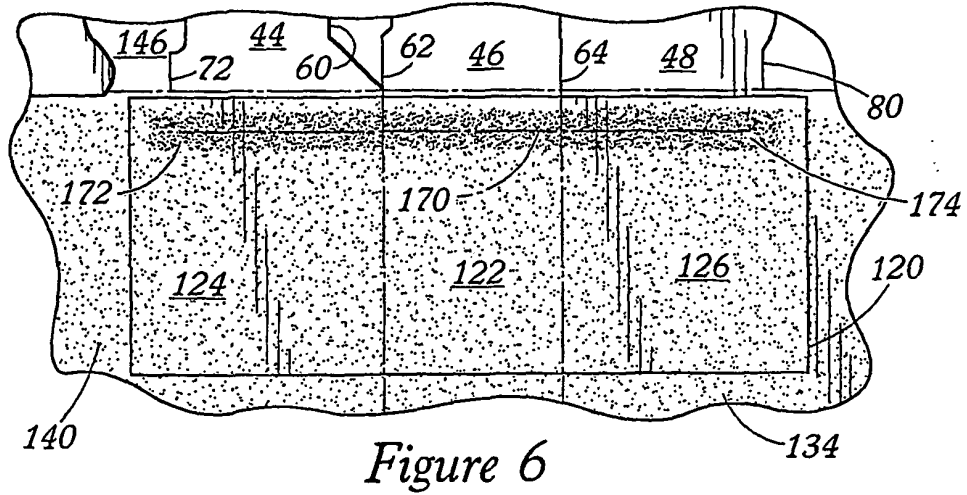


Figure 5



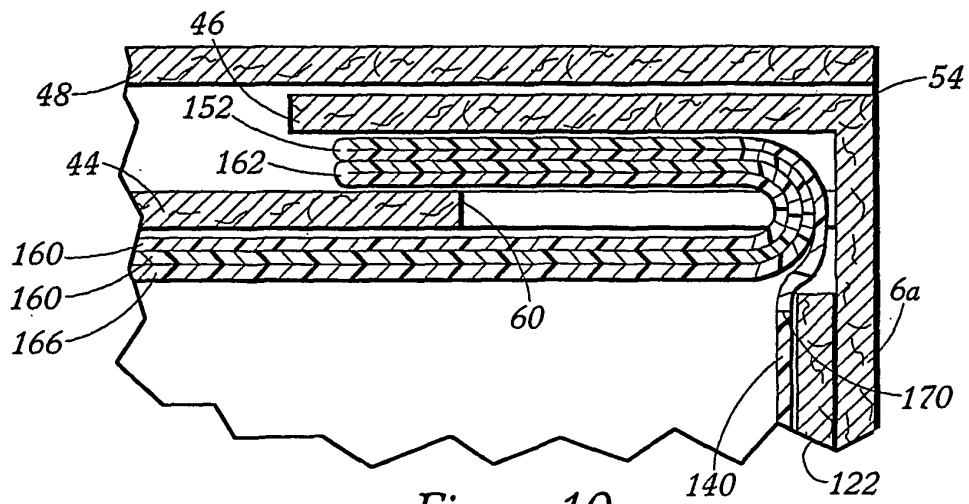


Figure 10

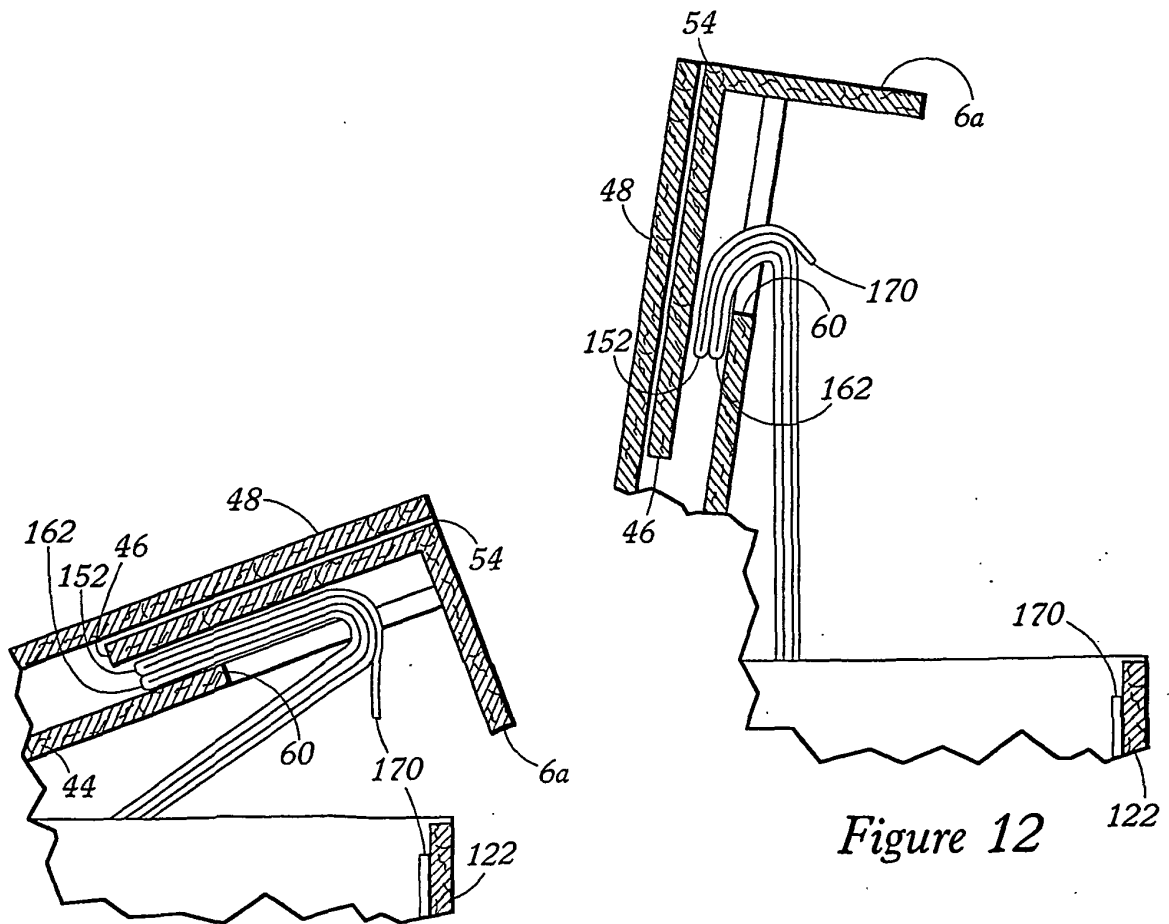


Figure 11

Figure 12

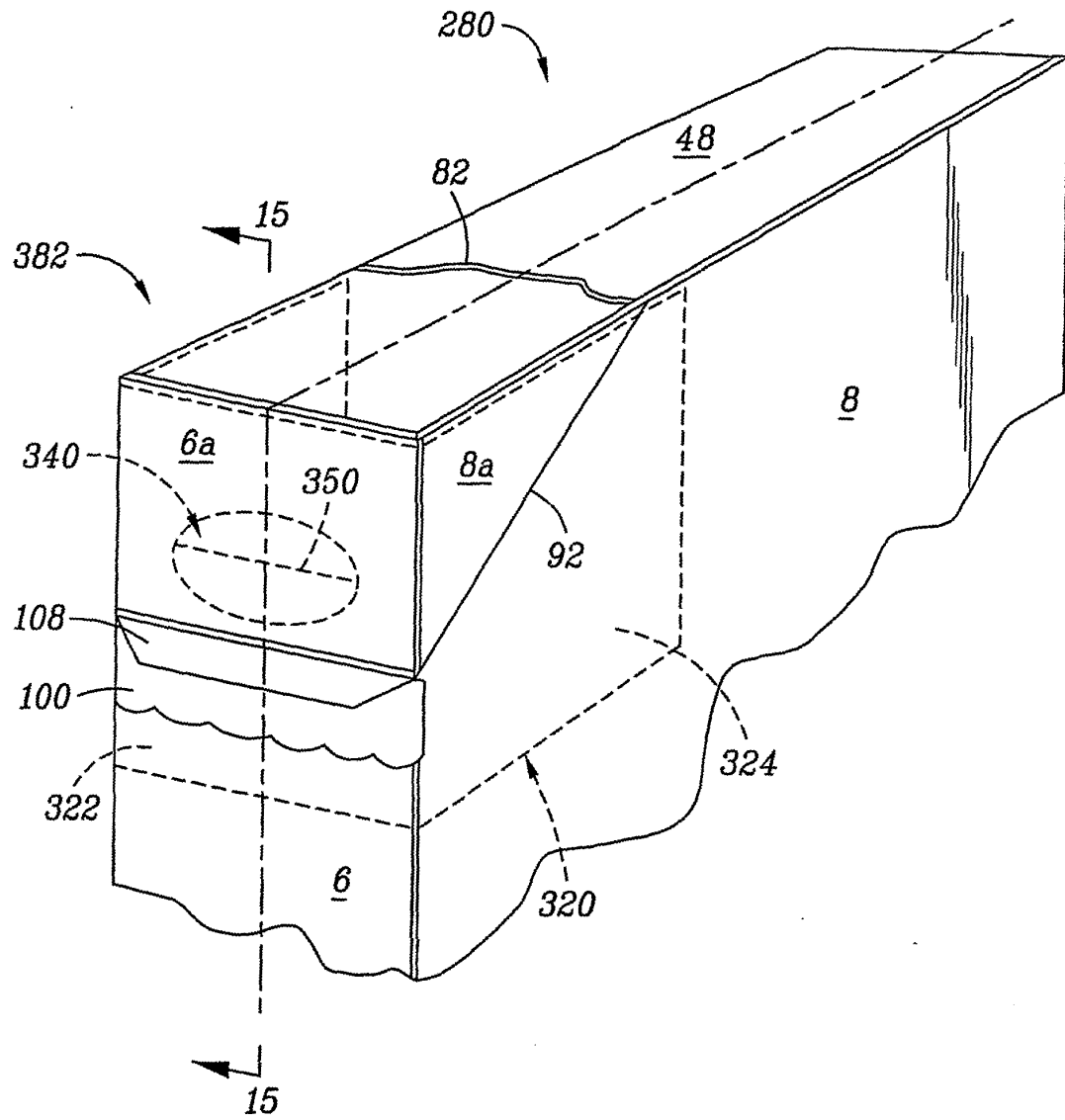


Figure 13

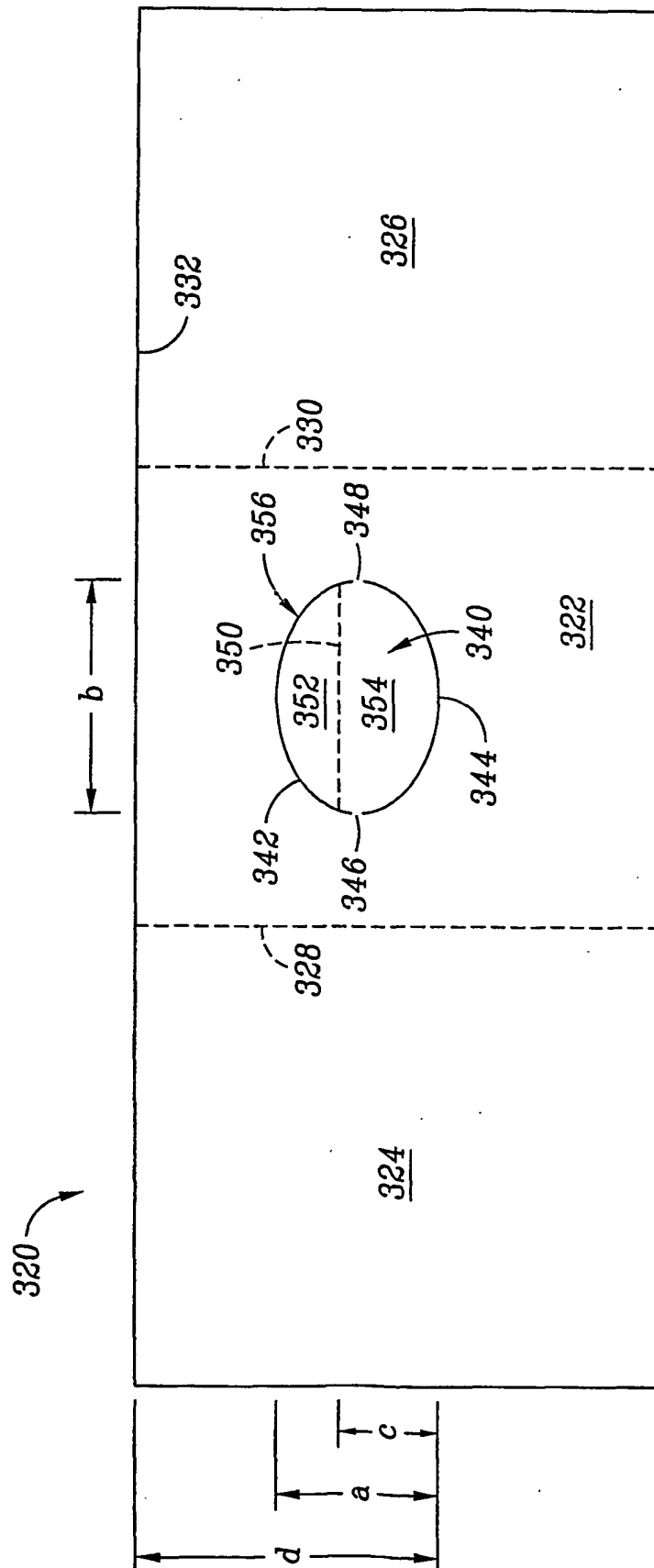


Figure 14

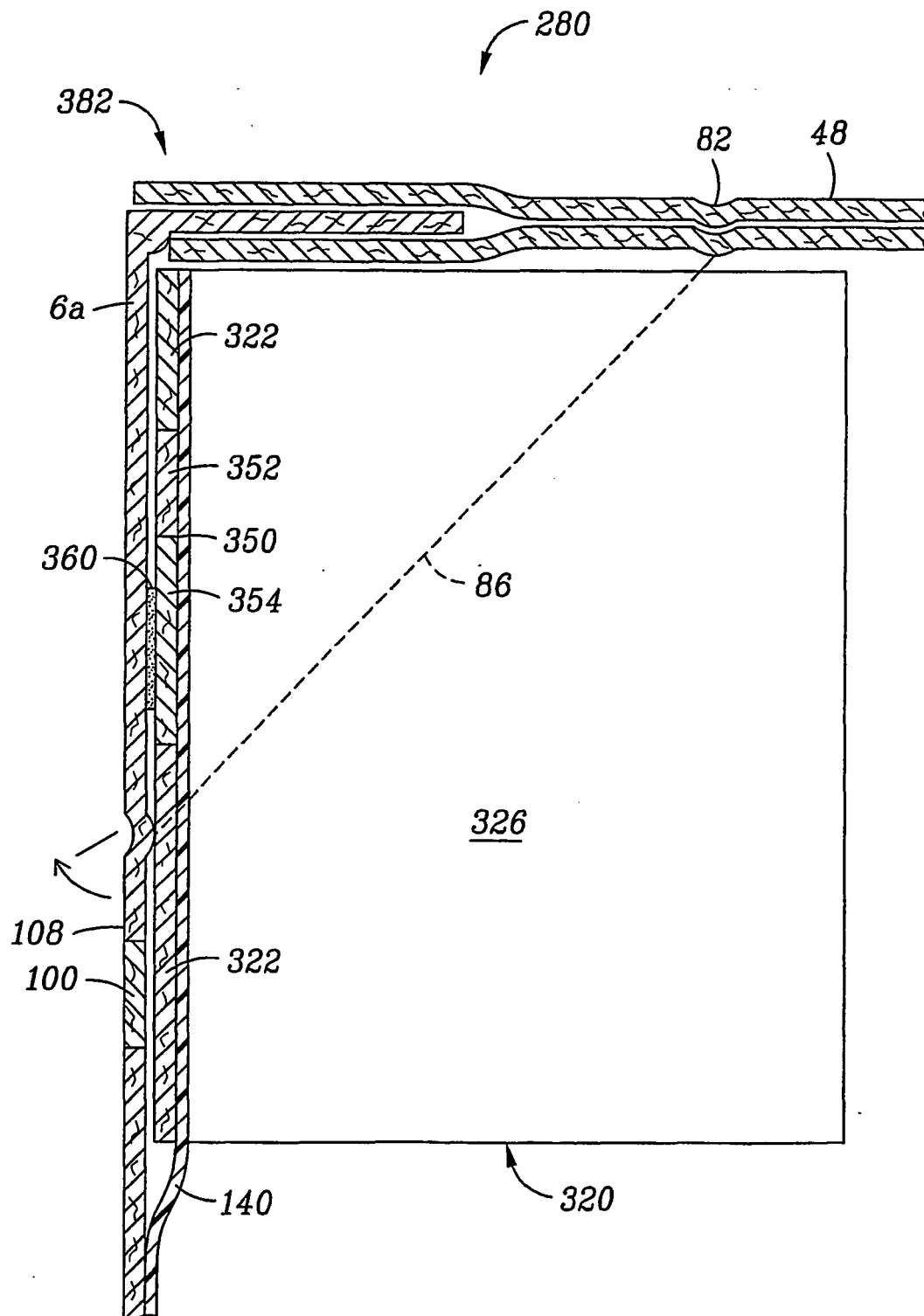


Figure 15

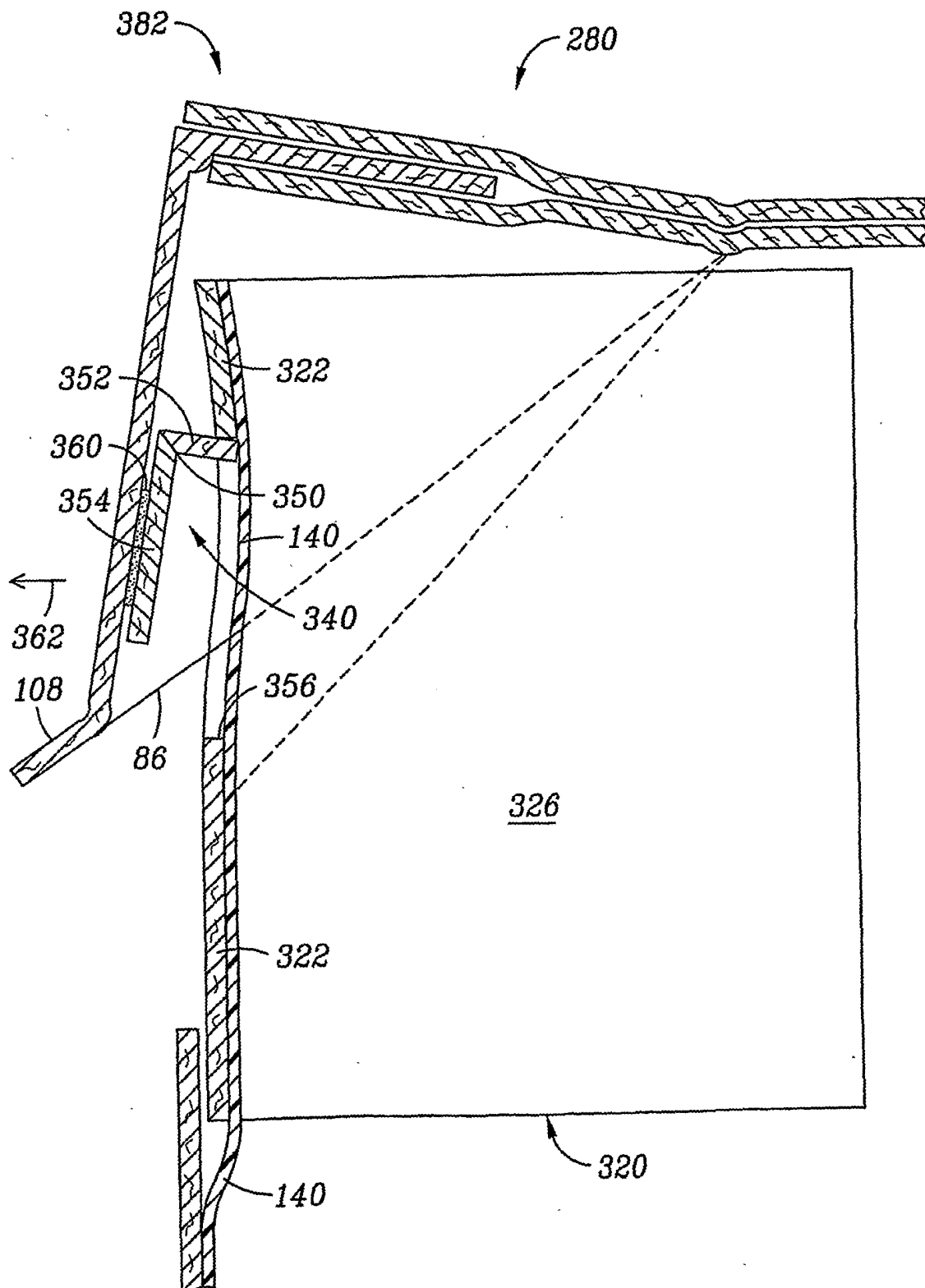


Figure 16

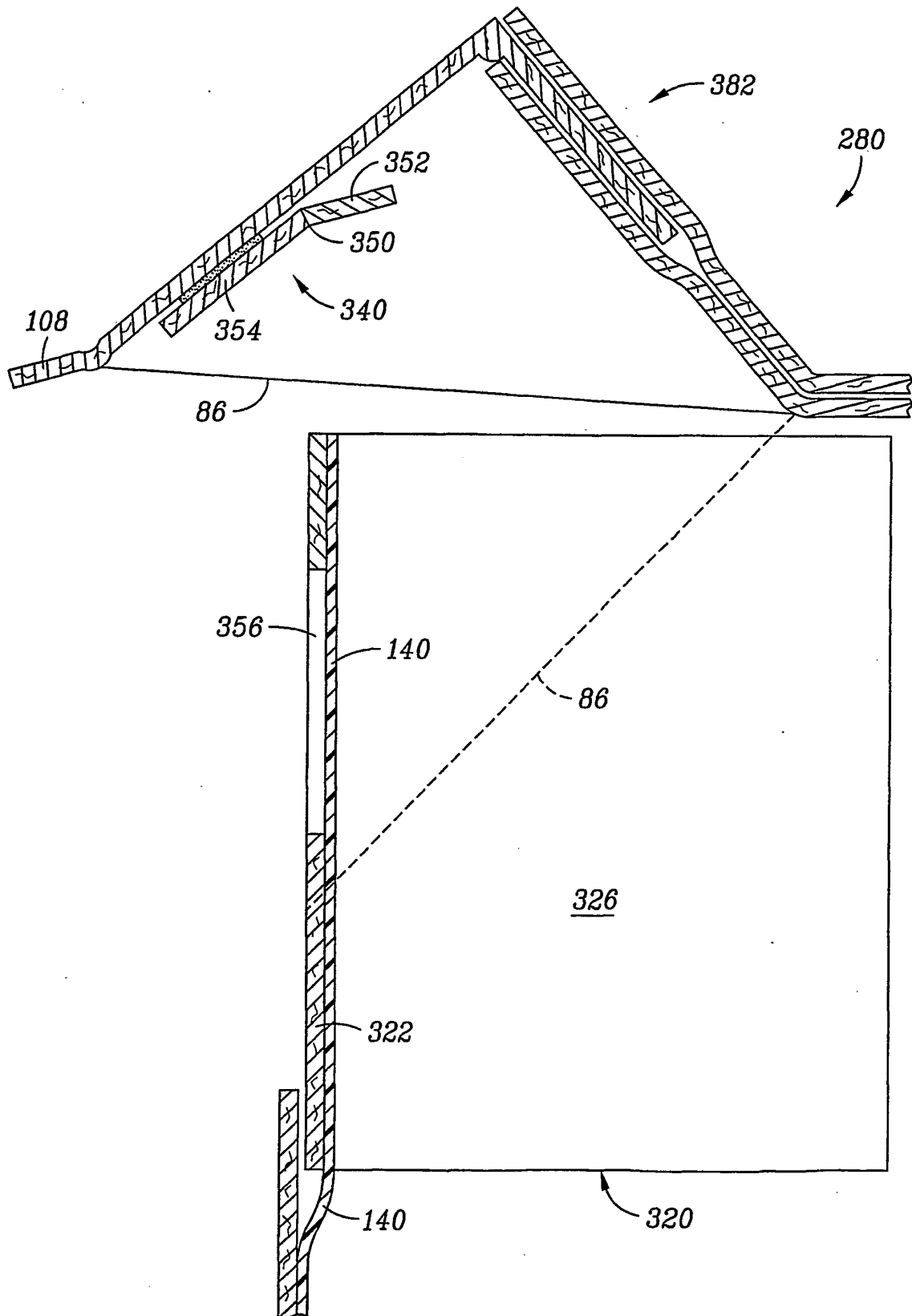


Figure 17

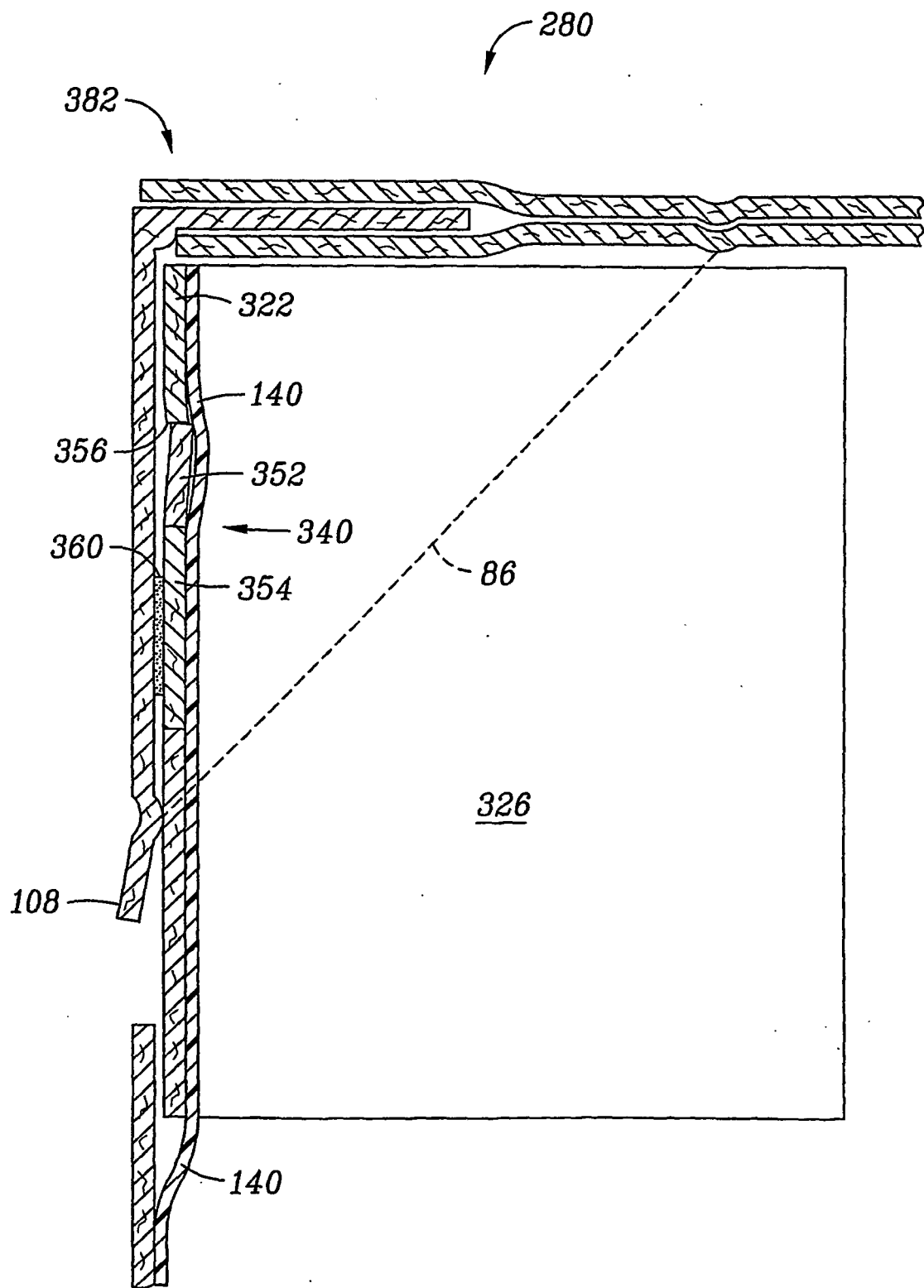


Figure 18

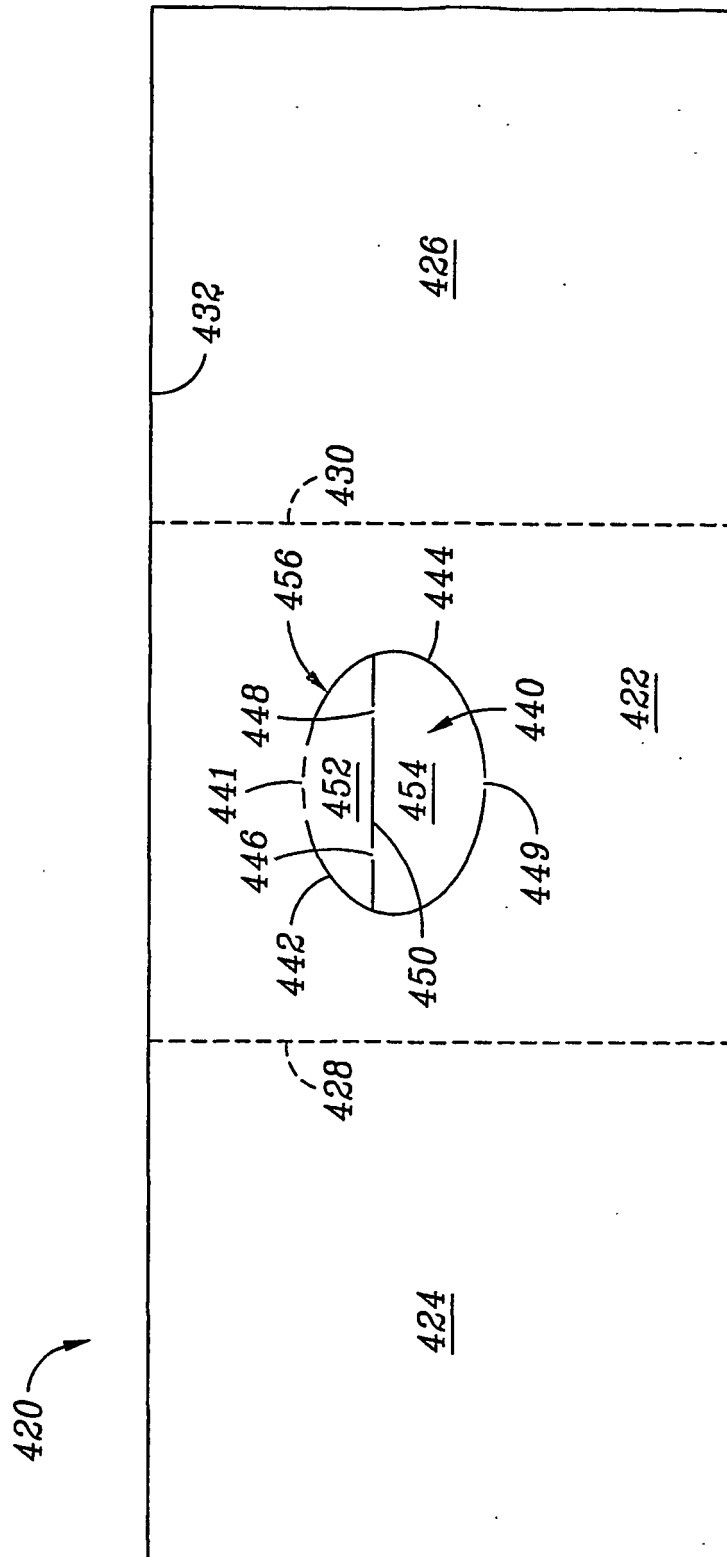


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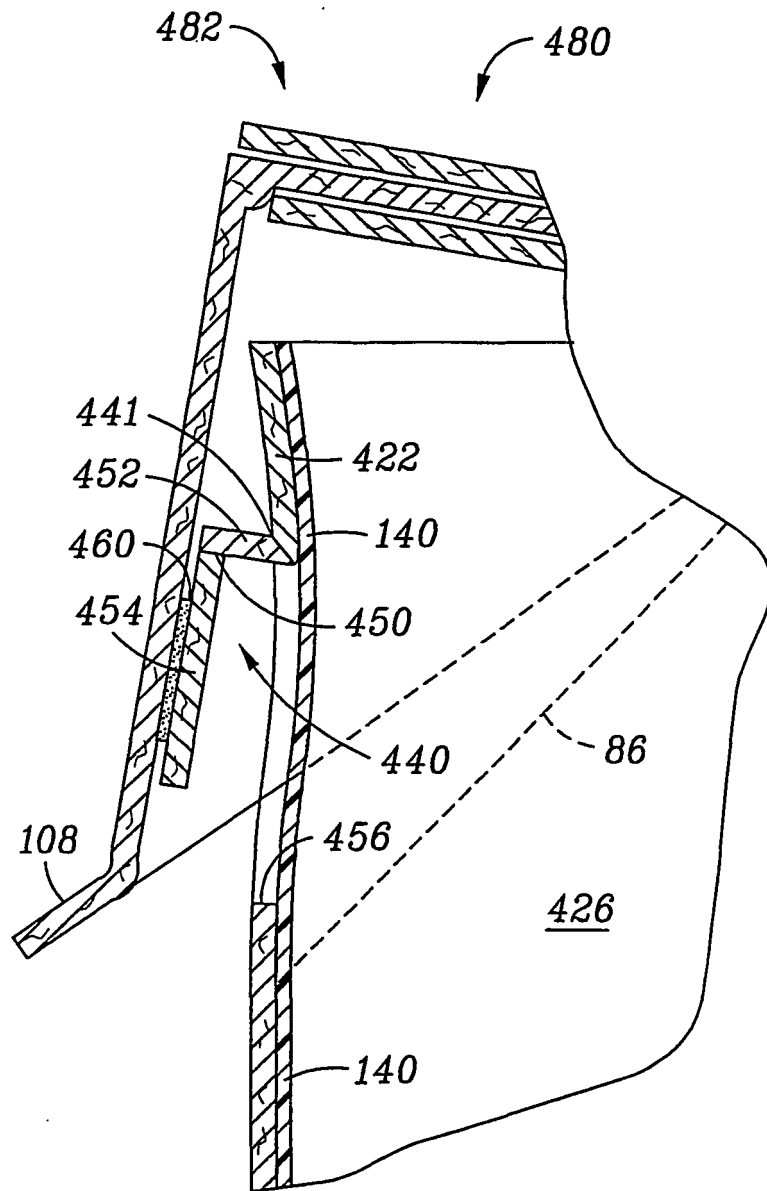


Figure 20

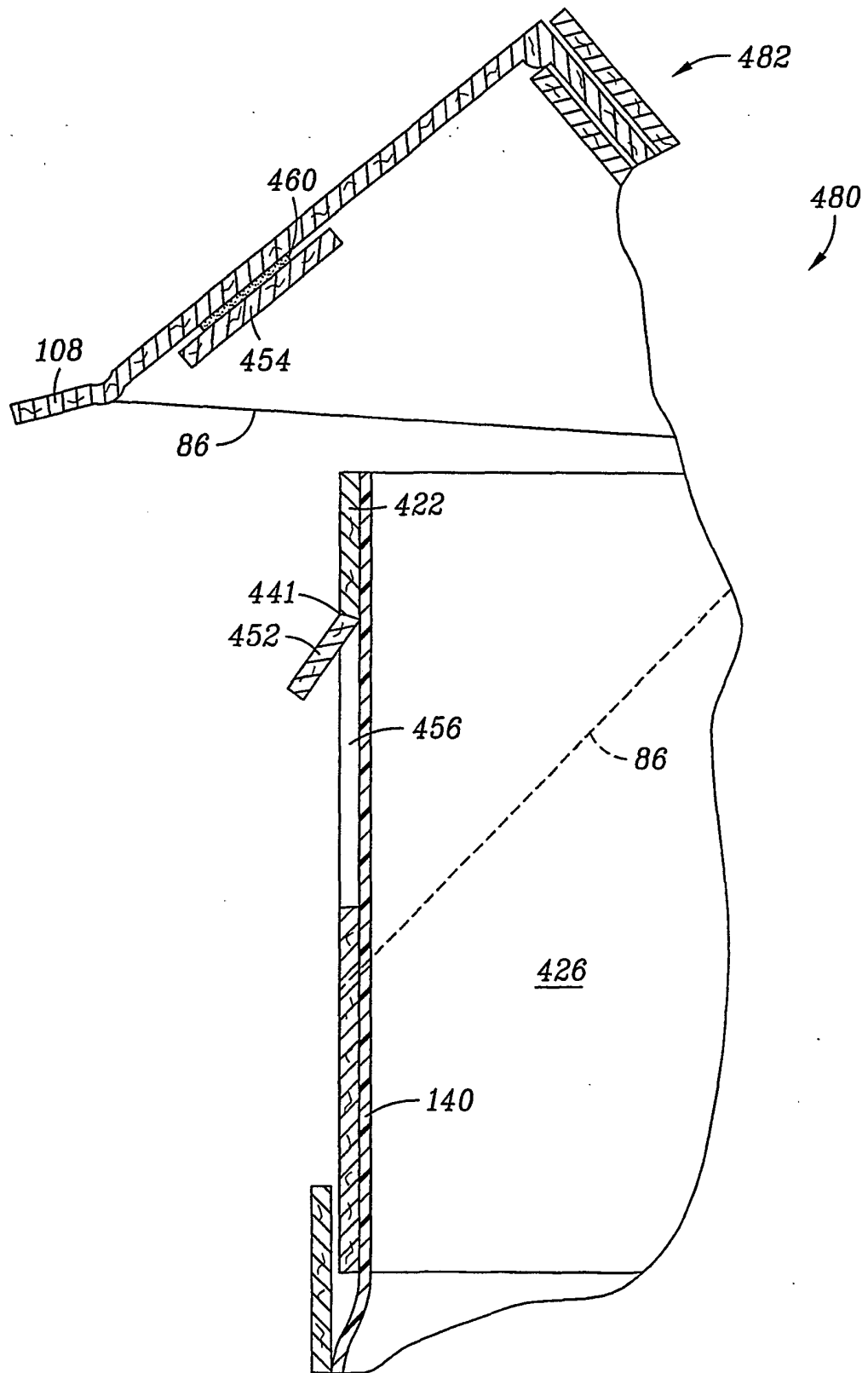


Figure 21

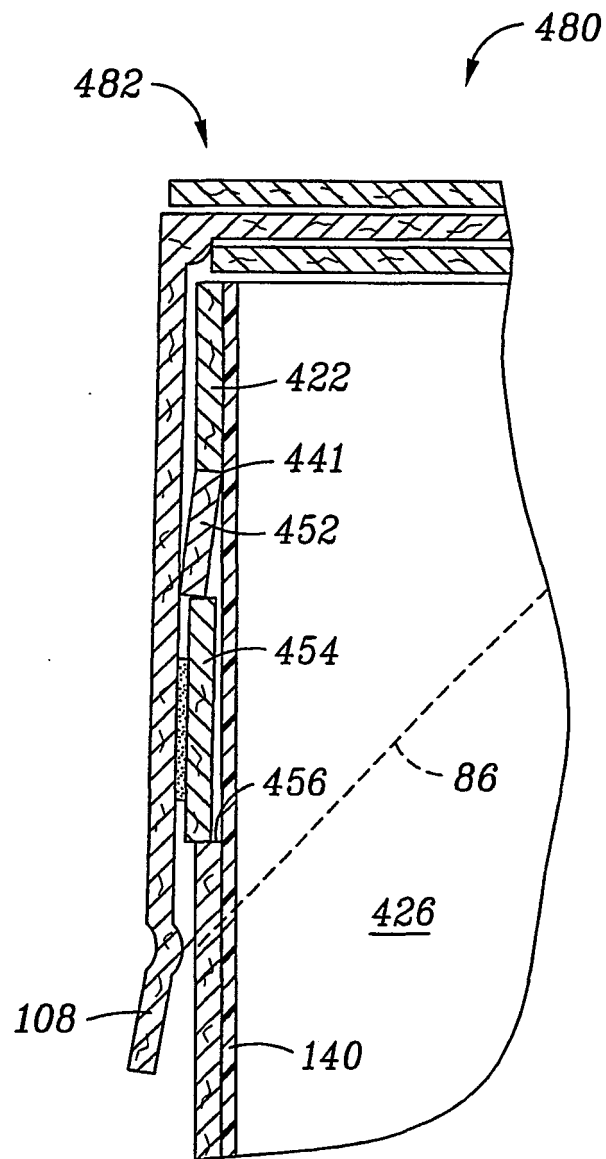


Figure 22

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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