Oct. 16, 1962 R. GUYER 3,058,646

RECLOSABLE CARTONS

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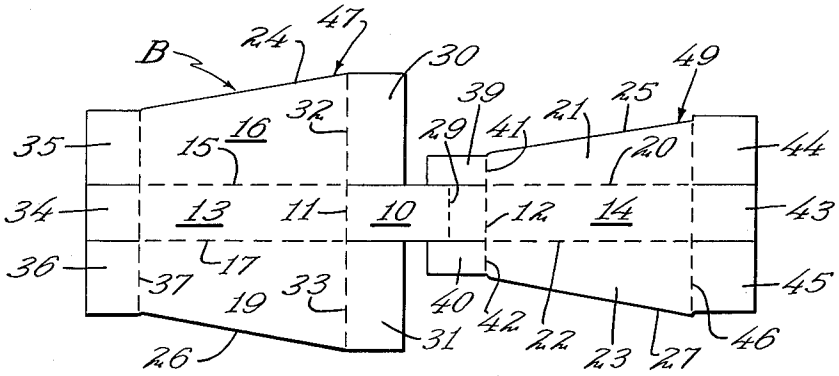


FIG. 4

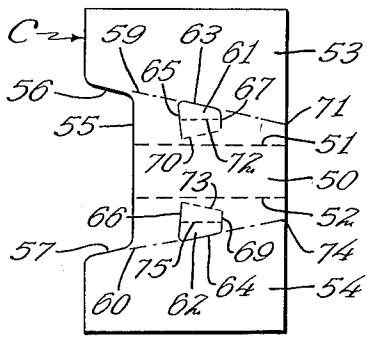


FIG. 5

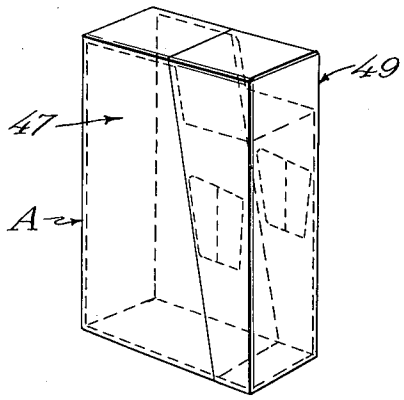


FIG. 1

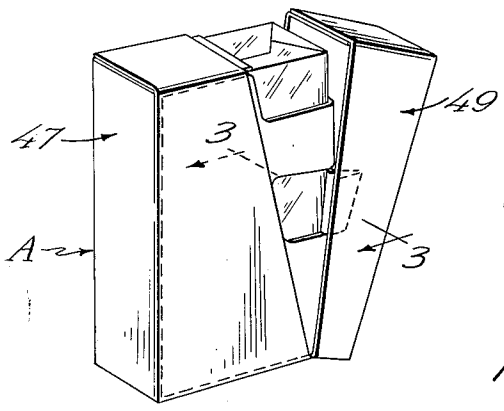


FIG. 2

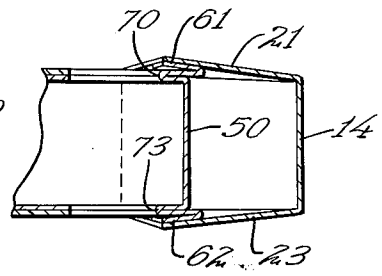


FIG. 3

INVENTOR

Reynolds Guyer

BY Robert M. Dunning

ATTORNEY

United States Patent Office

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RECLOSABLE CARTONS

Reynolds Guyer, White Bear Lake, Minn., assignor to Waldorf Paper Products Company, St. Paul, Minn., a corporation of Minnesota

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This invention relates to an improvement in reclosable cartons and deals particularly with a type of carton which may be used for containing cigarettes or the like and from which the contents may be dispensed when desired.

An object of the present invention resides in the provision of a carton which is formed in two complementary sections which are hingedly connected together. The carton includes a partial liner which is secured to one of the sections and which telescopes into the other section. This liner is arranged to hold the contents of the package contained in one carton section when the other section is hinged away so that the contents of the package may be removed.

A feature of the present invention resides in a package which in preferred form is formed in two sections which are separable along cut lines extending across the front panel, the top panel, and the rear panel. The bottom panel is hinged so that the two sections may be folded into edge abutting relation or may be hinged apart to disclose the contents.

A further feature of the present invention resides in the provision of a carton which is formed of a blank which includes two half carton sections which are connected by a wall including a hinge line by means of which the two carton sections are connected. When formed, the two sections abut together to form the complete enclosure.

An important feature of the present invention lies in the provision of a simple and effective means of holding the carton either in open or in closed position. A pair of tabs are cut from a portion of the liner panel and the ends of these tabs is adhered to the pivotally supported closure section. The anchoring of these tabs to the closure section acts to normally hold this closure section in closed position. However, as the closure section is hinged toward open position, the tabs fold in a manner to cause the side walls of the closure section to be flexed outwardly thus placing the tabs under compression until the cover section is in fully open position. Due to the action of these tabs, resistance is created to folding the closure section either out of closed position or out of fully opened position.

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

In the drawings froming a part of the specification:

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

FIGURE 2 is a perspective view of the carton in open position.

FIGURE 3 is a cross sectional view through a portion of the carton in open position, the location of the section being indicated by the line 3—3 of FIGURE 2.

FIGURE 4 is a diagrammatic view of the blank from which the outer portion of the carton is formed.

FIGURE 5 is a diagrammatic view of the blank from which the lining portion of the carton is formed.

The completed carton A is formed of the blank B illustrated in FIGURE 4 of the drawings, and the blank C illustrated in FIGURE 5 thereof. The blank B is formed with a bottom panel **10** which is foldably connected along fold lines **11** and **12** to side wall panels **13** and **14** respectively. The side wall panel **13** is foldably connected along a fold line **15** which is at right angles to the fold

lines **11** and **12** to a rear panel **16**; and the side wall **13** is also connected along a fold line **17** which is parallel to the fold line **15** to a front wall panel **19**. The terms front, rear and side wall panels are merely used as a means of designating the various parts to simplfy the description.

The side wall **14** is foldably connected along a fold line **20** which is aligned with the fold line **15** to a rear wall panel **21**. The side wall **14** is also connected along a fold line **22** which is aligned with the fold line **17** to a front panel **23**. As is indicated in the drawings, in the particular arrangement illustrated, the front and rear panels are tapered or wedge shaped in form, the rear panels **16** and **21** having mating inclined edges **24** and **25**, and the front wall panels **19** and **23** having mating inclined edges **26** and **27**. In the closed position of the carton, the edges **24** and **25** abut and in a similar manner the inclined edges **26** and **27** of the front wall panels abut.

A fold line **29** extends across the bottom panel **10** parallel to the fold lines **11** and **12** and spaced therefrom. Bottom flaps **30** and **31** are connected to the rear panel **16** and front panel **19** respectively along aligned fold lines **32** and **33**. The width of the flaps **30** and **31** is substantially equal to the width of the bottom panel **10** and the length of these flaps **30** and **31** is equal to the distance between the fold line **11** and the intermediate fold line **29**. The top closing flaps **34**, **35** and **36** are foldably connected to the upper edges of the walls **13**, **16** and **19** respectively along a fold line **37**.

Bottom flaps **39** and **40** are foldably connected to the lower edges of the rear panel **21** and front panel **23** along aligned fold lines **41** and **42** which are substantially aligned with the fold line **12**. The width of the flaps is equal to the width of the bottom panel **10** and the length of the flaps in a direction parallel to the fold lines **41** and **42** is substantially equal to the distance between the fold line **12** and the intermediate fold line **29**. Top closing flaps **43**, **44** and **45** are hingedly connected to the upper edges of the panels **14**, **21** and **23** respectively along a fold line **46**.

In the formation of the carton blank B, the rear and front walls **16** and **19** are folded upwardly at right angles to the side wall panel **13** and the flaps **30** and **31** are folded at right angles to the walls **16** and **19** into overlapping relation. The blank is also folded along the fold line **11** so that the flaps **30** and **31** overlie or underlie the portion of the bottom panel **10** between the fold line **11** and the intermediate fold line **29**. When the bottom flaps **30** and **31** are secured in face contact with the bottom panel **10**, this portion of the carton is completed.

In a similar manner, the rear and front walls **21** and **23** are folded into right angular relation with the side wall **14**, the bottom flaps **39** and **40** are folded into overlapping relation and these flaps are adhered in face contact with the portion of the bottom panel **10** between the fold line **12** and the intermediate fold line **30**. The upper end of the carton is closed by folding the top closing flaps **34**, **35** and **36** in face contact and folding the top closing flaps **43**, **44** and **45** in parallel face contact. When thus formed, a complete rectangular carton is formed including two sections which are in edge abutting relation.

The liner panel C is secured in place to the carton section **47** which is on one side of the intermediate fold line **29** and extends into the other section **49** which is on the opposite side of the intermediate fold line **29**. The liner C includes an intermediate panel **50** which is of proper width to fit within the carton section **49**, the panel **50** being foldably connected along parallel fold lines **51** and **52** to a rear wall panel **53** in a front wall panel **54**.

The panel 53 is of a width substantially equal to the combined width of the rear panels 16 and 21 and the front panel 54 is substantially equal in width to the combined width of the front panels 19 and 23 of the blank B. The rear wall panel 53 and front wall panel 54 are of substantially the same weight as the front and rear wall panels of the blank B and these panels are secured by adhesive or other suitable means to the inner surface of the rear panel 16 and the front wall panel 19. When thus arranged, the liner projects into the section 49 and lies in surface contact with the walls 14, 21 and 23 when the carton is in closed position.

In preferred form, the upper edge of the liner C is notched as indicated at 55. This notch extends across the wall 50 and into the rear and front walls 53 and 54 throughout the width of section 49 at this elevation. In other words, the ends 56 and 57 substantially coincide with the edges of the two sections when the carton is closed.

The broken lines 59 and 60 across the rear wall panel 53 and front wall panel 54 defines the portion of these panels which is secured to section 47 of the carton and the portion which projects from section 47. A pair of tabs 61 and 62 are cut from the portions of the panels 53 and 54 which lie between the broken lines 59 and 60 and the fold lines 51 and 52. These tabs 61 and 62 are defined by short cut lines 63 and 64 which extend substantially along the broken lines 59 and 60, relatively long cut lines 65 and 66 which are substantially in alignment, and shorter cut lines 67 and 69 at the other ends of the cut lines 63 and 64 and parallel to the cut lines 65 and 66. The tab 61 is foldably connected to the panel 53 along a fold line 70 which is directed toward the juncture between the broken line 59 and the lower edge of panel 53. The tab 61 is centrally divided by an additional fold line 72.

The tab 62 is similarly connected to the panel 54 by a fold line 73 which is directed toward the juncture 74 between the imaginary broken line 60 and the lower edge of the panel 54. The tab 62 is provided intermediate its ends with an additional fold line 75 also directed toward the point 74.

In practice, the end portions of the tabs 61 and 62 outwardly of the intermediate fold lines 72 and 75 are adhered to the wall panels 21 and 23 of section 49 of the carton. As a result, the two sections are normally held in the closed position illustrated in FIGURE 1 of the drawings by these tabs 61 and 62. However, if the upper portions of the two sections 47 and 49 are swung apart along the fold line 29 to the position illustrated in FIGURE 2, the connecting portions of the tabs 61 and 62 which are between the intermediate fold lines 72 and 75 and the inner fold lines 70 and 73 must swing outwardly in order to fold. These tabs accordingly flex the side walls 21 and 23 of the carton section 49 outwardly, placing the connecting portions of the tabs under compression. As the connecting portions of the tabs fold past 90°, the resiliency of the side walls will cause the section 49 to swing completely open into the position shown in FIGURE 2. The closing of the carton creates a similar force and the connecting portions of the tabs must again swing outwardly, causing the side walls of the carton section 49 to bow outwardly. As the tabs fold past 90°, the compressive force created by the side walls will swing the carton section 49 into fully closed position illustrated in FIGURE 1 of the drawings.

As indicated in FIGURE 2, the package of cigarettes which is contained virtually fills the carton when closed but one corner of the wrapper projects above the notched portion 55 of the liner member and forwardly of the carton section 47 where the contents of the package are readily available.

In accordance with the patent statutes, I have described the principles of construction and operation of my improvement in reclosable cartons, 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 carton including a rectangular body including front, rear and side walls, a top wall and a bottom wall, said bottom wall including a hinge line extending across the same from said front wall, top wall and rear wall, and a lining member including a front panel, a side panel and a rear panel lying inwardly of said front wall, one side wall, and said rear wall, said lining panel being free of engagement with said one side wall and being secured to said front and rear walls on the sides of said cut lines nearest the other side wall, tabs cut from said front and rear panels of said lining member and foldably connected thereto near the juncture of said front and rear panels and said side panel, and anchoring tabs cut from said front and rear panels and hinged to said first named tabs, said anchoring tabs being secured to the inner surfaces of said front and rear walls, respectively.

2. A carton including a rectangular body including rectangularly arranged front, rear and side walls, a top wall and a bottom wall, said body being formed in two sections hingedly connected along a fold line extending across one wall, and cut lines extending continuously across three walls from one end of the fold line to the other end thereof, two of the walls containing cut lines being parallel and at right angles to said one wall, and the third wall containing the cut line being parallel to said one wall, and a lining member including an intermediate panel, lying inwardly of said one of said uncut walls and having side panels lying inwardly of said parallel cut walls, said side panels being secured to said two parallel cut walls on the side of said cut lines adjoining the other uncut wall, said lining member cooperating with the walls of one of said section to provide a tubular outline when the other section is hinged along said hinge line, and tabs cut from said side panels of said liner member and anchoring tabs cut from said side panels and hinged to said first named tabs, said tabs being directed away from said intermediate panel and said anchoring tabs being adhered to the inner surfaces of said parallel cut walls forming said other section.

3. A carton including tubularly arranged side walls, and end closures closing the ends of said side walls to form a rectangular body, a hinge line extending across one of said end closures, and continuous cut lines extending from the ends of said fold line across the parallel side walls and across the other end closure to provide a body section and a closure section hingedly connected along said hinge line, a lining member including an intermediate panel lying inwardly of and adjacent the uncut wall of said closure section and side panels lying inwardly of, and adjacent to the cut parallel side walls, the portions of said side panels lying inwardly of the portions of parallel cut panels forming a part of said body section being secured thereto, whereby when said closure section is hinged away from said body section, said lining member maintains the tubular form of said body section, the side panels of said lining member including hinge tabs cut therefrom and connected thereto along fold lines, and anchoring tabs cut therefrom and foldably connected to said hinge tabs along fold lines, said tabs being directed away from said intermediate panel, and said anchoring tabs being secured to the inner surfaces of said cut side walls forming a part of said closure section.

4. A carton including tubularly arranged side walls, and end closures closing the ends of said side walls to form a rectangular body, a hinge line extending across one of said end closures, and continuous cut lines extending from the ends of said fold line across the parallel side walls and across the other end closure to provide a body section and a closure section hingedly connected along said hinge line, a lining member including an inter-

mediate panel lying inwardly of and adjacent the uncut wall of said closure section and side panels lying inwardly of, and adjacent to the cut parallel side walls, the portions of said side panels lying inwardly of the portions of parallel cut panels forming a part of said body section being secured thereto, whereby when said closure section is hinged away from said body section, said lining member maintains the tubular form of said body section, the side panels of the lining member including hinged tabs cut therefrom and connected thereto along fold lines, and anchoring tabs cut therefrom and foldably connected to the two said hinge tabs along fold lines, said tabs being directed away from said intermediate panel, and said anchoring tabs being secured to the inner surfaces of said cut side walls forming a part of said closure section, said fold lines connecting said hinge tabs to said side panels, and said fold lines connecting said anchoring tabs to said hinge tabs extending substantially along lines which extend radially from the ends of said first named hinge line.

5. A carton including, in series, a first side wall, a bottom wall and a second side wall, front walls hinged to one edge of said side walls along aligned fold lines and rear walls hinged to an opposite edge of said side walls along aligned fold lines parallel to the said one edge, the front walls secured to the first and second side walls being

folded in a common plane in edge abutting relation and the rear walls being folded in a common plane in edge abutting relation, top and bottom closure flaps secured to the upper and lower edges of at least some of said wall panels forming top and bottom closure walls, the top walls extending in abutting relation when said front and rear walls are in abutting relation, a hinge line extending across said bottom wall between the juncture of said front walls and the juncture of said rear walls, and a channel shaped liner including a front panel, a side panel and a rear panel lying inwardly of said front walls, said second side wall, and said rear walls respectively, said liner having an open upper end inwardly of the top wall adjacent to said other side wall whereby when said other side wall with the front, rear, and top walls connected thereto are hinged away from abutting relation with the front, rear and top walls connected to said one side wall, the contents of the carton are partially exposed.

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