Dec. 12, 1967 J. J. AID ET AL 3,357,631

RECESSED ICE-CREAM CARTON WITH TUCK-IN RECLOSURE

Filed Dec. 3, 1963 2 Sheets-Sheet 1

FIG. 1

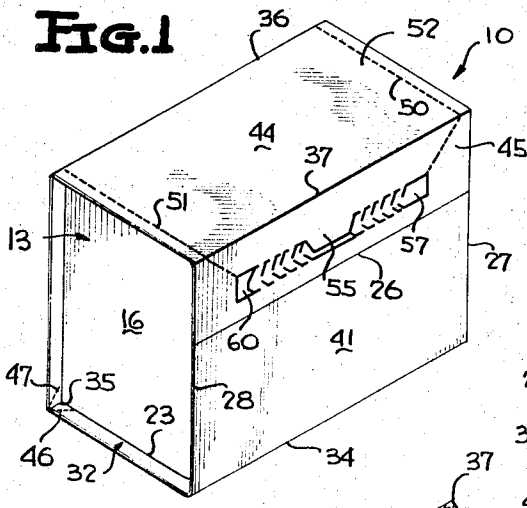
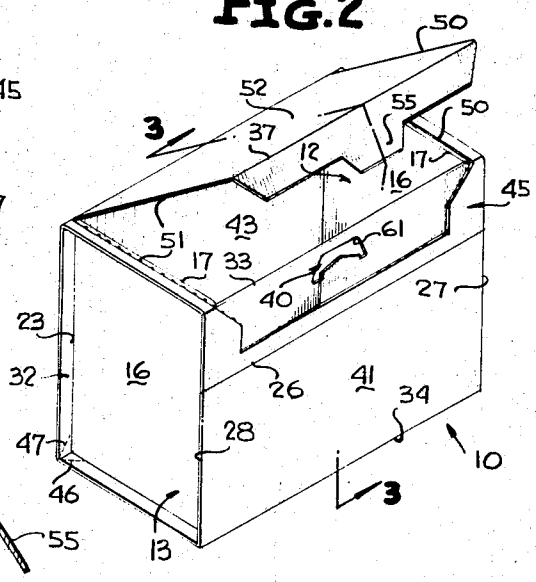


FIG. 2



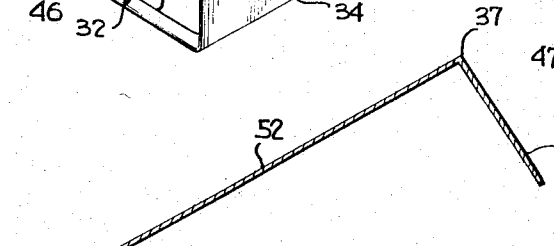


FIG. 3

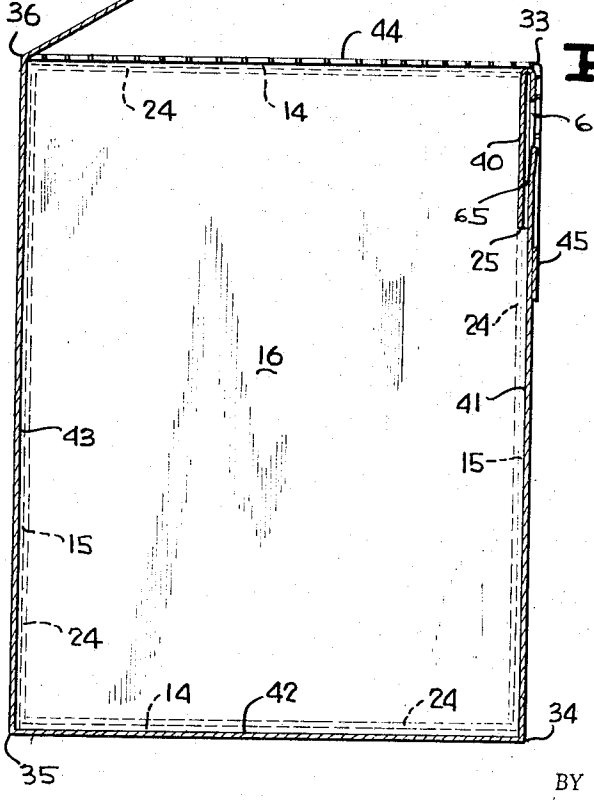
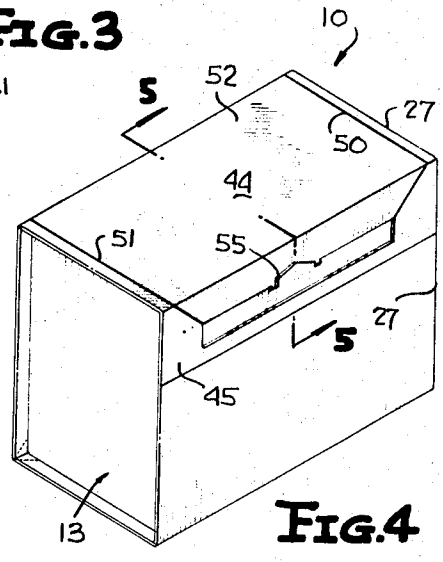


FIG. 4



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FIG. 5

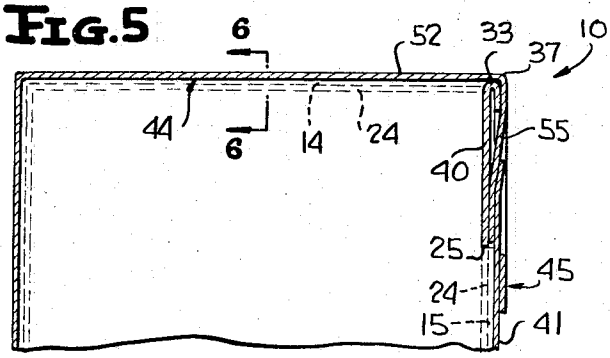


FIG. 6

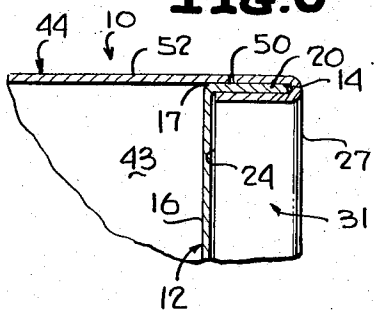


FIG. 7

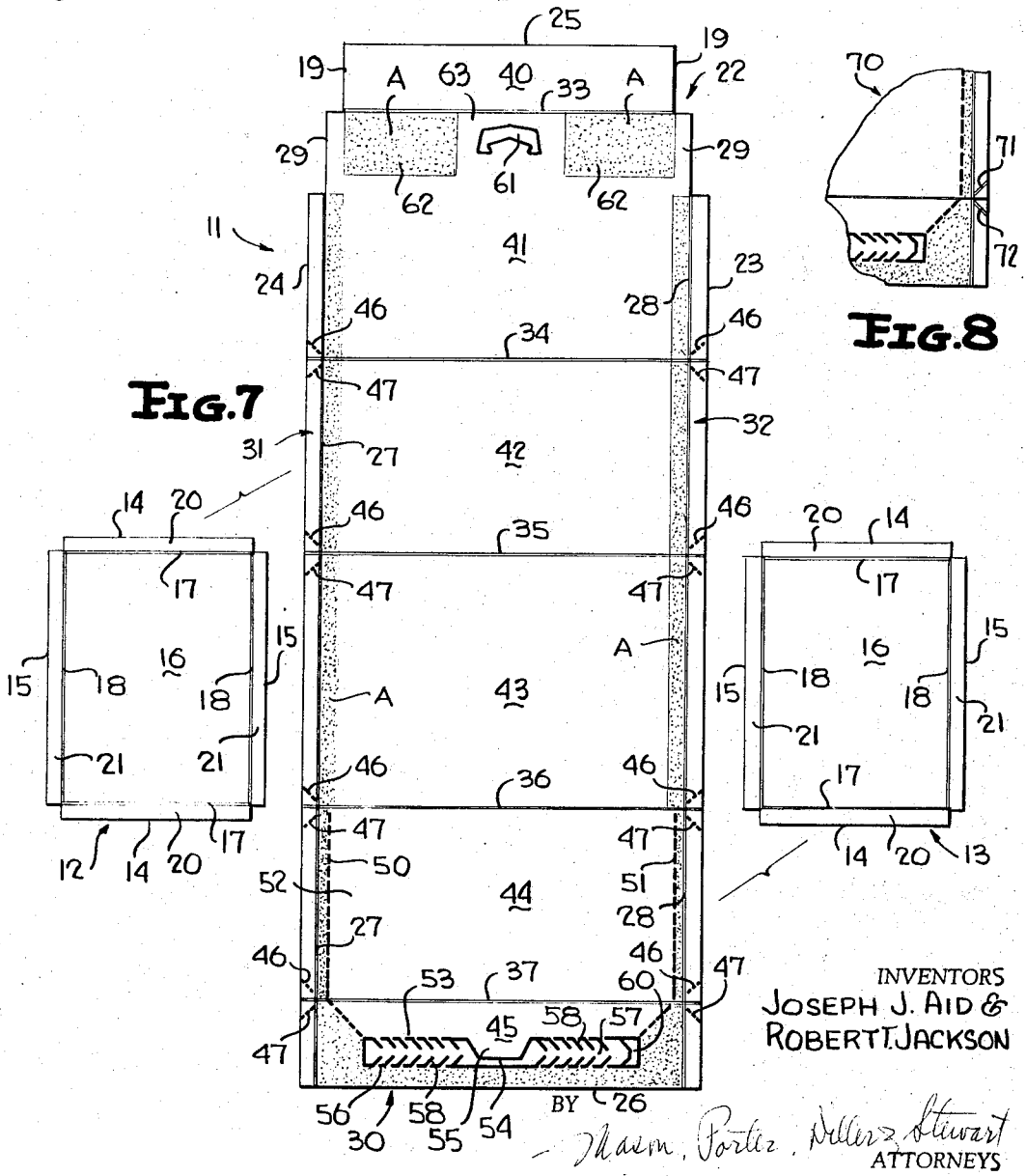


FIG. 8

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RECESSED ICE-CREAM CARTON WITH TUCK-IN RECLOSURE

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3 Claims. (Cl. 229—51)

This invention relates to a novel recessed ice-cream carton having a tuck-in reclosure, and in particular, to a novel carton including an interior chamber opening outwardly through a locking-tab opening in a side panel of the carton, and also having end panels providing planar portions for supporting a reclosure member of the carton.

An object of this invention is to provide a novel carton having a bottom panel, a pair of upstanding side panels and a pair of end panels joined to the bottom panel, a top panel joined to one of the pair of side panels, the top panel including a reclosure member defined in part by weakened lines and one of the panels having a supporting portion underlying one of the weakened lines whereby the reclosure member is supported adjacent the weakened line by the supporting portion.

Still another object of this invention is to provide a novel carton having a bottom panel, a pair of upstanding side panels and a pair of end panels joined to the bottom panel, a top panel joined to one of the side panels in overlying spaced relationship to the bottom panel, the top panel including a reclosure member defined in part between a pair of spaced parallel weakened lines and each of the end panels having a supporting portion underlying an associated one of the weakened lines whereby end portions of the reclosure member rest upon and are supported by the supporting portions of the end panels.

A further object of this invention is to provide a novel carton of the type immediately above described wherein the pair of end panels are recessed and the distance between the pair of end panels is less than the distance between the parallel weakened lines partially defining the reclosure member in the top panel of the carton.

Still another object of this invention is to provide a novel carton of the type above described wherein the supporting portions form integral parts of each of a plurality of flap or flange portions joined to the end panels along a fold line, and each of the plurality of flaps adjacent the top panel of the carton directly underlay and support the closure member at an area adjacent the weakened lines.

A further object of this invention is to provide a novel carton having a bottom panel, and a pair of upstanding and opposed side panels, a pair of upstanding and opposed end panels, said opposed panels being joined to the bottom panel, a top panel joined to one of the pair of side panels, a locking panel joined to the top panel for overlapping engagement with the other of the side panels, a panel joined to the other side panel and defining therewith an interior chamber in the carton opening outwardly through a locking-tab opening in the other side panel, and the locking panel including a locking-tab for insertion into the interior chamber by being passed through the locking-tab opening in the other side panel.

Still another object of this invention is to provide a novel carton of the type immediately above described,

and in addition, to form the interior chamber of the carton by folding the panel joined to the other side panel into the interior of the carton and adhesively securing the same to an interior surface of the other side panel.

Another object of this invention is to provide a novel carton comprising a bottom panel, a pair of upstanding side panels and a pair of upstanding end panels, said panels being joined to the bottom panel, a top panel joined to one of the pair of side panels in spaced parallel relationship to the bottom panel, a locking panel joined to the top panel for overlapping engagement with an exterior surface of the other of the pair of side panels, a tab receiving opening in the other side panel, a backing panel joined to and overlying an interior surface of the other side panel and defining therewith a chamber opening outwardly through the tab receiving opening, the top panel including a reclosure member defined in part by a pair of spaced parallel weakened lines, and the pair of end panels each having a supporting flange portion underlying an associated one of the weakened lines whereby the side end portions of the reclosure member rest upon and the supported by each of the end panel flange portions.

A further object of this invention is to provide a novel three-piece carton blank unit comprising a pair of substantially identical end panels and a body panel, a pair of fold lines and adjacent edges of the end panels defining flange portions on the end panels, the body panel including a top panel defined in part by a pair of fold lines, each of the fold lines of the top panel being spaced from an edge of the body panel and defining therewith a securing flap, a pair of spaced weakened lines in the top panel defining a reclosure member between the pair of fold lines of the top panel, and the distance between each weakened line and an adjacent longitudinal fold line of the top panel is less than the distance between each fold line and an adjacent edge of each of the end panels whereby the flange portions of the end panels each underlyingly support a portion of the reclosure member of the top panel when the carton blank unit is erected.

With the above and other objects in view that will hereinafter appear, the nature of the invention will be more clearly understood by reference to the following detailed description, the appended claims and the several views illustrated in the accompanying drawings.

In the drawings:

FIGURE 1 is a top perspective view of a novel ice-cream carton constructed in accordance with this invention, and illustrates a reclosure member in the closed position thereof prior to being opened by the removal of a tear strip and subsequently tearing along substantially parallel spaced weakened lines.

FIGURE 2 is a top perspective view of the carton of FIGURE 1, and illustrates the reclosure member being partially opened to provide access into the interior of the carton.

FIGURE 3 is an enlarged cross-sectional view taken along line 3—3 of FIGURE 2, and illustrates a tab-receiving recess or chamber of the carton opening outwardly through a tab-receiving opening in a side wall of the carton.

FIGURE 4 is a top perspective view of the carton of FIGURES 1 through 3 of the drawings, and illustrates the reclosure member in closed position.

FIGURE 5 is an enlarged fragmentary sectional view taken along line 5—5 of FIGURE 4, and illustrates the

locking tab passed through the opening in the side wall of the carton and received in the chamber thereof.

FIGURE 6 is an enlarged fragmentary sectional view taken along line 6—6 of FIGURE 5, and illustrates one of the weakened lines in the top panel overlying an outwardly directed supporting flange of an end panel.

FIGURE 7 is an exploded top plan view of a three-piece carton blank unit from which the carton of FIGURES 1 through 6 of the drawings is formed.

FIGURE 8 is an enlarged fragmentary top plan view of a carton blank, and illustrates a modification of the three-piece carton blank unit of FIGURE 7.

A novel ice-cream carton of this invention is fully illustrated in FIGURES 1 through 8 and is generally designated by the reference numeral **10**. The carton **10** will be best understood by first describing a three-piece carton blank unit or assembly **11** of FIGURE 7 from which the carton **10** of FIGURES 1 through 6 is formed.

The three-piece carton blank unit **11** comprises a pair of substantially identical, rectangular end panel blanks **12** and **13**. Each of the end blanks **12** and **13** has a pair of identical transverse edges **14, 14** and a pair of identical longitudinal edges **15, 15**. An end panel **16** of each of the end panel blanks **12** and **13** is set off by a pair of spaced parallel transverse fold lines **17, 17** and a similar pair of spaced, parallel longitudinal fold lines **18, 18**. Each transverse edge **14** and an adjacent transverse fold line **17** of the end panel blanks **12** and **13** set off an identical transverse flap or flange **20**. Similarly, each longitudinal edge **15** and an adjacent longitudinal fold line **18** of each of the end panel blanks **12** and **13** sets off an identical longitudinal flap or flange **21**.

An elongated, substantially rectangular body forming blank **22** of the three piece carton blank unit **11** has a pair of longitudinal edges **23, 24** and a pair of transverse edges **25** and **26**. A pair of longitudinally extending, parallel fold lines **27, 28** set off a longitudinally extending, substantially rectangular central body panel **30** terminating at the transverse edges **25** and **26**.

A narrow, rectangular securing panel **31** is set off by the longitudinal edge **24** and the adjacent longitudinal fold line **27** while a substantially identical securing panel **32** is similarly set off by the longitudinal edge **23** and the adjacent longitudinal fold line **28**.

A plurality of spaced, transverse fold lines **33** through **37** cooperate with the longitudinal fold line **27** and **28** to divide the central panel **30** into a plurality of individual panels. The transverse edge **25**, the transverse fold line **33** and identical edge portions **19, 19** of the longitudinal edges **23** and **24** set off a backing panel **40**.

A substantially rectangular side panel **41** is set off by the transverse fold lines **33** and **34**, the longitudinal edges **23** and **24**, and identical edge portions **29, 29** of the longitudinal edges **23, 24**.

A substantially rectangular bottom panel **42** is similarly set off by the transverse fold lines **34** and **35**, and the longitudinal fold lines **27** and **28**.

A second side panel **43** is set off by the transverse fold line **35**, the transverse fold line **36** and the longitudinal fold lines **27** and **28**.

A top panel **44** of the central panel **30** is bounded by the transverse fold line **36**, the transverse fold line **37** and the longitudinal fold lines **27** and **28**.

The transverse fold line **37**, the transverse edge **26**, the longitudinal fold line **27** and the longitudinal fold line **28** bound a substantially narrow, rectangular locking panel **45**.

A pair of identical weakened lines **46** and **47** are formed in each of the narrow longitudinal securing strips **31** and **32** on either side of the transverse fold lines **34** through **37**. The weakened lines **46** and **47** are preferably lines of cut scoring or lines or perforations which converge from the longitudinal edges **23** and **22** of the blank **22** toward the respective longitudinal fold lines **28** and **27** at the intersections of these longitudinal fold lines and the transverse fold lines **34** through **37**.

A pair of weakened lines, preferably cut-scoring or lines of perforations **50, 51** are located in the top panel **44** of the central body blank **22**. The weakened lines **50** and **51** are normal to and terminate at the transverse fold line **36**, and are similarly normal to but project beyond the transverse fold line **37**. The weakened line **50** is parallel to and spaced slightly inwardly of the longitudinal fold line **27** while the weakened line **51** is similarly parallel to and spaced inwardly of the longitudinal fold line **28**. It should be particularly noted that the distance between each of the weakened lines **50** and **51** and their adjacent longitudinal fold lines **27** and **28** respectively is slightly less than the distance between each transverse edge **14** and an adjacent transverse fold line **17** of each of the end panel blanks **12** and **13**. The importance of the above-noted dimensioning and the novel structure produced thereby will be more fully described hereafter in the description of the carton **10**.

The weakened lines **50, 51** and the transverse fold lines **36** and **37** set off a substantially rectangular area **52** in the top panel **44** of the blank **22**. This rectangular area **52** forms the reclosure member of the carton **10** which will be described more fully hereafter.

The weakened lines **50** and **51** converge toward each other in the locking panel **45** and terminate at opposite ends of a weakened line **53**. The weakened line **53** is substantially parallel to the transverse fold line **37** but is contoured at **54** to set off a locking tab **55**. A transverse weakened line **56** is formed by scoring or perforating the locking panel **45** adjacent the transverse edge **26**. The weakened line **56** cooperates with the weakened line **53** to set off a tear strip **57** in the locking panel **45**.

The tear strip **57** is angularly scored along the length thereof, as at **58**. An opening **60** is struck from the material of the locking panel **45** to enable a person to grip the tear strip **57** prior to removing the same for initiating the opening in the carton **10**.

A substantially inverted U-shaped opening **61** is struck in the side panel **41** adjacent the transverse fold line **33**. The opening **61** is in longitudinal alignment with the locking tab **55** of the locking panel **45**.

Adhesive A, identified by the strippling in FIGURE 7, is applied to the central blank **22** of the three-piece carton blank unit **11** prior to erecting the carton **10** of FIGURES 1 through 6 of the drawings. It should be particularly noted that the adhesive A applied to the top panel **44** between the weakened lines **50** and **51** and the adjacent longitudinal fold lines **27** and **28** is narrower than the adhesive applied to the panels **41** through **43** and **45**. Two substantially identical rectangular areas **62, 62** in the side panel **41** are each coated with an adhesive A while a central surface area **63** of the side panel **41** between the adhesively coated areas **62, 62** is not coated. The adhesive A is preferably a heat sealable adhesive, although glue or any other conventional adhesive may be employed.

The panel **40** is first folded about the transverse fold line **33** and secured by the rectangular adhesive coated portions **62, 62** to the side panel **41**. The blank **22** is then folded along the transverse fold lines **34–37**, and the locking panel **45** is adhesively secured to the side panel **44**, as is best illustrated in FIGURE 1 of the drawings.

After the body blank **22** has been folded to form a body of the container **10**, each of the end panel blanks **12** and **13** is inserted into an open end of the carton body.

In actual practice, one of the end panel blanks **12** or **13** is then adhesively secured to the carton body whereafter the carton is packaged with a desirable fill, such as ice cream, through the single open end, and this open end is then closed.

The flanges or flaps **20** and **21** of the end panel blanks **12** and **13** are directed outwardly of the carton body as is best illustrated in FIGURE 6. The relatively narrow

rectangular securing panels 31 and 32 are then folded inwardly to overlap the flaps 20 and 21 of the end panel blanks 12 and 13. The plurality of pairs of weakened lines 46, 47 permit the securing panels 31 and 32 to be readily bent inwardly during the erection of the carton 10.

In the completely erected carton 10, the side panels 41 and 43 are disposed in upstanding parallel relation to each other and are joined to the bottom panel 42 by the respective transverse fold lines 34 and 35. The top panel 44 is joined to the upstanding side panel 43 by the fold line 36, and is similarly joined by the fold line 37 to the locking panel 45. The end panels 16, 16 are, like the side panels 41 and 43, in spaced, opposed parallel relationship.

The carton 10 is opened by grasping the tear strip 57 adjacent the opening 60 in the locking panel 45 (see FIGURE 1) and pulling the tear strip 57 from left-to-right as viewed in the same figure. After the tear strip 57 has been torn and removed from the locking panel 45, the tab 55 is grasped and drawn upwardly, as viewed in FIGURE 1, to sever the reclosure member 52 on the top panel 44 along the weakened lines 51 and 50.

Referring to FIGURE 3 of the drawings, it will be noted that the panel 40 and the side panel 41 cooperate to define therebetween a relatively, narrow downwardly opening recess or chamber 65. The chamber or recess 65, opens outwardly of the carton 10 through the inverted U-shaped tab receiving opening 61.

When it is desired to reclose the carton 10 from the position illustrated in FIGURES 2 and 3 of the drawings, to the reclosed position of the carton 10 shown in FIGURES 4 and 5, the locking tab 55 of the locking panel 45 is merely inserted into the opening 61 and urged downwardly into the recess 65 to the final position illustrated in FIGURE 5. It will be noted that in this position the tab 55 is completely backed up or surrounded by the panel 40 and the fill within the carton 10 cannot contact the tab 55. Thus, the locking tab 55 can be repeatedly reinserted through the opening 61 into the recess 65 without in any way being affected by the fill within the carton 10. If, for example, this fill were ice cream, the absence of the panel 40 would permit the tab 55 to contact the ice cream in the carton itself or the ice cream adhering to the interior surface of the side wall 41. The locking tab 55 would not only become tacky from the ice cream, but more important, germs or deleterious matter of any kind transferred from a person's fingers to the locking tab 55 would be communicated to the interior of the carton 10 and transferred to the product therein. In the case of an edible product, such as ice cream, this is most unsanitary and undesirable.

The panel 40, however, substantially precludes the entry of any undesirable material into the interior of the carton 10.

In describing the three-piece carton blank unit 11 of FIGURE 7, it was noted that the distance between the weakened lines 50 and 51 and the respective longitudinal fold lines 27 and 28 was less than the distance between the transverse fold lines 17 and the transverse edges 14 in each of the end panel blanks 12 and 13. Referring primarily to FIGURES 2 and 6 of the drawings, it will be seen that the above-noted dimensioning disposes the weakened line 50 directly above the flange 20 of the end panel blank 12 outwardly of the end panel 16. In a similar manner, the weakened line 51 of the top panel 44 directly overlies the outwardly directed flange 20 of the end panel blank 13 outwardly of the end panel 16. In this manner, the outwardly directed flanges or flaps 20 of the end panel blanks 12 and 13 adjacent the top panel 44 provide planar supporting portions at both ends of the carton 10 for the reclosure member 52. When the reclosure member 52 is in the position shown in FIGURE 4, the area of the reclosure member 52 immediately adjacent the weakening line 51 is supported by the flap 20 of the end panel blank 13 while an area of the reclosure member 52 immediately adjacent the weakening line 50 is similarly supported along the entire length thereof by a planar portion of the flange 20 of the end panel blank 12.

It should be noted that frictional contact between the edges of the reclosure member 52 at 50 and 51 (FIGURE 2) and the inner surface of the end flaps 20 establishes a frictional locking when the reclosure member 52 is closed and pressed inwardly below the plane of the surfaces of the flanges or flaps 20.

Illustrated in FIGURE 8 of the drawings is a fragment of the body blank 70 which is substantially identical to the body blank 22 of FIGURE 7. The body blank 70 differs from the body blank 22 only in that the weakened lines 45 and 47 of FIGURE 7 have been replaced by fold lines 71 and 72. Other than this, the body blank 70 of FIGURE 8 is identical to the body blank 22 of FIGURE 7.

From the foregoing, it will be seen that novel and advantageous provision has been made for carrying out the desired end. However, attention is directed to the fact that variations may be made in the example carton and three-piece carton blank unit disclosed herein without departing from the spirit and scope of this invention as defined in the appended claims.

We claim:

1. A carton comprising a bottom panel, vertically upstanding spaced front and rear panels, opposed end panels, and a top panel, said top panel being joined to said rear panel and being normally disposed in opposed overlying relationship to said bottom panel, a locking tab panel joined to said top panel, said locking tab panel being secured in overlying relationship to an exterior surface of the front panel, tab receiving opening means in said front panel beneath said locking tab panel and normally closed thereby, a pair of spaced weakened lines in said locking tab panel defining a tear strip disposed wholely within the confines of said locking tab panel, a portion of one of said weakened lines defining a tab directed toward one of said top and bottom panels, said tab and tab receiving opening means being generally in overlying relationship in the normally closed position of said locking tab panel, said tab receiving opening means being of a size sufficient to receive said tab upon the removal of said tear strip and a subsequent reclosure of said carton, means provided interiorly of said carton defining a chamber for receiving said locking tab when said tab is passed through said tab receiving opening means to reclose said carton after said carton has been once opened, said chamber means being defined by a backing panel joined to said front panel, said backing panel being in completely interiorly overlying relationship with said opening, said locking tab panel being joined to said top panel along a fold line, said top panel being defined in part by a pair of generally parallel spaced edges, a second pair of weakened lines in said locking tab panel, said second pair of weakened lines converging toward and terminating at said one weakened line, said second pair of weakened lines being confined wholely within the confines of said locking tab panel, a third pair of generally parallel weakened lines in said top panel, and an associated one of each of said third pair of weakened lines merging with an associated one of each of said second pair of weakened lines at said fold line.

2. The carton as defined in claim 1 wherein said end panels each have a supporting portion underlying an associated one of said third weakened line whereby an openable portion of said top panel between the third weakened lines rests upon and is supported by each end panel supporting portion.

3. The carton as defined in claim 1 wherein said locking tab panel includes an opening between said first pair of weakened lines defining a finger-gripping tab for facilitating the gripping of said tear strip incident to the removal thereof from the locking tab panel.

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