

March 18, 1947.

R. GUYER

2,417,550

RECLOSING CARTON

Filed Dec. 4, 1944

2 Sheets-Sheet 1

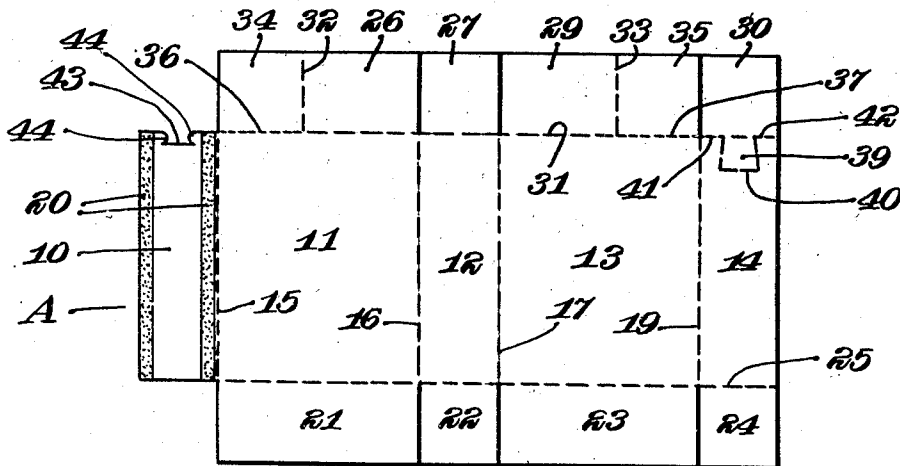


Fig. 1

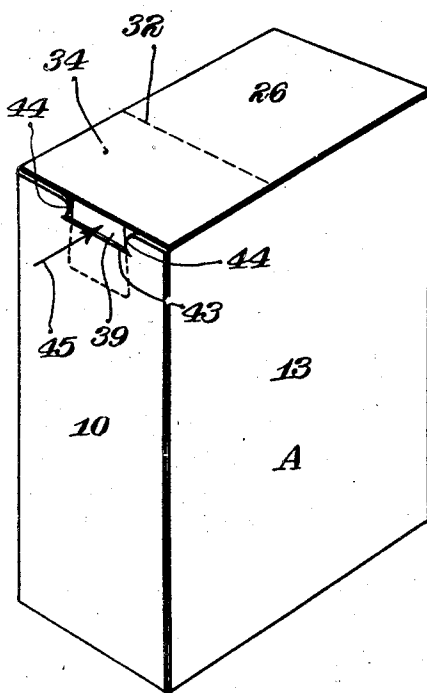


Fig. 2

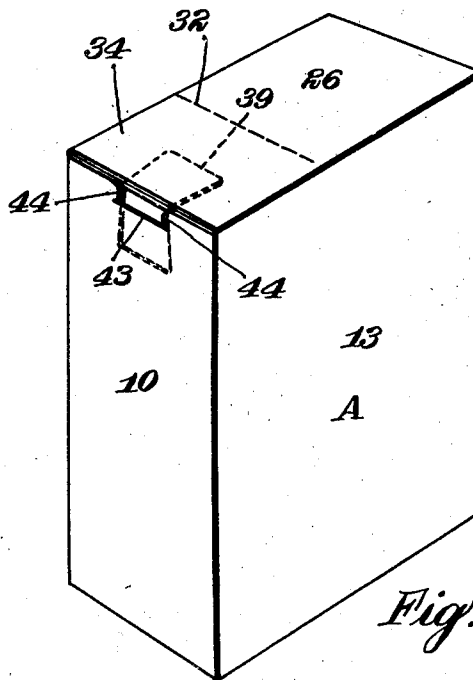


Fig. 3

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2 Sheets-Sheet 2

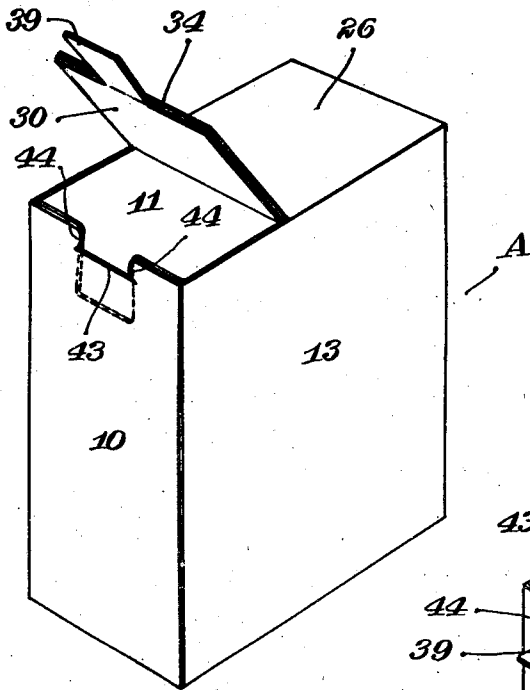


Fig. 4

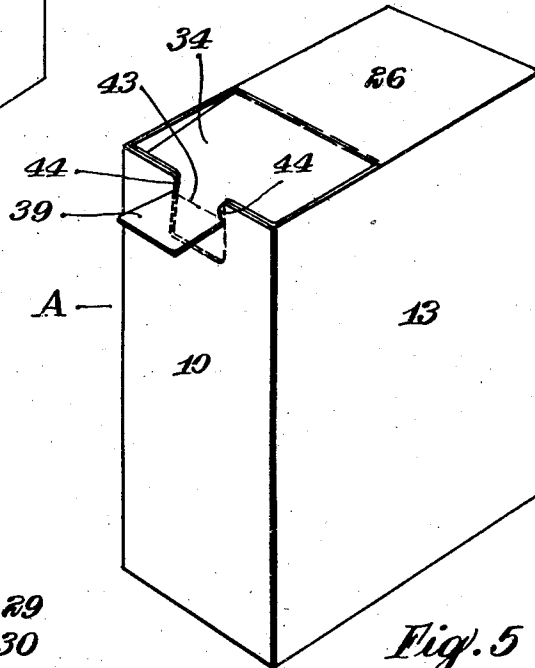


Fig. 5

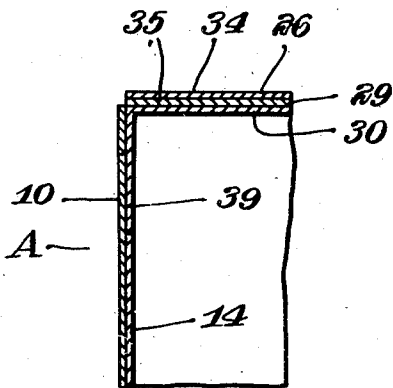


Fig. 6

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UNITED STATES PATENT OFFICE

2,417,550

RECLOSING CARTON

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9 Claims. (Cl. 229—17)

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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 inner lamination of this double thickness wall is wholly or partially cut from the surrounding area of the wall to form a closure tab. A portion of the outer lamination overlying this tab is cut away or notched. As a result a finger or a thumb may be inserted through this notch and the closing tab bent inwardly.

It is a feature of the present invention to provide a carton having a rectangular top closure wall area defined along three sides by a perforated or weakened line of separation and along the fourth side by a crease line. The side of this area opposite the hinge line is provided with a closure tab. This closure tab forms a part of the inner lamination of a double thickness wall before the carton is open. After the carton has been opened, however, the closure tab may be engaged in a corresponding notch in the outer lamination of the carton wall thus providing a lock to hold the carton closed.

A feature of the present invention lies in the fact that the notch in the outer lamination of the double thickness wall is provided with opposed projections which engage above the closing tab and prevent accidental disengagement between the tab and the notch.

In my previously filed, co-pending application, Patent No. 2,364,439, dated December 5, 1944, I show a somewhat similar construction in which the closing tab is located in the outer lamination and a locking notch forms a part of the inner lamination. The present construction has the advantage that the hinged portion of the upper carton closure may be separated along perforated lines from adjacent areas of the carton by grasping the edge of the upper closure between the thumb and forefinger and exerting an upward pull thereupon.

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 diagrammatic view of a carton blank showing the construction thereof.

Figure 2 is a perspective view of the carton in sealed form.

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Figure 3 is a view similar to Figure 2 showing the closure tab bent out of normal position to underlie the upper carton closure.

Figure 4 is a perspective view of the carton showing the hinged portion of the top closure in open position.

Figure 5 is a view similar to Figure 4 showing the carton in reclosed position.

Figure 6 is a sectional view through the top and one end wall of the carton, the section extending through the locking tab.

The carton A includes an end panel 10, a front panel 11, an end panel 12, a rear panel 13, and an end panel 14 connected along parallel fold lines 15, 16, 17, and 18. The panel 10 is provided with a coating of adhesive either over its entire area or along two spaced lines 20 as illustrated in Figure 1 of the drawings.

Bottom closure flaps 21, 22, 23, and 24 are connected to the lower edges of the panels 11, 12, 13, and 14 respectively along a common fold line 25. Somewhat similar closing panels 26, 27, 28 and 30 are connected to the upper edges of the panels 11, 12, 13, and 14 along a common line of fold 31 parallel to the fold line 25.

A fold or crease line 32 extends across the panel 26 at right angles to the line of fold 31. A similar fold or crease line 33 extends across the panel 29 at right angles to the fold line 31. When the top closure is in sealing position the fold line 32 overlies the fold line 33 or coincides therewith so that rectangular areas 34 and 35 of the panels 26 and 29 may fold relative to the remainder of these panels.

A line of perforations 36 extends from the fold line 15 to an end of the fold line 32 along the line of fold 31. A similar line of perforations 37 extends along the fold line 31 from the end of the fold line 33 to the end of the fold line 19. These perforated lines 36 and 37 permit separation of the rectangular areas 34 and 35 from the panels 11 and 13 to which they are normally connected.

A locking tab 39 is defined by broken cut lines at the upper extremity of the panel 14 adjacent its upper extremity. This locking tab 39 is wider at its free end 40 than at its base along the fold line 31. A perforated line 41 connects one edge of the tab 39 to the fold line 19 along the fold line 31. A similar line of perforation 42 extends along the fold line 31 from the other edge of the base of the tab 39 to the adjacent end of the carton blank. Thus the entire top closure portion on one side of the superimposed fold lines 32 and 33 may be separated from the

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side wall panels to which they are connected along the perforated lines 36, 37, 41, and 42.

When the blank shown in Figure 1 is folded the panel 10 is outermost and is adhered to the outer surface of the panel 14. In the upper edge of the panel 10 I provide a notch 43. This notch is relatively wide at its base, but the side walls of the notch are provided with opposed projections 44 which restrict the width of the notch above the bottom thereof. These shoulders 44 give to some extent if the tab is pulled downwardly in the notch but hold the locking tab from accidental disengagement therewith when once engaged. The shape of the tab 39 prevents this tab from being pulled through the notch, as the free end of the tab is wider than the base of the notch 43.

In folding the carton A the bottom closing flaps 21, 22, 23 and 24 are folded in the usual manner, the flaps 22 and 24 folding into coplanar relation and the flaps 21 and 23 folding there beneath with adhesive between the various layers so as to effectively seal the same. The top is similarly closed, the flaps 27 and 30 folding into opposed coplanar relation and the flaps 29 and 26 folding thereover in such a way that the fold lines 32 and 33 coincide. The carton may be wrapped with a paper label if desired, or the exterior of the carton may be printed with a suitable design. To open the carton an external pressure is exerted in the direction of the arrow 45 in Figure 2 of the drawings breaking the locking tab 39 away from the remainder of the panel 14 and folding the same along the fold line 31 so that it underlies the top closure panel as illustrated in Figure 3. This inward pressure is usually applied by the forefinger which may be inserted through the notch 43. The edge of the top closure of the container may then be grasped between the thumb and the forefinger and while holding the remainder of the container an upward pull may be exerted upon the exposed edge. This upward pull will cause the container to separate along the perforated lines 36, 37, 41 and 42 so that the rectangular portions 34 and 35, together with the flap 30, may be swung upwardly along the fold lines 32 and 33 into position illustrated in Figure 4. While in this position a part of the contents of the container may be removed.

When it is desired to close the container the locking tab 39 may be grasped between the thumb and forefinger and the hinged portion of the upper closure swung down into the position shown in Figure 5 of the drawings. When in this position the piece of the locking tab adjacent the fold line 31 is engaged in the notch 43. To engage the locking tab in the notch 43 the projections 44 must flex to some extent. These projections prevent the tab from becoming accidentally disengaged. The width of the end of the tab also prevents the locking tab from being pulled through the slot 43.

In accordance with the patent statutes, I have described the principles of construction and operation of my invention, and while I have endeavored to set forth the best embodiments 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 paperboard carton comprising rectangularly arranged walls and end closure walls therefor, one of said walls having a portion thereof of double thickness of paperboard, a locking tab formed adjacent one edge of the inner lamination

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of said wall and integral with an adjacent wall of said carton, and notch means, small in area relative to said tab, in the outer lamination of said wall in registry with the notch formed in the inner lamination when said locking tab is disconnected from said inner lamination, and shoulders on opposed walls of said notch in said outer lamination.

2. A reclosable paperboard carton comprising rectangularly arranged walls and end closure walls therefor, one of said walls being of double thickness of paperboard, a potential locking tab formed in the inner 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, small in area relative to said potential locking tab, in the outer lamination of said one wall in registry with the notch formed in the inner wall by the separation of said potential locking tab from said inner lamination, and shoulders on opposed walls of said notch in said outer lamination.

3. A reclosable paperboard 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 paperboard material, a potential locking tab formed in the inner of said laminations and separably connected to said inner lamination along a weakened line of separation, said closure being integrally connected to said locking tab, the outer of said laminations having a notch therein, small in area relative to said locking tab and in registry with the notch formed in the other lamination by the separation of said locking tab therefrom, and opposed projections on said outer 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 outer lamination.

4. A reclosable paperboard 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 paperboard material, a locking tab formed in the inner 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 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 of said second named fold lines, a notch in the outer lamination of said one wall in registry with, and relatively smaller in area than the notch formed in the inner lamination by the separation of said locking tab therefrom, and opposed projections extending into said notch in said outer lamination and frictionally engaging opposite sides of said locking tab when said locking tab is inserted into said notch in said outer lamination.

5. A reclosable paperboard 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 of paperboard, a locking tab formed in the inner of said laminations along an edge thereof and con-

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nected 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 the 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 second named fold line, a notch in the outer of said laminations in registry with, and relatively smaller in area than the notch formed in the inner lamination by separation of the locking tab therefrom, said notch in said inner lamination being frictionally engageable with opposite sides of said tab, and a recess in said inner lamination adjacent said locking tab.

6. A paperboard 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 of paperboard, a locking tab formed in said inner lamination connected at one end along a fold line to an adjacent wall of said carton, a second fold line parallel to and spaced from said first named 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 outer lamination in registry with the notch formed in said inner lamination by the separation of said locking tab therefrom, said notch in said outer lamination 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 paperboard carton comprising a series of rectangularly arranged side walls, two opposed side walls having closure flaps issuing therefrom and extending into coplaner relationship, closure flaps on the remaining opposed side walls folded over said opposed flaps and adhered thereto, coinciding fold lines in said last named closure flaps extending substantially parallel to one of said first named opposed walls of said carton, at least a portion of said one wall being formed of two laminations of paperboard, a locking tab in the innermost 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 lines of separation extending from the ends of said fold line 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 outer lamination of said one wall, relatively small in area to said locking tab and arranged to frictionally engage opposite sides of said locking tab when said locking tab is inserted in said notch.

8. A reclosable paperboard carton comprising tubularly arranged side walls, end closure flaps issuing from the upper ends of said side walls

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and secured in overlying superimposed relation to form a top closed end for said side wall, 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 of paperboard, a locking tab formed in the innermost of said laminations adjacent the upper edge of said one wall, a second fold line connecting said closure 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 outer lamination of said one side wall in registry with and small relative to the notch formed in the inner lamination thereof by the separation of the locking tab therefrom, said locking tab being foldable to underlie said end closure flaps when forced inwardly, the inward pressure being exerted through the notch in said outer lamination.

9. A reclosing paperboard 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 paperboard material, a locking tab formed in the inner 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 the 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 outer of said laminations extending a portion of the depth of the notch formed by the separation of said locking tab from said inner 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 outer lamination extending into the notch in said outer lamination to frictionally engage opposite sides of said locking tab.

REYNOLDS GUYER.

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