

Dec. 5, 1944.

R. GUYER

2,364,439

RECLOSING CARTON

Filed July 15, 1943

2 Sheets-Sheet 1

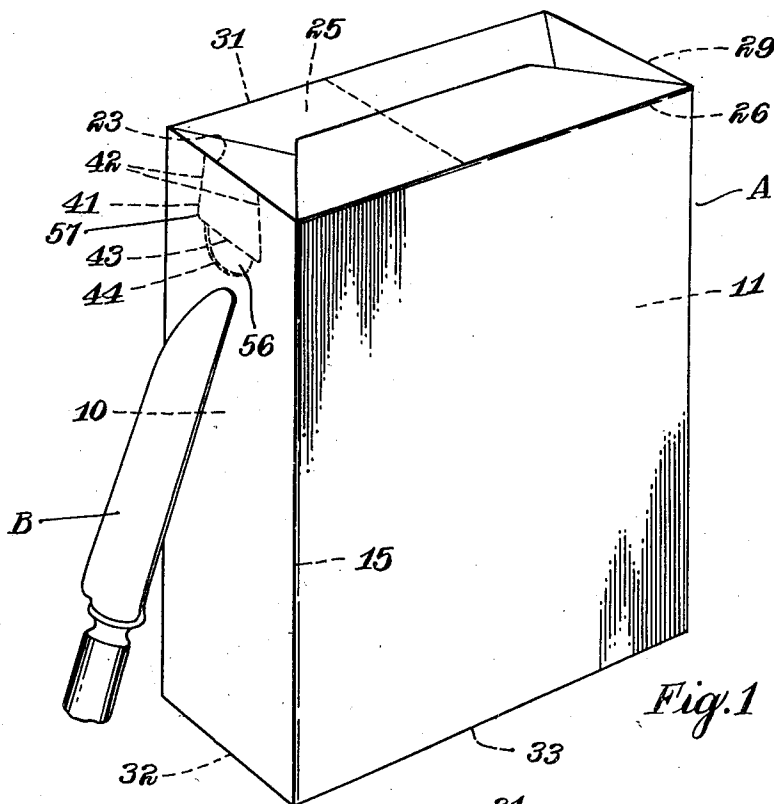


Fig. 1

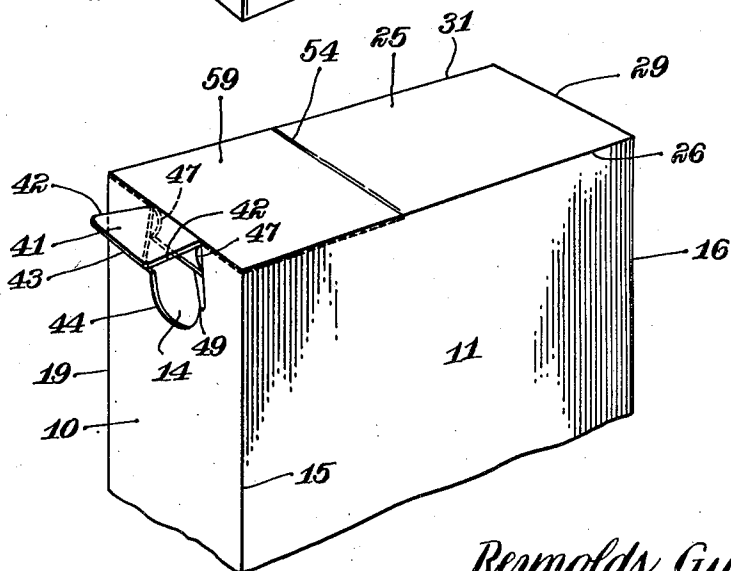


Fig. 2

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2 Sheets-Sheet 2

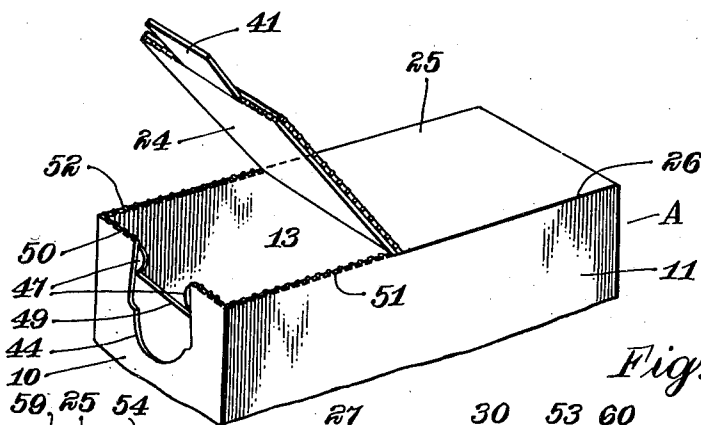


Fig. 3

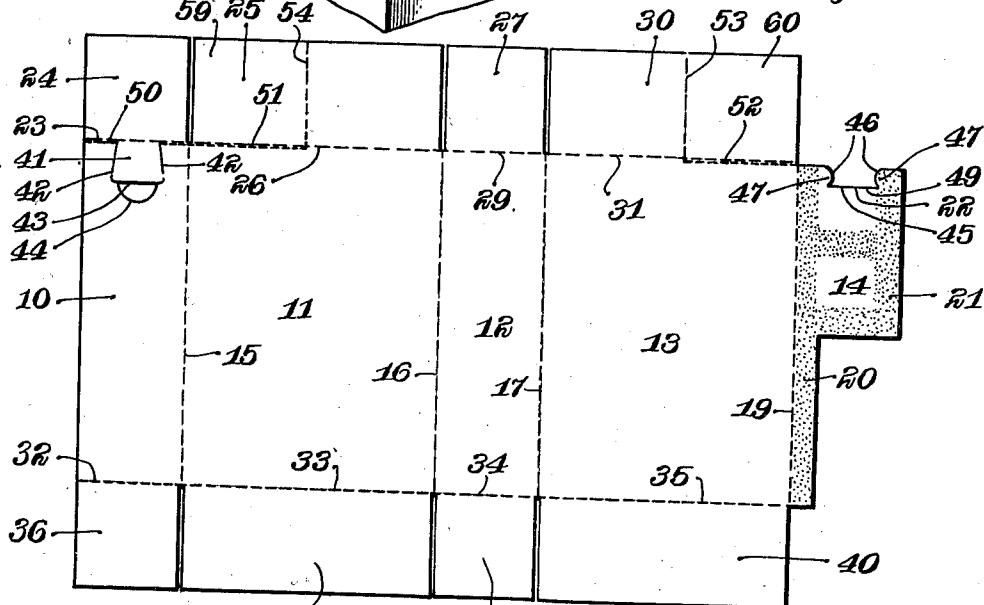


Fig. 5

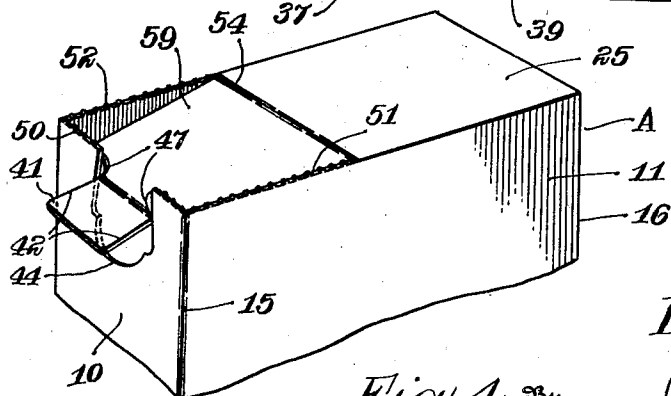


Fig. 4

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2,364,439

RECLOSING CARTON

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a corporation of Minnesota

Application July 15, 1943, Serial No. 494,789

9 Claims. (Cl. 229—17)

My invention relates to an improvement in reclosing carton, wherein it is desired to provide a carton which may be sealed securely closed and, which may be opened and reclosed in a simple and efficient manner.

A feature of the present invention lies in the provision of a reclosing device formed in a carton wall of double thickness. A portion of the outer lamination of this double thickness wall is cut wholly or partially from the surrounding area of the wall to form a closure tab. A portion of the outer lamination adjacent this tab is cut away to form a recess into which a finger or a suitable tool may be inserted for grasping the closure tab or in separating this closure tab along its weakened line of separation from the remaining outer wall portion.

My carton in preferred form has one wall of double thickness. A closure tab is connected to the outer lamination thereof along a weakened line of separation. The carton is preferably wrapped with a relatively thin wrapping sheet. A recess extends through the outer lamination of the double thickness wall adjacent the closure tab. A hollow space is thus formed beneath the wrapping sheet throughout the area of the recess. By applying external pressure against the unsupported area of the wrapping sheet, the sheet will be fractured, simplifying the operation of engaging the closure tab.

A further feature of the present invention lies in the provision of a closure tab provided with outwardly diverging walls. The narrowest end of the tab is connected along a fold line to a portion of an adjacent panel of the carton. This closure tab cooperates with a pair of opposed tongues or projections formed on the notched inner lamination of the double thickness wall, in such a manner that the narrowest portion of the tab is frictionally engaged to hold the panel section connected therewith in a desired predetermined relationship.

The closure tab notch construction constitutes a further feature of my invention. The outer lamination of the double thickness wall includes a tab integrally connected to the composite top carton closure. This tab, when separated from the outer lamination, leaves a notch therein. The inner lamination includes a notch in registry with the first mentioned notch. The inner lamination notch is thus ordinarily concealed and protected by the locking tab.

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

In the drawings forming a part of my specification:

Figure 1 is a perspective view of my carton in wrapped form prior to opening.

Figure 2 is a perspective view of the upper por-

tion of my carton, illustrating the appearance of the carton after the opening tab has been separated from the outer lamination of the carton wall in which it is formed.

Figure 3 is a perspective view of a portion of the carton showing the appearance thereof when the closure has been swung into open position.

Figure 4 is a perspective view of the top of the carton after the closure thereof has been reclosed.

Figure 5 is a diagrammatic view of the blank from which the carton is formed.

The carton A is formed from the blank, best illustrated in Figure 5 of the drawings. The blank includes an end panel 10, a front panel 11, an end panel 12, a rear panel 13, and an inner flap or panel 14, all of which are connected along the parallel fold lines 15, 16, 17, and 19. The flap or panel 14 is usually secured, such as by strips of adhesive 20 and 21 to the inner surface of the carton wall 10 when the carton is formed into tubular formation. This flap or panel 14 may be formed with a notch or cut away portion 22 for economy in cutting a number of the blanks from a sheet of stock, if it is so desired.

The panel 10 is connected along the fold line 23 at its upper edge to a top closure flap 24. The panel 11 is connected along its upper edge to a panel 25 along a fold line 26. A flap 27 is likewise connected along a fold line 29 to the panel 12. A fourth closure flap 30 may be connected to the upper edge of the panel 13 along a fold line 31. Substantially aligned fold lines 32, 33, 34, and 35 connect the panels 10, 11, 12 and 13, respectively, to closure flaps 36, 37, 39 and 40.

A tab 41 is cut from the panel 10 along diverging lines 42 which are connected by a transverse cut line 43. The cut lines 42 and 43 are substantially continuous, but may be slightly broken so as to leave the flap 41 connected to the panel 10 along short uncut portions. A recess is formed through the panel 10 adjacent the cut line 43, this recess being bound by a curved peripheral line 44 and the cut line 43. The cut lines 42 terminate at the fold line 23 connecting the panel 10 to the closure flap 24.

The panel 14 is provided with a notch 45 therein, which registers with the aperture left by the tab 41 when this tab is broken away from the panel 10. The notch 45 is bounded by opposed curved lines 46 which provide a pair of inwardly projecting ears 47. The lower extremities of the curved cut lines 46 are connected by a relatively straight connecting cut line 49. Thus the base of the notch 45 is somewhat wider than the distance between the nearest points of the opposed tongues 47.

A weakened line of separation, such as a perforated line or the like, designated by the number 50, extends from the end of the blank

parallel to or along the fold line 23 to the cut line 42. A second weakened line of separation 51 extends from the opposed cut line 42, bounding one side of the tab 41 to a point between the ends of the fold line 26. This weakened line of separation 51 coincides with, or is parallel to, and adjacent the fold lines 23 and 26.

Another weakened line of separation 52 coincides with the fold line 31 or is parallel and adjacent thereto, and extends a portion of the length of the fold line 31. A fold line 53 extends transversely of the flap or panel 30 from the end of the weakened line of separation 52 to the opposite edge of this closing flap. A similar fold line 54 extends transversely of the flap 25 from a point adjacent the end of the perforated line 51 to the opposite side of the closing flap. The fold lines 53 and 54 coincide or lie one above the other in folded position of the carton A.

In the formation of the carton A, the blank is folded into tubular form and glued with the flap 14 underlying the wall 10 and adhered thereto. The lower end of the closure is then ordinarily sealed, the flaps 36 and 39 being first bent into substantially coplanar relationship and the flaps 37 and 40 folding over the opposed flaps 36 and 39 and being secured thereto. The lower end of the box is then complete.

After the contents of the carton have been placed therein, the flaps 24 and 27 are folded into substantially coplanar relationship. The flaps 25 and 30 are then folded down to overlie the opposed flaps 24 and 27 and are adhered in this relation. Thus the carton is filled, folded and sealed.

While the carton thus described may, if desired, be used without an outer covering sheet wrapped thereabout, such a covering sheet 55 may be applied if it is desired. The covering sheet is merely wrapped about the body of the carton in any usual or suitable way and adhered to the surface of the carton to form an outer covering therefor. The covering has been omitted in all but Figure 1 for the sake of clarity.

If the covering 55 is applied, obviously the locking tab 41 and the various weakened lines of separation are concealed thereby. However, by following suitable instructions on the outer covering the carton may be opened by applying inward pressure against the unsupported area 56 so as to fracture the covering sheet at this point. By inserting a finger or some flat instrument such as the knife B into the fractured opening in the outer covering, the locking tab 41 may be pulled or pried loose from the remainder of the panel 40. If a covering sheet is used the locking tab 41 may be held in place thereby, and if desired a perforated line 51 may be provided in the outer cover 55 to permit easy separation of the portion of the covering overlying the tab 41 from the remainder of the covering.

When the tab 41 has been pried loose it may be grasped between the fingers and pulled upwardly, the integral panel portions 59 and 60 of the closing flaps 25 and 30, respectively, separating from the remainder of the carton along the weakened lines of separation 50, 51 and 52. The knife B may be used to assist in cutting the panel portions of the top closure from along the perforated lines described, if it is so desired. The locking tab 41, the attached flap 24, and the panels 59 and 60 adhered thereto are then free to fold along the coinciding fold lines 53 and 54 so as to open a portion of the top of the carton.

When it is desired to close the carton A, it is

only necessary to pivot the closure panel portions downwardly until they extend between the opposed side walls 11 and 13, the narrowest portion of the locking tab 41 engaging between the projecting fingers 47 adjacent the notch 45. Figure 3 illustrates the carton in open position while Figure 4 of the drawings discloses a reclosed box. The lower surface of the tab 41 engages against the base of the notch 45 to support the panel portions 59 and 60 and the integral flap 24.

The projecting fingers 47 frictionally engage the tab 41 particularly during insertion into or removal from the notch 45. The fact that the tab is wider at its outer extremity than at the point engaged, prevents the tab from pulling through the notch 45. The projecting fingers 47 prevent accidental disengagement of the tab 41 from the notch 45, by requiring flexing of the locking tab 41 during insertion or removal thereof.

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

I claim:

1. A carton comprising rectangularly arranged walls and end closure walls therefor, one of said walls having a portion thereof of double thickness, a locking tab formed adjacent one edge of the outer lamination of said wall and integral with an adjacent wall of said carton, and notch means in the inner lamination of said wall in registry with the notch formed in the outer lamination when said locking tab is disconnected from said outer lamination, and shoulders on opposed walls of said notch in said inner lamination.

2. A reclosable carton comprising rectangularly arranged walls and end closure walls therefor, one of said walls being of double thickness, a potential locking tab formed in the outer lamination of said one wall adjacent an edge thereof, said potential locking tab being integrally connected along a fold line to an adjacent wall of said carton, a potential closure formed in said adjacent wall connected to the remainder of the carton along a weakened line of separation, said potential closure being integrally connected to said locking tab along a fold line, a notch in the inner lamination of said one wall in registry with the notch formed in the outer wall by the separation of said potential locking tab from said outer lamination, and shoulders on opposed walls of said notch in said inner lamination.

3. A reclosable carton having a series of connected side walls and end closure walls to form a closed carton, at least a portion of one of said walls being formed of two laminations of material, a potential locking tab formed in the outer of said laminations and separably connected to said outer lamination along a weakened line of separation, said locking tab being integrally connected along a fold line to an adjacent wall of said carton, at least a portion of said adjacent wall forming a closure end connected to the remainder of said carton along a weakened line of separation, said closure being integrally connected to said locking tab, the inner of said laminations having a notch therein in registry with the notch formed in said other lamination by the separation of said locking tab therefrom, and opposed projections

on said inner lamination projecting into said notch formed therein to frictionally engage opposed sides of said locking tab when said locking tab is inserted into said notch in said inner lamination.

4. A reclosable carton including a series of connected side walls arranged in tubular formation and end walls closing the ends thereof, at least a portion of one of said walls being formed of two laminations of material, a locking tab 5 formed in the outer of said laminations adjacent an edge thereof, said locking tab being integrally connected to an adjacent wall along a fold line, a second fold line in said adjacent wall substantially parallel to the fold line connecting 10 said locking tab to said adjacent wall, a closure comprising at least a portion of said adjacent wall and being defined by weakened lines of separation extending from opposite ends of said first named fold line to the opposite ends 15 of said second named fold lines, a notch in the inner lamination of said one wall in registry with the notch formed in the outer lamination by the separation of said locking tab therefrom, and opposed projections extending into said 20 notch in said inner lamination and frictionally engaging opposite sides of said locking tab when said locking tab is inserted into said notch in said inner lamination.

5. A reclosable carton comprising a series of tubularly arranged side walls and end closure walls therefor, at least a portion of one of said walls being formed of two laminations, a locking tab formed in the outer of said laminations 30 along an edge thereof and connected to an adjacent wall along a fold line, a second fold line in said adjacent wall, a weakened line of separation extending from one end of said first named fold line to the corresponding end of said second named fold line, a second weakened line of separation extending from the other end of said first named fold line to the other end of said 35 second named fold line, a notch in the inner of said laminations in registry with the notch formed in the outer lamination by the separation of said locking tab therefrom, said notch in said inner lamination being frictionally engageable with opposite sides of said tab, and a recess in said outer lamination adjacent said locking 40 tab.

6. A carton comprising tubularly arranged side walls and end closure walls closing the ends thereof, at least a portion of one of said walls being formed of two laminations, a locking tab formed in said outer lamination connected at 45 one end along a fold line to an adjacent wall of said carton, a second fold line parallel to and spaced from said first fold line, a weakened line of separation connecting each end of said first named fold line to the corresponding end of said second named fold line, a notch in said inner lamination in registry with the notch formed in said outer lamination by the separation of 50 said locking tab therefrom, said notch in said inner lamination being frictionally engageable with opposite sides of said tab, and a recess in said outer lamination adjacent the other end of said locking tab.

7. A reclosable carton comprising a series of rectangularly arranged side walls, two opposed side walls having closure flaps issuing therefrom and extending into coplanar relationship, closure flaps on the remaining opposed side walls 55 folded over said opposed flaps and adhered

thereto, coinciding fold lines in said last named closure flaps extending substantially parallel to one of the first named opposed walls of said carton, at least a portion of said one wall being 60 formed of two laminations, a locking tab in the outermost of said laminations connected to the closing flap issuing from said one wall along a fold line parallel to said coinciding fold lines, weakened lines of separation in said flap issuing from said one wall, said weakened line of separation extending from the ends of said fold line 65 to the edges of said flap, parallel weakened lines of separation in said last named closure flaps extending from the ends of said coinciding fold lines to the ends of said last named closure flaps adjacent said one wall, and notch means in the inner lamination of said one wall arranged to frictionally engage opposite sides of said locking 70 tab when said locking tab is inserted into said notch.

8. A reclosable carton comprising tubularly arranged side walls, end closure flaps issuing from the upper ends of said side walls and secured in overlying superimposed relation to form a top closed end for said side walls, a fold line in said top closure extending parallel to one of said side walls, at least a portion of said one side wall being formed of two laminations, a locking tab formed in the outermost of said laminations adjacent the upper edge of said one wall, a second fold line connecting said closure 75 tab to said top closure wall, weakened lines of separation connecting the corresponding ends of said first named and second named fold lines in said top closure wall, a notch in the upper edge of the inner lamination of said one side wall in registry with the notch formed in the outer lamination thereof by the separation of said locking tab therefrom, a recess in said outer lamination adjacent said locking tab, and a relatively thin wrapping sheet enclosing said walls of said carton and adhered thereto.

9. A reclosable carton comprising a series of tubularly arranged side walls and an end closure wall closing the upper end thereof, a fold line in said upper closure wall extending parallel to the juncture between said top closure wall and one of said side walls, at least a portion of said one side wall being formed of two laminations of material, a locking tab formed in the outer lamination of said one wall adjacent the upper edge thereof, said locking tab being connected to said top closure wall along a second fold line parallel the first named fold line, weakened lines of separation in said top closure wall extending from the ends of one of said fold lines to the corresponding ends of the other of said fold lines, said locking tab being defined by lines diverging outwardly from said second fold line so that the free end of said locking tab is wider than the fold line end of said locking tab, a notch in the inner of said laminations extending a portion of the depth of the notch formed by the separation of said locking tab from the outer lamination, said notch in said inner lamination being in registry with the notch in said outer lamination and being designed to receive the fold line end of said locking tab, and opposed projections on said inner lamination extending into said notch in said inner lamination to frictionally engage opposite sides of said locking tab.

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