Aug. 7, 1962 C. E. ANDERSON 3,048,324

RECLOSING CARTON

Filed April 23, 1959 3 Sheets-Sheet 1

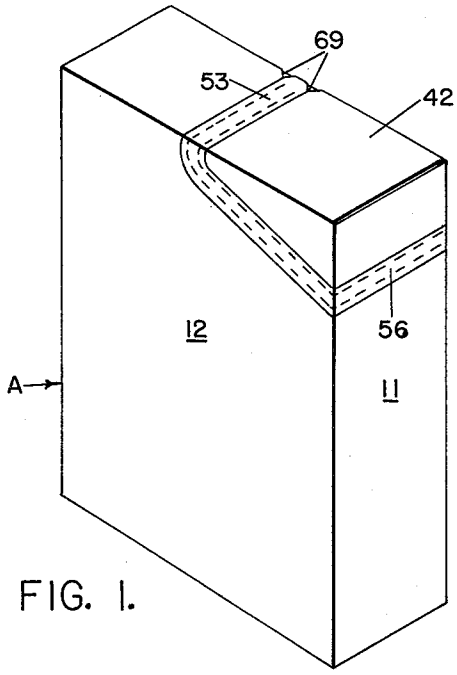


FIG. 1.

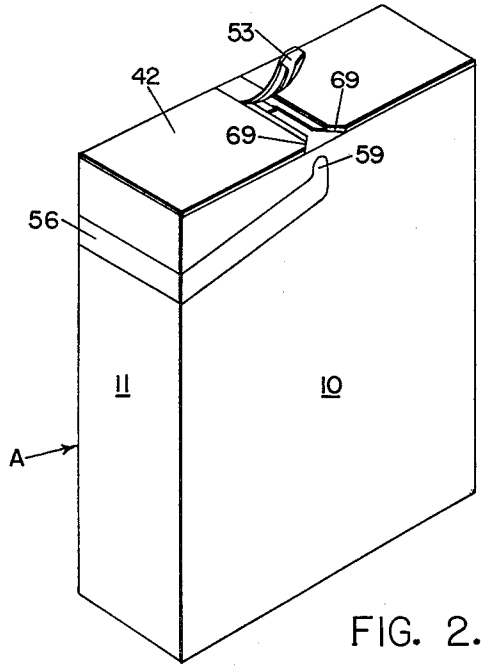


FIG. 2.

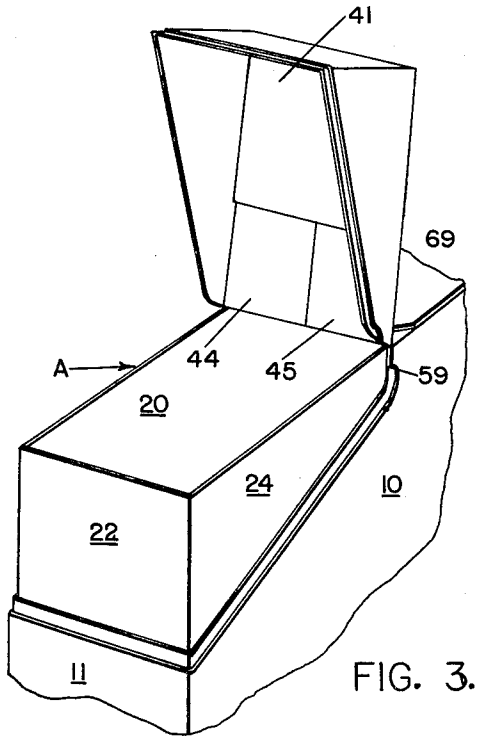


FIG. 3.

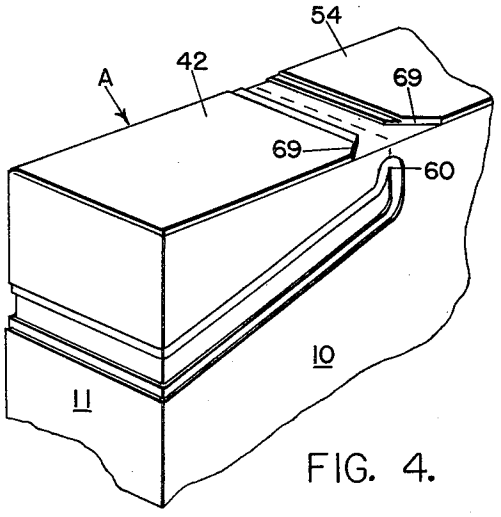


FIG. 4.

INVENTOR;
CARL E. ANDERSON.

BY Robert M. Dunning

ATTORNEY

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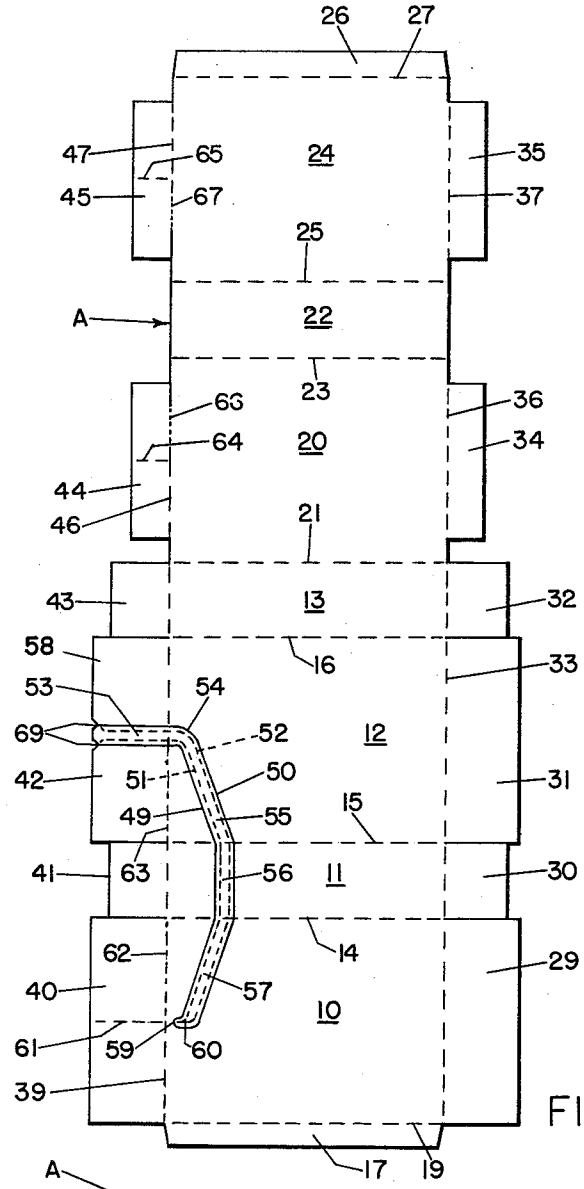


FIG. 7.

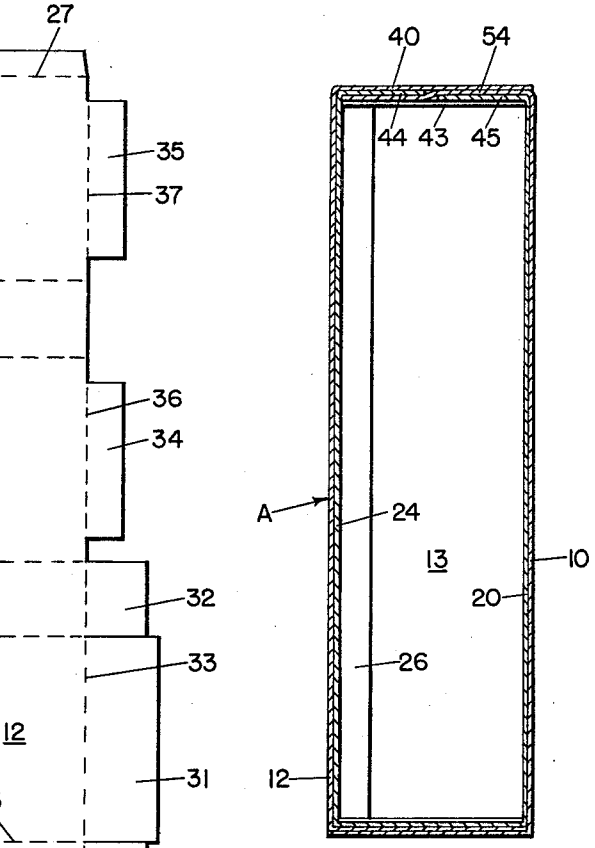


FIG. 5.

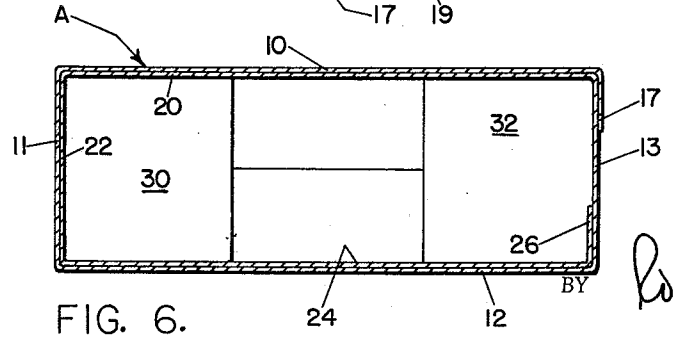


FIG. 6.

INVENTOR;
CARL E. ANDERSON.

BY Robert M. Dunning

ATTORNEY

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RECLOSING CARTON

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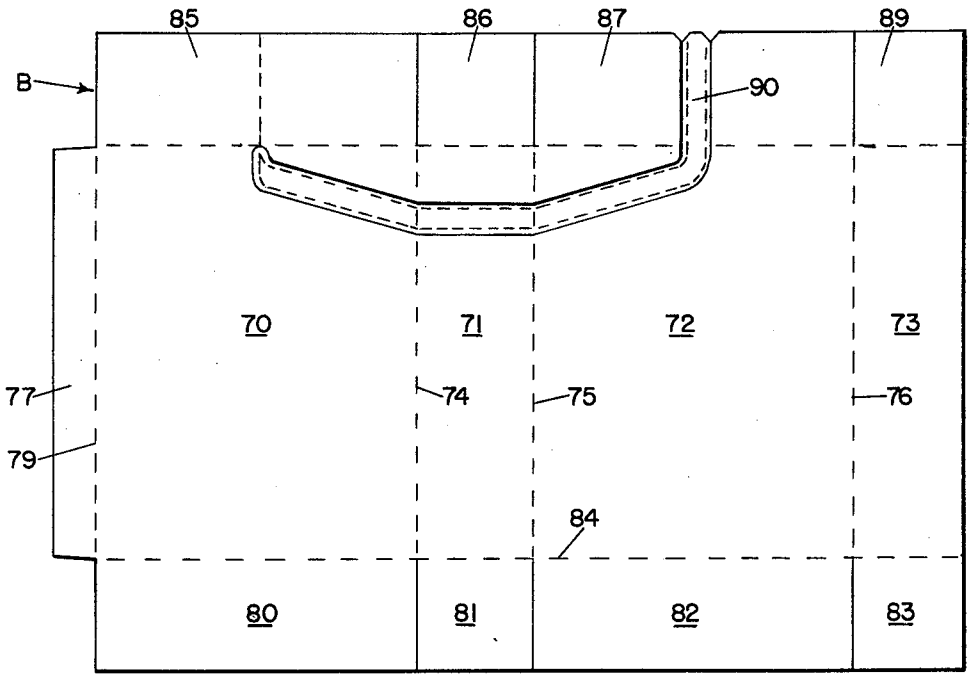


FIG. 8.

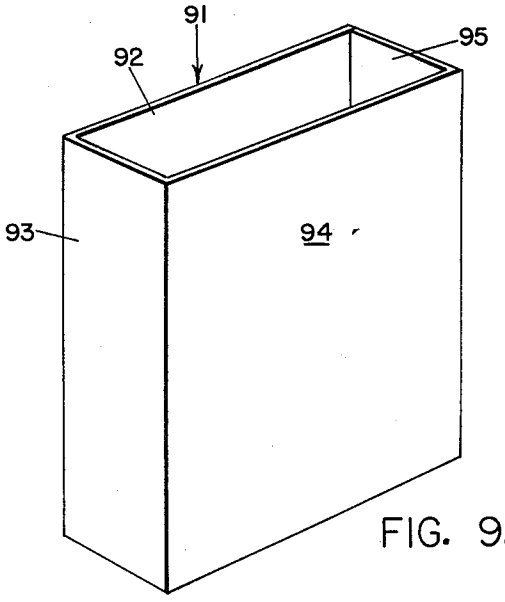


FIG. 9.

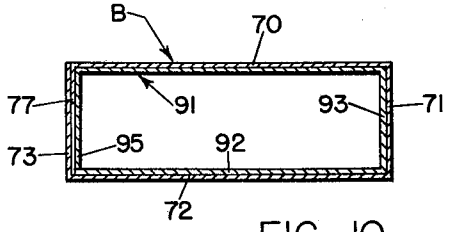


FIG. 10.

INVENTOR;
CARL E. ANDERSON.

BY Robert M. Dunning

ATTORNEY

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RECLOSING CARTON

Carl E. Anderson, St. Paul, Minn., assignor, by mesne assignments, to Waldorf Paper Products Company, St. Paul, Minn., a corporation of Minnesota

Filed Apr. 23, 1959, Ser. No. 808,386
6 Claims. (Cl. 229—51)

This invention relates to an improvement in reclosing carton and deals particularly with a sealed carton having a removable tear strip encircling an upper corner of the carton to provide a carton having a hinged cover portion when the tear strip is removed.

For many years cartons have been produced having an outer shell and an inner liner and having cut lines or weakened lines of separation extending across three walls of the outer shell and having a hinge line across the fourth wall. When opened, the upper portion of the outer shell may be hinged back to disclose the contents. Cartons of this type are normally not particularly air tight or sift proof due to the cut lines and accordingly usually not adaptable for use in conjunction with a powdered product which tends to sift from the carton. It is a purpose of the present invention to provide a sealed carton such as may be used for containing several pounds of a powdered product such as soap and from which the product will not readily sift. A continuous tear strip is provided which extends through portions of four adjoining walls of the carton, the ends of the tear strip being closely adjacent one another. When this tear strip is removed, a corner of the carton may be hinged upwardly so that the contents may be dispensed. At the same time, this corner portion may again be hinged down into place to close the carton when it is not in use.

A feature of the present invention resides in the provision of a carton having a removable tear strip which has one end at the free end of a top closing flap of a tubular carton and which extends continuously across this closing flap, across an upper corner of an adjoining side wall, across the adjoining end wall, and across a corner of the second side wall to terminate near the free edge of the closing flap adjoining the other end of the tear strip. As a result, substantially a continuously removable portion is provided so that the carton may be opened in a simple pulling operation.

A further feature of the present invention resides in the provision of a sealed package of the type described which includes a removable tear strip which is so arranged that the carton may be opened without applying inward pressure against the side walls of the carton which tend to distort the walls and to also distort the liner. Where a carton of this type is provided with perforated lines which must be opened by inward pressure against portions of the carton or which may be opened by running a knife along the line of perforations, injury is often caused to the liner, destroying the effectiveness of the finished carton.

These and other objects and novel features of the present invention will be more clearly and fully set forth in the following specification and claims.

In the drawings forming a part of the specification:

FIGURE 1 is a perspective view of the carton in closed position.

FIGURE 2 is a view similar to FIGURE 1 showing the start of the opening operation.

FIGURE 3 illustrates the carton after it has been opened and the closure hinged upwardly.

FIGURE 4 is a perspective view of a portion of the carton after reclosure thereof.

FIGURE 5 is a vertical sectional view through the carton.

FIGURE 6 is a horizontal sectional view through the carton.

FIGURE 7 is a diagrammatic view of the blank from which the carton is formed.

FIGURE 8 is a perspective view of a modified form of outer carton shell.

FIGURE 9 is a perspective view of a reinforcing sleeve which may be inserted within the carton shown in FIGURE 8.

FIGURE 10 is a cross sectional view through the assembled carton and liner.

The carton A is formed from the blank illustrated in FIGURE 7 of the drawings. The blank is shown at right angles to its normal position and includes a side wall panel 10, an end wall panel 11, a side wall panel 12, and an end wall panel 13 which are foldably connected along parallel fold lines 14, 15 and 16. A glue flap 17 is hingedly connected to the panel 10 along a fold line 19 and this glue flap is secured in overlapping relation to the end wall panel 13 when the carton is formed.

The side wall liner panel 20 is foldably connected to the end wall 13 along a fold line 21. An end wall 22 is foldably connected to the inner side wall 20 along the fold line 23. A second inner side wall 24 is foldably connected to the inner end wall 22 along a fold line 25. A glue flap 26 may be secured to the panel 24 along a fold line 27. The glue flap 26 is secured to the inner surface of the end wall 13 in the assembled form of the carton.

The walls 10, 11, 12 and 13 form outer side and end walls while the panels 20, 22 and 24 form inner or liner walls. Normally, the liner walls are not adhered to the corresponding outer walls but are positioned in face contact therewith.

Bottom closing flaps 29, 30, 31, and 32 are foldably connected to the lower edges of the panels 10, 11, 12 and 13 respectively along a fold line 33. Reinforcing flaps 34 and 35 may be foldably connected to the lower ends of the liner panels 20 and 24 along fold lines 36 and 37 if it is so desired. The flaps 34 and 35 are of substantially smaller dimensions than the closing flaps 29 and 31 so as not to interfere with the folding of the outer flaps and the flaps 34 and 35 are preferably of a width not greater than one-half the width of the closure panels 29 and 31 so as to not overlap when the various flaps are folded inwardly.

Closing flaps are also secured to the upper edge of the carton wall along a fold line 39. Closing flaps 40, 41, 42 and 43 are hingedly connected to the wall panels 10, 11, 12 and 13 respectively. If desired, reinforcing flaps 44 and 45 may be connected to the liner walls 20 and 24 respectively along fold lines 46 and 47. In preferred form, the reinforcing flaps 44 and 45 are of a length equal to not over one-half the width of the carton so that the two flaps do not overlap when the carton is closed. The flaps are also somewhat narrower than the walls 20 and 24 to which they are hinged to prevent any crowding at the corners of the carton when it is closed.

A tear strip is provided extending through portions of one closing flap and three adjoining walls. As is best indicated in FIGURE 7, the tear strip includes two parallel cut score lines 49 and 50 extending into the paperboard from the outer surface of the sheet and a pair of spaced parallel inner cut score lines 51 and 52 extending into the sheet from the inner surface thereof. The cut score lines 51 and 52 are offset inwardly from the cut lines 49 and 50 so that a portion of the paperboard is split between the inner cut lines and the outer cut lines.

The tear strip includes a portion 53 which extends transversely across the closing flap 42 from the free edge 58 thereof, to the fold line 39. The tear strip extends into the panel 12, curves as indicated at 54 and extends

diagonally across a corner of the wall panel **12** as indicated by the numeral **55**. The tear strip extends horizontally across the end wall panel **11** as indicated at **56**. The tear strip then continues diagonally across the panel **10** as indicated at **57**. The outer cut lines **49** and **50** are curved to meet as indicated at **59** forming the end of the tear strip which is closely adjacent to the fold line **39**. The inner cut lines **49** and **50** also merge together as indicated at **60** so that the removable tear strip may be readily pulled completely from the wall.

A fold line **61** extends transversely across the closing flap **40** in registry with the removable tear strip portion **53** and the portion of the closing flap **40** between the fold line **61** and the fold line **14** is perforated or weakened as indicated at **62**. The portion of the fold line **39** between the tear strip portion **53** and the fold line **15** is also perforated as indicated at **63**. When the reinforcing flaps **44** and **45** are provided, these flaps are also provided with fold lines **64** and **65** which register with the fold line **61**. The portion of the reinforcing flap **44** between the fold line **64** and the end of the flap nearest the fold line **23** is perforated as indicated at **66**. The portion of the flap **45** between the fold line **65** and the end of the flap nearest the fold line **25** is also weakened or perforated as indicated at **67**.

The carton is adhered together in the manner described with the panels **20** and **24** lying inwardly of the side walls **10** and **12** and with the liner panel **22** lying inwardly of the panel **24**. The lower end of the carton may be closed and sealed by first folding the flaps **30** and **32** inwardly and then folding the flaps **29** and **31** inwardly and securing the various flaps together. The reinforcing flaps **34** and **35** are folded simultaneously with the corresponding flaps of the outer closure or, alternatively, these flaps **34** and **35** may be first folded into a common plane and the outer closing flaps may be folded inwardly to enclose the same.

After the carton is filled, the top closure is closed in the same manner as the bottom closure, it being possible to first fold inwardly the flaps **40** and **43**, then fold inwardly the flaps **44** and **45**, and then fold inwardly the flaps **40** and **42**. Alternatively, the reinforcing flaps may be folded in with the flaps which lie outwardly thereof. In any event, the flap **42** is outermost in the closed condition of the carton.

When it is desired to open the carton, the end of the portion **53** of the tear strip is grasped and pulled upwardly as indicated in FIGURE 2 of the drawings. Notches **69** on either side of the tear strip at the end simplify the grasping of this strip. As the strip is pulled, it follows the cut score lines in the opposite sides of the sheet and pulls away from the rest of the carton until it appears as indicated in FIGURE 4 of the drawings. From this position, the carton may be swung open as best indicated in FIGURE 3 of the drawings so that any part of the contents may be removed. The hinged cover member can then be swung back into closed position as shown in FIGURE 4.

In FIGURES 8, 9 and 10 of the drawings, a modified form of carton is constructed which operates very similarly to the previous construction but which has certain advantages and disadvantages over the carton A. The carton B has the disadvantage that it is formed in two parts which must be assembled together during the closing operation. However, it has the advantage that it is somewhat easier to glue than the carton A and may include a relatively light paperboard outer shell and a relatively heavy reinforcing sleeve.

The carton B includes wall panels **70**, **71**, **72** and **73** connected along parallel fold lines **74**, **75** and **76**. A glue flap **77** is foldably connected to one panel along the fold line **79**. The lower ends of the walls are provided with closing flaps **80**, **81**, **82** and **83** which are connected along the fold line **84**. The upper ends of the wall panels are provided with closing flaps **85**, **86**, **87** and **89**. A tear strip **90** extends across the closing flap **87**, diagonally across a corner of the wall panel **72**, horizontally across the end panel **71**, and diagonally across the upper corner of the panel **70** and is thus identical to the tear strip previously described.

A reinforcing sleeve **91** is inserted within the carton blank to form an inner sleeve and reinforcement therefor. The sleeve **91** includes panels **92**, **93**, **94** and **95** which fit inwardly of corresponding walls of the outer covering and serve as a reinforcement therefor. With this arrangement, the blank illustrated in FIGURE 8 may be of relatively thin paperboard and the sleeve **91** may be of fiber, corrugated cardboard, or other relatively strong material which need not be printed before use.

In accordance with the patent statutes, I have described the principles of construction and operation of my improvement in reclosing carton, and while I have endeavored to set forth the best embodiment thereof, I desire to have it understood that changes may be made within the scope of the following claims without departing from the spirit of my invention.

I claim:

1. A reclosing carton containing a product and including rectangularly arranged paperboard side and end walls, liner panels inwardly of at least a portion of one end wall and the adjoining side walls at one end thereof, closure flaps secured to said one end of said walls folded into substantially right angular relation to their respective walls and secured together in face contact with one closure flap of one of said side walls outermost, a removable continuous tear strip encircling a corner of said one end of said walls including a portion of said one closure flap, a portion of both side walls, and a portion of said one end wall, said corner lying outwardly of said liner panels, said tear strip being defined by spaced weakened lines of separation and extending from the free end of said one closure flap transversely across the same, diagonally across a portion of said one side wall, across said one end wall, and diagonally across a portion of the other side wall to terminate adjacent the end of the tear strip at the free end of said one closure flap.

2. The structure of claim 1 and in which the other closure flap secured to the other side wall includes a score line in registry with the portion of said removable tear strip in said one closure panel.

3. The structure of claim 1 and in which said lining panels are integrally connected to said walls.

4. The structure of claim 1 and in which said lining panels comprise a rectangular sleeve.

5. A reclosing carton containing a product and including a series of panels foldably connected together and including alternate four outer side and end panels, and three inner side and end panels connected in series, means securing said outer side and end panels enclosing said inner panels, said inner panels lying within one outer end wall and two adjoining outer side walls, closure flaps secured to an end of each of said outer walls with one closure flap of one side wall outermost, reinforcing flaps on said inner side walls, lying inwardly of the closure flaps of said outer side wall closure flaps and secured thereto, a removable continuous tear strip encircling a corner of said one end of said walls including a portion of said one closure flap, a portion of both side walls, and a portion of said one end wall, said corner lying outwardly of said liner panels, said tear strip being defined by spaced weakened lines of separation and extending from the free end of said one closure flap transversely across the same, diagonally across a portion of said one side wall, across said one end wall, and diagonally across a portion of the other side wall to terminate adjacent the end of the tear strip at the free end of said one closure flap.

6. A reclosing carton containing a product and including rectangularly arranged paperboard side and end walls, liner panels inwardly of at least a portion of one end wall and the adjoining side walls at one end thereof, closure flaps secured to said one end of said walls folded into

substantially right angular relation to their respective walls and secured together in face contact with one closure flap of one of said side walls outermost, a removable continuous tear strip encircling a corner of said one end of said walls including a portion of said one closure flap, a portion of both side walls, and a portion of said one end wall, said corner lying outwardly of said liner panels, said tear strip being defined by spaced weakened lines of separation and extending from the free end of said one closure flap transversely across the same, diagonally across a portion of said one side wall, across said one end wall, and diagonally across a portion of the other side wall to terminate adjacent the end of the tear strip at the free end of said one closure flap, said spaced weakened

lines of separation each comprising spaced cut lines extending into the paperboard from opposite sides thereof, and in which the cut lines of one weakened line connect with the cut lines of the other weakened line at the end of the tear strip in said other side wall panel.

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