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DISPENSING CARTON WITH RECLOSABLE FOUR SPOUT  
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3 Sheets-Sheet 1  

FIG. 1  

FIG. 2  

FIG. 3  

FIG. 4  

FIG. 5  

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The present invention relates to cartons of paperboard or other suitable material having a reclosable pour spout and adapted to contain and dispense fluid material in such forms as powder, granules, flakes, liquids, etc.

One of the principal objects of the present invention is to provide a carton having an integral pouring spout on its upper end which can be automatically snapped open and closed so as to reseal the opening after a portion of the material has been dispensed.

Another object of the present invention is to provide a closure means having a pull out tab integral therewith whereby the closure can be pulled into pour spout configuration and reclosed by application of the proper force to the pull tab member.

Still another object of the present invention is to provide a reclosable pour spout for a container in which the pour spout is formed from the top end closure panels by downwardly bending triangular ears on the end closure member to spring the end closure panels outwardly into pour spout configuration.

Still another object of the present invention is to provide a reclosable pour spout for a carton in which an end closure panel is infolded beneath side cover flaps whereby upon rupture of a tear flap, bellows folds are expanded automatically to spring the end panel outwardly and upwardly into pour spout defining relation with the container, in which the end panel can be forced inwardly and snapped into sealing relationship with extruded score lines on the interior of the side cover flaps.

These and other objects and advantages will become apparent hereinafter.

The present invention comprises a reclosable pour spout having suitable dimensioned triangular panels which automatically are snapped into pour spout configuration and which are sprung into sealing relationship with other portions of the top closure upon application of suitable forces to said panels. The present invention also comprises a carton embodying a reclosable pour spout which can be snapped into open or closed relationship with respect to said container and further includes the blanks from which said closures and containers are formed.

In the accompanying drawings which form a part of this specification and wherein like numbers refer to like parts, wherever they occur:

FIG. 1 is a plan view of a blank embodying the present invention and showing the surface which forms the inside of the container when folded.

FIG. 2 is an enlarged view of the top portion of the blank shown in FIG. 1.

FIG. 3 is a perspective view of the top portion of the folded container showing the upper or cover flaps in open position.

FIG. 4 is a perspective view of the top portion of the folded container showing the cover flaps in partially open position just prior to their overlapping.

FIG. 5 is a perspective view of the top portion of the container with the cover flaps in closed sealed relation.

FIG. 6 is a perspective view of the top portion of the container after the two triangular portions of the cover have been folded upwardly into substantially vertical position.

FIG. 7 is a perspective view showing the two triangular portions folded downwardly into close relation with the top, thereby causing the spout end panels and connected triangular portions to spring upwardly automatically into the position of FIG. 8.

FIG. 8 is a perspective view showing the spout in its fully open and pouring position.

FIG. 9 is a top plan view of the carton after the spout end panel has been snapped into closed position, showing how the spout forming portions seal the opening.

FIG. 10 is a cross-sectional view taken along the line 10—10 of FIG. 9.

FIG. 11 is a plan view of the top portion of a blank embodying a modification of the present invention and showing the surface which forms the inside of the container when folded.

FIG. 12 is a perspective view of the top portion of the modified container with the top closure in sealed relation and showing the pull tab extending therefrom.

FIG. 13 shows how the pull tab opens the upper longitudinal central score during the opening operation.

FIG. 14 is a perspective view showing how the portion of the pull tab glued to the spout and panel opens the spout into fully open position.

FIG. 15 is a fragmentary top plan view of a blank showing a modified pull tab and showing the surface which forms the inside of the container when folded, and

FIG. 16 is a perspective view of the top portion of the modified container made from the blank shown in FIG. 15 and showing the top closure opened with the modified pull tab secured only to one outer end triangular panel.

FIG. 1 shows a blank 10 which ordinarily is made of paperboard and which can be coated or laminated on one or both surfaces thereof to render it moisture proof. The blank 10 has an irregular top edge 11, an irregular bottom edge 12, a front edge 13, and a rear edge 14 parallel thereto. The body of the blank is formed into a series of longitudinal panels, top panels and bottom panels which form the longitudinal walls and the top and bottom closures, respectively, for the container into which the blank 10 is formed as will hereinafter be more fully explained.

The body of the blank 10 includes a manufacturer's flap 15 on one side thereof defined by the blank edge 13, a transverse top score line 16, a transverse bottom score line 17 and a longitudinal score line 18. The manufacturer's flap 15 includes a top extension 19 defined by the blank edge 13, a transverse edge 20, the longitudinal score line 18, and the transverse score line 16. A bottom extension 21 of the manufacturer's flap 15 is defined by the blank edge 13, the bottom transverse score line 17, the longitudinal score line 18 and a transverse edge 22.

An end panel 23 is connected to the manufacturer's flap 15 at the longitudinal score line 18 and is further defined by a spaced longitudinal score line 24, a bottom transverse score line 25 aligned with the score line 17, and a top transverse score line 26 offset from the manufacturer's flap top score line 16.

A spout end panel 27 is connected to the end panel 23 at the transverse score line 26 and is defined by the transverse top edge 28 which is offset from the manufacturer's flap top edge 29, and the longitudinal score lines 18 and 24. The spout end panel 27 includes end triangular portions 29 and 39 defined by diagonal score lines 31 which intersect at the midpoint of the top edge 28 and connect with the intersections of the longitudinal score lines 18 and 24 with the transverse score line 26. The end triangu-
lar panels 29 and 30 have free edges 29a and 30a, respectively.

A bottom end closure panel 32 is connected to the end panel 23 at the bottom score line 25 and is further defined by an intersection with the transverse score line 33 and the longitudinal scores 18 and 24. The top transverse score line 36 is longitudinally offset from the bottom transverse score line 35.

A side panel 35 is connected to the end panel 23 at the longitudinal score line 24 and is further defined by a top transverse score line 36, a bottom transverse score line 37 and a longitudinal score line 38. The top transverse score line 36 is longitudinally offset from the end panel top transverse score line 26; while the bottom transverse score line 37 is aligned with the end panel bottom transverse score line 25.

A side cover flap 39 is connected to the side panel 35 at the score line 36 and is further defined by the top transverse edge 40 and the longitudinal score lines 24 and 38. The top cover flap 40 is longitudinally offset from the spout panel edge 28, and the top longitudinal score line 36 is offset from the end panel top score line 26. A diagonal score line 41 connects the intersections of the longitudinal score line 24 and the top transverse score line 36 with the top transverse edge 40, and provides a side triangular panel 42 having a free edge 42a.

A bottom side closure panel 43 is connected to the side panel 35 at the transverse score line 37 and is further defined by a bottom transverse edge 44 and the longitudinal score lines 24 and 38.

A rear wall 45 is connected to the side panel 35 at the longitudinal score line 38 and is further defined by a longitudinal score 45, a top transverse score line 47 and a bottom score 48. The top transverse score line 47 is longitudinally offset from the side panel score line 36 and is aligned with the spout end panel score 26.

A rear end panel 49 is connected to the end wall 45 at the transverse score line 47 and is further defined by a transverse top edge 50 and the longitudinal score lines 38 and 46. The rear end panel 49 is divided into outer triangular portions 51 and 51a by diagonal score lines 52 which intersect at the midpoint of the top edge 50 and connect with the intersections of the longitudinal score line 38 and the longitudinal score line 46. The bottom end closure panel 53 is connected to the end panel 45 at the bottom score line 48 and is further defined by an irregular bottom transverse edge 54 and the longitudinal scores 38 and 46. The bottom transverse score line 55 is longitudinally offset from the end panel score line 47 and is aligned with the side panel transverse score line 36.

A side panel 56 is connected to the end panel 45 at the longitudinal score line 46 and is further defined by the longitudinal edge 14, a top transverse score line 57 and a bottom transverse score line 58. The top transverse score line 57 is longitudinally offset from the end panel score line 47 and is aligned with the side panel transverse score line 36.

A side cover panel 59 is connected to the side panel 56 at the top transverse score line 57 and is further defined by a top transverse edge 60, the longitudinal edge 14 and the longitudinal score 46. The top transverse edge 60 is longitudinally offset from the end panel top edge 50 to form a top closure seal as is explained more fully hereinafter.

A separate seal tab 61 in the corner of the side cover panel 59 is defined at one of its inner sides by a transverse line of weakness 62 and at the other of its inner sides by a diagonal line of weakness 63. The diagonal line of weakness 63 extends past the longitudinal line of weakness 62 and intersects a diagonal score line 64 which originates at the point of intersection of the longitudinal edge 14 and the transverse score line 57 to define therewith a generally triangular side panel 65.

The line of weakness 62 is disposed in offset relation to the container midwidth to make the container closure leakproof, and the perforated score 62 is spaced from the side panel score 57 the distance which is equal to approximately one-half the width of the container plus $\frac{1}{4}$ inch. The width of the container is determined by the width of the end panels 23 and 45, and therefore the distance Z is equal to one-half the width of the panels 23 and 45 plus $\frac{1}{4}$ inch.

A bottom cover flap 66 is hinged to the side panel 56 at the transverse score 58 and is further defined by an edge 67, the edge 14, and the longitudinal score 46.

In forming a container or carton from the blank 10, a suitable adhesive is applied to the outer surface of the manufacturer's flap 15 and the panels 23, 35, 45 and 55 are folded inwardly toward each other about the parallel scores 18, 24, 38 and 46. The outer side of the manufacturer's flap 15 is secured to the inside of the terminal side panel 56 along the free edge 14 to complete the body of the container.

In forming the top closure, a suitable adhesive is applied to the inner surface of the side panel 59 adjacent to the top edge 69 thereof to cover the tear tab 61 and the portion of said side panel 59 which overlaps the outer surface of the other side cover flap 39 when the flaps are in closure forming arrangement. As the side flaps 59 and 39 are folded toward each other, the end panel 49 and the side panel 27 are folded toward each other so that the triangular portions 29, 38, 51 and 51a define bellows folds with the side flaps 39 and 59. The free edge 40 of the side panel 39 is tucked into the bellows folds defined by the triangular panels 29 and 51a and the side flap 59, while the free edge 60 of the side flap 59 is laid upon and overlaps the free edge 40 of the side flap 39. The free edge 50 of the end panel 49 is folded at its center and the two resulting portions are positioned in close parallel alignment when the end panel 49 is folded along the diagonal score lines 52. The free edge 28 of the spout end panel 27 is folded at its center and the two resulting portions 28a and 30a are positioned in close parallel alignment when the spout end panel 27 is folded along the score lines 31. To complete the top closure, the overlaid side flap 59 is glued to the other side flap 39.

While the foregoing top closure is adequate when the container holds powder particles, in the preferred embodiment wherein the container is adapted to contain a liquid, preferably milk, the top closure members are coated with a thermoplastic seal material, such as polyethylene, since the closure must be moisture proof in order to retain leakage of the fluid in the container through the top closure even when the filled container is inverted for extended periods of time.

When the top closure members are coated with a thermoplastic seal material, the side closure members 39 and 59 are interlocked and overlapped as hereinbefore described and a thin mandrel is positioned inside the container adjacent to the inner surfaces of the end cover flap 49 and the spout cover flap 27. A heated sealing instrument is pressed against the outer surface of the side flap 59 adjacent to the free edge 60, including the tear strip portion 61. The heat penetrates into the top closure members to seal said members together. Not only is the free edge 60 of the side flap 59 sealed to the outer surface of the other side flap 39, but the interlocked edge 40 of the second side flap 39 also is sealed to the inner surfaces of the members forming the bellows fold. Also, the outer surfaces of the rear end closure flap 49 may be sealed together along the midline of the top closure. The degree of seal in depth is controlled by the temperature of the heated sealing instrument and the time which it is in engagement with the top closure. Any sealing of the folded over portions of the spout end panel 27 is remedied when
the top closure is opened as is hereinafter more fully described.

When the top closure is completed, the container is filled in an upside down position through the bottom opening. When the container is filled, the bottom closure is applied. Any conventional bottom closure can be applied to the container and for purposes of this disclosure, the bottom closure formed from the blank 10 shown in FIG. 1 will be described. The bottom closure must be moisture proof, if the container is to be held liquid or a hygroscopic powder, and must be strong enough to support the contents of the container. If the foregoing requirements are fulfilled, any suitable bottom closure is satisfactory.

In forming the shown bottom closure, the bottom side closure panels 43 and 66 are folded inwardly and the overlapping portions of the free edges 44 and 67 are secured together by an adhesive or a heat seal, depending on the contents of the container. As the bottom side closure panels 43 and 66 are folded inwardly, the bottom end panels 32 and 53 are folded outwardly along the transverse score lines 25 and 48 and along the diagonal score lines 34 and 55. The overlapping portions of the bottom end closure panels are then secured together. To complete the bottom closure, the end closure panel 32 is folded inwardly about the longitudinal score lines 18 and 24 and the transverse score line 25 and the end closure panel 53 is folded inwardly about the longitudinal score lines 38 and 46 and the transverse score line 48. The folded end panels 32 and 53 and then secured to the longitudinal ends walls 35 and 56.

The novel spout closure in which the spout end panel 27 is snapped outwardly to spout defining position (FIG. 8), and also is snapped inwardly to top closure defining position (FIG. 9), includes the spout end panel 27 and the two adjacent pairs of contiguous triangular panels 30 and 29 and 65.

The first pair of triangular panels includes a first or end triangular panel 29 defined by the free edge 29a, the score line 31, and the score line 18 connecting the panel 29 to the manufacturer's flap 19 which is secured to the side triangular panel 65. The second or side triangular panel 65 is defined by the perforated score line 31, connecting the panel 65 to the tear tab 61, the score line 64 connecting the panel 65 to the side closure panel 59, and the free edge 14 positioned adjacent to the manufacturer's flap score line 18 when the container is in erected position.

The second pair of triangular panels includes a first or end triangular panel 28 defined by the score line 31, the free edge 39a, and the common score line 24 connecting the first panel 30 to the side triangular panel 42. The second or side triangular panel 42 is defined by the free edge 42a, the score line 41 connecting the panel 42 to the side closure panel 39 and the common score line 24. Certain novel angular and dimensional relationships exist among the panels which comprise the spout end closure which cause the spout end panel 27 to be snapped or sprung with a distinct "popping" sound into a pour spout configuration (FIGS. 6-8). The length of the free edges 29a and 30a of the spout end triangular panels 29 and 30 is less than the length of the perforated score line 62 of the side triangular panel 59 and also is less than the length of the free edge 42a of the side triangular panel 42. Also, the angle A between the diagonal score line 41 and longitudinal score line 24 is slightly greater than 45° and preferably approximately 46°. Similarly, the angle B between the diagonal score line 64 and the free edge 14 is greater than 45° and preferably is about 46°.

The difference in the dimensions of the edges 29a and 62 and the edges 30a and 42a must be such that the panels comprising the bellows fold (triangular panels 29 and 65 and 30 and 42) and the pour spout panel 27 lie in contacting flatwise relation in the sealed condition of the container, and when the triangular panels 29 and 65 and 30 and 42 are folded upwardly and outwardly to open the container (as is hereinafter explained more fully), a stress results which tends to urge the spout end panel 27 outwardly into the protruded pour spout configuration shown in FIG. 8.

To open the sealed container (FIG. 5), the tear strip 61 is severed along the line of perforations 62 and the overlapped triangular panels are raised into substantially vertical position (FIG. 6), breaking whatever heat seal may have been impinged thereon during the top closure sealing operation. The triangular panels then are bent backwardly into close relation with the top, raising the point "X" defined by the intersection of the free edges 29a and 30a and the diagonal scores 31 above the plane of the rest of the top closure and causing the spout end panel 27 to spring upwardly automatically into pouring position (FIGS. 7 and 8). The spout end panel 27 tends to spring outwardly or inwardly as soon as the point "X" passes through a common plane defined by the parallel alignment of the spout end panel 27 and the triangular end panels 29 and 30. As the spout end panel 27 is snapped inwardly, the panels 27, 29, and 30 move into sealing configuration with the rest of the top closure assembly (FIG. 9). The end triangular panels 29 and 30 are in close contacting position adjacent to the side triangular panels 42 and 65, respectively, to further seal the top opening.

Since all of the scores are impressed on the outside of the blank 10, each of the inner scores has a raised area (more clearly shown in FIG. 10), and the raised adjacent contacting score lines 31 and 41 and 31 and 64, respectively, seal the closure of the spout end panel 27 with the top side closure panels 39 and 39. Thus, even after the seal on the top of the container has been broken, a liquid proof closure is provided for the container.

FIG. 11 shows the top portion of a modified blank 70. The lower portion of the blank 70 may be similar to that shown in FIG. 11, or it may be any other suitable bottom closure structure. The blank 70 includes an irregular top margin 71 and parallel longitudinal end margins 72 and 73. A series of parallel longitudinal score lines 74, 75, 76, and 77 divide the blank into a series of top closure panels and the longitudinal side and end panels 78, 79, 80, and 81 with a manufacturer's flap 82 hinged to one edge thereof.

The manufacturer's flap 82 is defined between the blank edge 72 and the longitudinal score line 74 and includes a transverse score 83 to define a top portion 84. The end panel 81 is defined by the longitudinal scores 78 and 75 and is hinged to the manufacturer's flap 82. A top end closure panel 85 is defined between a transverse free margin 86 and a transverse score 87 and defines outer triangular panels 88 and 89 defined by the diagonal scores 90 and 91 which diverge from the top margin 86 to the intersections of the transverse score 87 with the longitudinal scores 74 and 75. The panels 88 and 89 have free margins 88a and 89a, respectively.

The side panel 89 is defined between the longitudinal scores 75 and 76 and is hinged to the end panel 81. A top side closure panel 92 is defined between a transverse margin 93 and a transverse score 94 which is offset from the transverse score 87. A diagonal score 95 beginning at the free edge 93 and terminating at the intersection of the longitudinal score 76 and the transverse score 94 defines a triangular spout panel 96 having a free margin 96a.

The end panel 97 defined between the longitudinal scores 76 and 77 is hinged to the side panel 88. A spout end panel 97 is defined between a transverse free margin 99 and the perforated score 100 which is the continuation thereof. The transverse score 98 is offset from the adjoining transverse score 94. Diagonal scores 101 and 102, beginning at the juncture of the free edge 99 and the perforated score 100 and terminating at the intersection of the transverse score 94 and the longitudinal scores 76 and 77, respectively, divide the spout end panel 97 into end triangular portions 103 and 104.
A pull tab assembly 105 is connected to the spout end panel triangular portion 103 by the perforated score 109 and further includes a triangular glue portion 106, defined between the free edges 107 and 108 and a diagonal score 108, which is aligned with the diagonal score 102; a trapezoidal portion 119, which is hinged to the triangular portion 106 at the diagonal score 109; and a free rectangular pull tab 111 hinged to the trapezoidal portion 119 at a longitudinal score 112. A cutout score 113 spaces the tab 111 from the side closure panel 92.

The side panel 76 is defined between the longitudinal score 77 and the blank end margin 73. A side cover flap 114 is defined between a free top margin 115 and a transverse score 116 which is offset from the adjoining score 98 and aligned with the transverse score 94. A separable glue flap 117 is defined by a transverse perforated score 118, which is aligned with the perforated score 100 connecting the pull tab assembly 105 to the spout end panel 97, and the diagonal perforated score 119 terminating at the free margin 115. A diagonal score 120 connects the end of the transverse perforated score 118 with the intersection of the transverse score 116 and the longitudinal score 77 to define a triangular side spout panel 121.

In forming a container or carton from the blank 70, the panels 78, 79, 80 and 81 are folded inwardly toward each other about the parallel longitudinal scores 77, 76 and 75, and the outer side of the manufacturer's flap 82 is folded toward the inner side of the terminal side panel 78 along the free edge 73 to complete the body of the container. In forming the top folding, the side flaps 92 and 114 are folded toward each other and the end panel 85 and the spout end panel 97 also are folded toward each other so that the triangular portions 88, 89, 103 and 104 thereby define the bellows folds defined by the side panels 92 and 114. The free edge 93 of the side panel 92 is tucked into the bellows folds defined by the triangular panels 88 and 104 and the other side flap 114, while the free edge 115 of the side flap 114 is laid upon and overlaps the top of the side flap 92. The free edges 89a and 90a of the end panel 85 are positioned in close parallel relationship when the end panel 85 is folded along the diagonal score lines 90 and 91.

The pull tab assembly 105 is folded upon the perforated score 100 and triangular portion 106 thereof is scored so that the spout end panel 97 and the trapezoidal portion 110 is folded along the diagonal score 109 and positioned between the triangular end panel 103 and the triangular portion 106 of the pull tab assembly 105.

When the side cover flap 114 is folded over the other side cover flap 92, it is secured along the edge thereof, so that the separable glue flap 117 is secured to the top of the other side panel 92. The side panels 92 and 114 also are secured along the remainder of the free edges thereof.

The rectangular pull tab 111 then is folded along the longitudinal score 112 to overlie the separable glue strip 117 and a portion of the end cover panel 92 as shown by the broken lines of FIG. 12.

To open the container into a portion spout defining position, the pull tab 111 is disengaged from the top of the container as shown by the solid lines of FIG. 12. The pull tab 111 is pulled inwardly and upwardly to sever the glue strip 117 from the side cover flap 114 along the perforated score 118 (FIG. 13). As the pull tab 111 is then pulled further outwardly, the perforated score 108 is severed and the spout end panel 97 is pulled into a spout defining position (FIG. 14).

To close the spout, the pull tab assembly 105 is pulled inwardly and downwardly and the pull spout panel 97 snaps into sealing relationship with the side cover panels 92 and 114 similar to the configuration shown in FIGS. 9 and 10.

The same critical relationships of angles and dimensions as set forth in the structure shown in FIGS. 1–10, also are important in the present modification of the invention. In other words, the length of the free edges 89a and 90a of the spout end triangular panels 88 and 89 is less than the length of the perforated score 119 of the side shell portion 78. The length of the side shell 78 is less than the length of the free edge 96a of the other side triangular panel 96. Also, the angle A between the diagonal score line 120 and the longitudinal score line 77 is slightly greater than 45° and preferably is 46°. Similarly, the angle B between the diagonal score 95 and the longitudinal score 76 is greater than 45° and preferably is about 46°.

As previously explained, the difference in the dimensions of the blank edges are such that the panels comprising the bellows folds (triangular panels 103 and 96 and 104 and 121) and the spout spout panel 97 lie in a contacting flatwise relation in the sealed condition of the container, and yet when the triangular panels 103 and 104 are pulled upwardly and outwardly to open the container, a stress results whereby the spout end panel 97 is sprung outwardly into protruded spout configuration. Similarly, the triangular panels 103 and 96 and 104 and 121 are snapped back into contacting relation when the spout end panel 97 is pulled inwardly and downwardly to thereby reseat the top closure.

A further modification of the present invention is shown in FIG. 15, wherein the blank 130 is identical to the blank 70 except that the pull tab assembly is modified. The pull tab assembly 131 shown in FIG. 15 includes a trapezoidal portion 132 hinged to the spout end panel 97 by a transverse score 133 and thereby connected to one end triangular panel 135. A rectangular pull tab 134 is connected to the trapezoidal portion 132 by a longitudinal score 136 and is spaced from the side cover flap 92 by a cutout score 135.

With the modified pull tab assembly 131 shown in FIG. 15, the trapezoidal portion 132 is folded in flat contacting relation between the triangular end panel 105 when the top closure is effected. The pull tab portion 134 is folded back from the tear tab 117 where it overlaps a portion of the side cover flap 92.

To open the top closure, the pull tab 134 first is pulled upwardly and outwardly to free it from the container top, after which the pull tab 134 is pulled upwardly and inwardly to detach the tear tab 117 along the perforated score 118 (FIG. 16). The pull tab 134 then is pulled outwardly to pull the spout end panel 97 into a spout defining position similar to that shown in FIG. 14.

The same critical dimensions set forth in the blank 70 shown in FIG. 11 also apply to the blank 130 shown in FIG. 15 in order that the spout end panel 97 can be automatically snapped open and shut with a distinct popping sound.

Thus it is apparent that the present invention achieves all of the objects and advantages set forth therefor.

This invention is intended to cover all changes and modifications of the examples of the invention herein chosen for purposes of the disclosure, which do not constitute departures from the spirit and scope of the invention.

What is claimed is:

1. A container blank comprising a generally rectangular sheet having generally parallel opposed free side edges and being provided with longitudinally extending score lines dividing the central portion of the sheet into series of adjacent generally rectangular main body panels, transverse score lines adjacent to the opposite ends of the sheet providing, in cooperation with the longitudinal score lines, end closure panels at each end of the main body panels, the transverse score lines at the upper edges of the blank being offset at the main body panels, one spout end panel at the upper end of the sheet being provided with upwardly convergent score lines extending from the respective upper corners of the main body panel and intersecting at the upper edge of said spout end panel, a pull tab member joined to said spout end panel by a transverse line of weakness, said line of weakness forming a portion...
of the upper edge of said spout end panel, said pull tab member having a longitudinal side edge and a diagonal side edge aligned with one of said spout end panel diagonal scores, a transverse cut, a longitudinal score spaced from the longitudinal side edge and said cut defining a pull panel, a diagonal score aligned with the other of said spout end diagonal scores and with said diagonal edge defining a triangular glue tab having its apex at the top edge of said spout end panel and spaced from the pull panel by a generally trapezoidal panel, the two end panels adjacent to the spout end panel when the blank is formed into a container having diagonal score lines originating at the respective corners of their main body panels which are adjacent to the spout end main body panel when said blank is formed into a container and extending therefrom diagonally inwardly toward the center of the respective two end panels, one of said diagonal score lines joining the free edge of its end panel to define a triangular closure member, the other end panel having a transverse line of weakness adjacent to the free edge thereof and with the second diagonal score line defining a generally triangular closure member and a separable glue tab, the line of weakness of said generally triangular closure member being longer than one-half the length of the free edge of the spout end panel.

2. A container blank comprising a generally rectangular sheet having generally parallel opposed free side edges and being provided with longitudinally extending score lines dividing the central portion of the sheet into series of adjacent generally rectangular main body panels, transverse score lines adjacent to the opposite ends of the sheet providing, in cooperation with the longitudinal score lines, end closure panels at each end of the main body panels, the transverse score lines at the upper end of the blank being offset at the main body panels, one spout end panel at the upper end of the sheet being provided with upwardly convergent score lines extending from the respective upper corners of the main body panel and intersecting at the upper edge of said spout end panel, a pull tab member joined to said spout end panel by a transverse score, said score forming a portion of the upper edge of said spout end panel, said pull tab member having a longitudinal side edge and a diagonal side edge aligned with one of said spout end panel diagonal scores, a transverse cut, and a longitudinal score spaced from the longitudinal side edge and with said edge and said cut defining a rectangular pull panel, said diagonal side edge, said transverse score and said longitudinal score defining a trapezoidal panel hinged to said spout end panel at said transverse score and hinged to said pull panel at said longitudinal score, the two end panels adjacent to the spout end panel when the blank is formed into a container having diagonal score lines originating at the respective corners of their main body panels which are adjacent to the spout end main body panel when said blank is formed into a container and extending therefrom diagonally inwardly toward the center of the respective two end panels, one of said diagonal score lines joining the free edge of its end panel to define a triangular closure member, the other end panel having a transverse line of weakness adjacent to the free edge thereof and with the second diagonal score line defining a generally triangular closure member and a separable glue tab, the line of weakness of said generally triangular closure member being longer than one half the length of the free edge of the spout end panel.

3. A sealed dispensing closure for a flat-topped milk carton or the like having a pair of opposed longitudinal side wall panels and front and rear end wall panels comprising, a spout end panel hinged to the front end wall of the container, a rear end panel hinged to the rear wall of the container, first and second side cover panels hinged to the side walls of the container, said end and side cover panels being hingedly connected to one another, said spout end panel having converging score lines extending from the upper corners of the front end wall and intersecting at the free margin of said spout end panel to define a central triangular pour spout having adjacent triangular portions, each of said triangular portions forming a bellows fold with the immediately adjacent side cover panels when said end panels and side cover panels are folded together into a flat closure, the free edge of said second side panel being tucked into a closing bellows and a dispensing bellows formed at said first side cover panel, said first side cover panel having a diagonal score and a perforated score parallel to the free edge thereof, said scores cooperating to define a first triangular side panel and a separable tear strip, the perforated score upon being torn defining a free edge of said first triangular side panel which edge is longer than the free edge of the adjacent triangular dispensing bellows panel to which it is hinged, said second side cover panel having a diagonal score defining a second triangular side panel having a free edge longer than the free edge of the adjacent dispensing bellows panel to which it is hinged, said first side cover panel overlying and being sealed to said second side cover panel with said tear strip overlying and being sealed to the top of said first triangular side panel when in closed configuration, said tear strip being severable from said first side panel, the side cover panels and said end triangular portions defining reversible bellows folds, said reversible folds alternately springing the central triangular pour spout into pouring position and into closure position as the apex of the central triangular spout is passed through the plane of the front end pour panel.

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