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R. GUYER

2,473,055

RECLOSING CARTON

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2 Sheets-Sheet 1

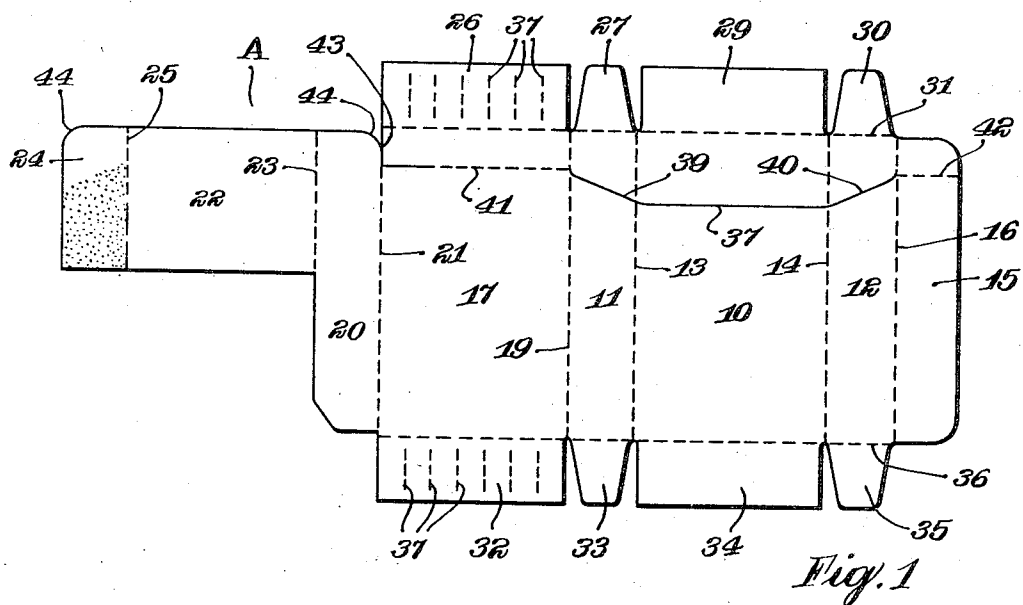


Fig. 1

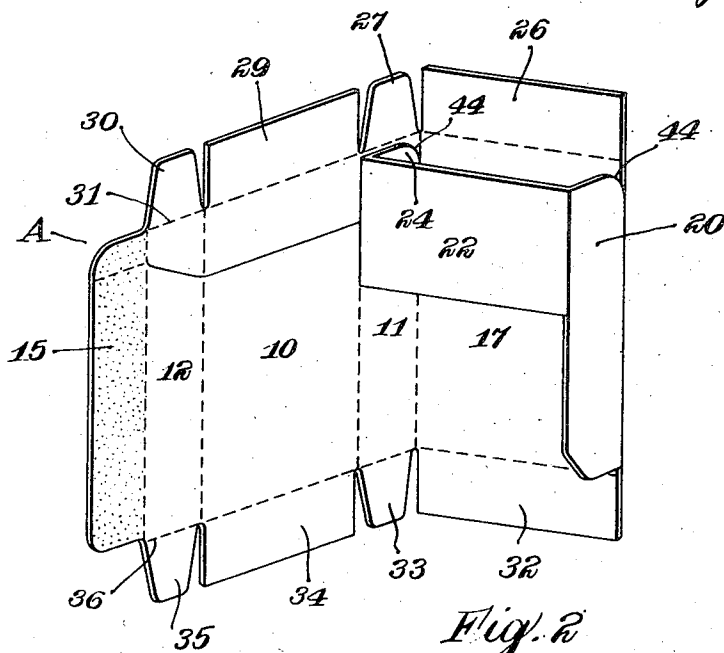


Fig. 2

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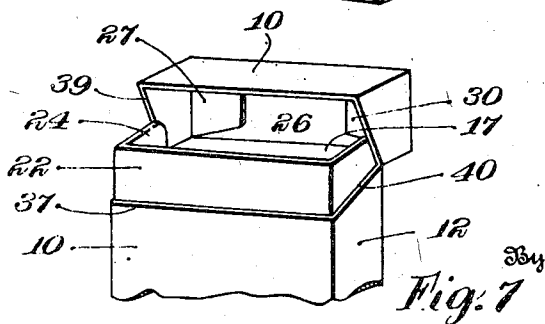
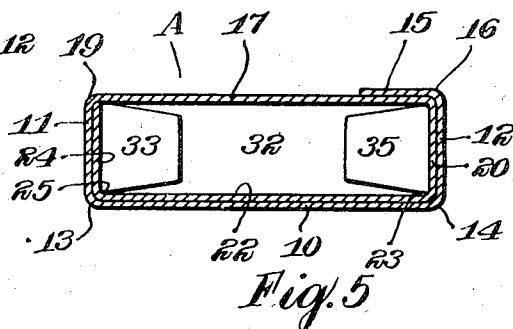
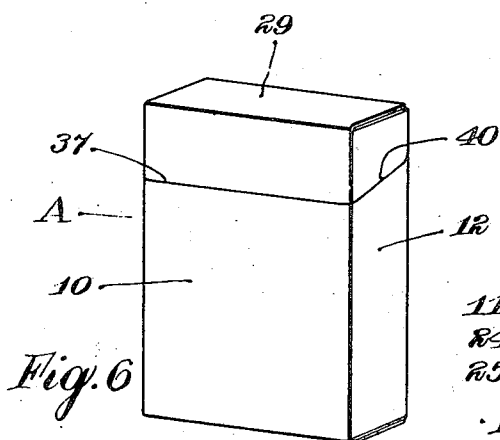
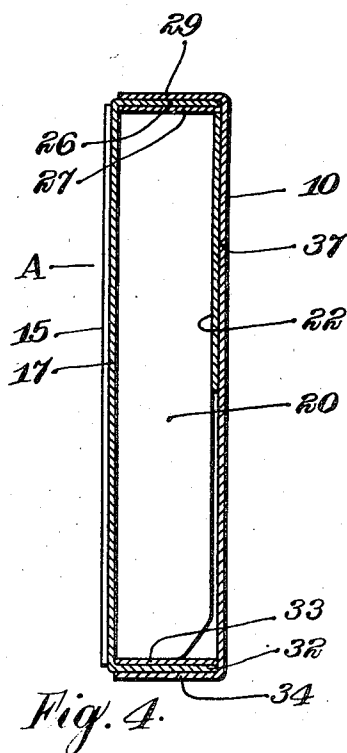
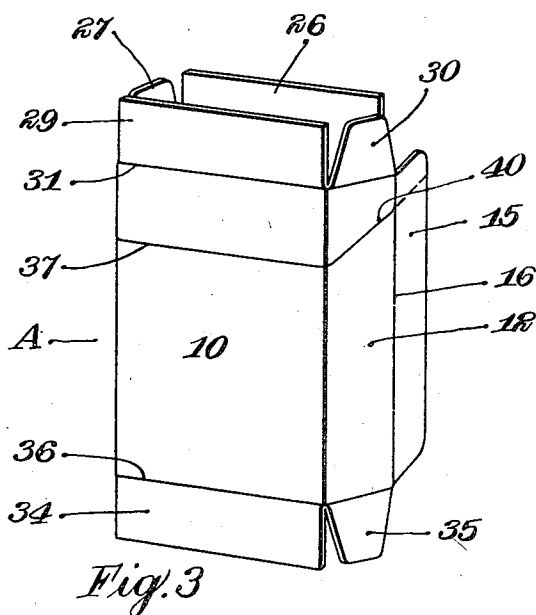
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2 Sheets-Sheet 2



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2,473,055

RECLOSING CARTON

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1 Claim. (Cl. 229—37)

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My invention relates to an improvement in reclosing carton wherein it is desired to provide a carton which may be readily opened and closed.

Many commodities, such as smoking tobacco and the like, which previously were packed in metal containers are now packed in paper cartons. These cartons in order to be satisfactory must possess certain qualities. In the first place the cartons must be relatively strong to withstand the strain of being carried about in a pocket for a considerable length of time. In the second place the cartons must be readily opened to expose the contents. Finally such cartons should be closed as effectively as possible when not in use so as to prevent the contents from drying out.

It is the object of the present invention to produce a carton which is possessed of the above listed necessary attributes for a carton of this type. A portion of the walls of the carton are of double thickness and therefore the carton is more rigid than would otherwise be possible. The entire top of the carton may be swung open, thus providing easy access to the interior of the carton. Furthermore when swung into closed position the carton will remain closed and will not open accidentally. As a result an effective closure is provided.

A feature of the present invention lies in providing a carton which has a portion of the walls thereof formed of double thickness, but which is extremely economical to construct. Other cartons have been produced for a similar purpose which include double wall structures. These previously constructed cartons, however, have usually comprised at least two additional panels to accomplish approximately the same result. The present carton is therefore an improvement upon previous types of cartons which involve the use of additional paper stock.

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

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 blank shown in Figure 1 in partially folded position.

Figure 3 is the blank shown in Figures 1 and 2 in a later step of the folding operation.

Figure 4 is a vertical section through the carton showing the arrangement of the walls thereof.

Figure 5 is a transverse section through the folded carton.

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Figure 6 is a perspective view of the completed carton.

Figure 7 is a perspective view of the upper portion of the carton shown in Figure 6 in open position.

The carton A comprises a front panel 10 having a pair of side panels 11 and 12 foldably connected to opposite sides thereof along parallel fold lines 13 and 14 respectively. An outside glue flap 15 is secured to the side flap 12 along the fold line 16. A rear panel 17 is foldably connected to the side panel 11 along the fold line 19. An inner side panel 20 is connected to the rear panel 17 along the fold line 21. An inner front panel 22 is connected to the inner side panel 20 along the fold line 23. An inner side panel 24 is connected to the inner front panel 22 along the fold line 25. All of the fold lines previously mentioned are substantially parallel.

Top closure flaps 26, 27, 29 and 30 are connected to the panels 17, 11, 10 and 12, respectively, along a common fold line 31. Bottom closure flaps 32, 33, 34, and 35 are connected to the lower edges of the panels 17, 11, 10, and 12, respectively, along the common fold line 36. The top and bottom closure panels are designed to fold in the usual manner to provide top and bottom closures for the carton. Parallel perforated lines 37 are provided in the flaps 26 and 32 so as to increase the tendency for adhesive to adhere the remaining flaps thereto. In the closing of the carton the flaps 27 and 30 are usually folded into coplanar relationship, the flap 26 folded to overlie the same, and the flap 29 folded over the flap 26. Similarly in sealing the other end of the carton the flaps 33 and 35 are usually folded into coplanar relationship, the flap 32 folded to underlie the same, and the flap 34 is folded to underlie the flap 32.

In the assembly of the carton A adhesive is applied to a portion of the panel 24, the remainder of the panel being printed to prevent the adhesive from adhering thereto. The carton is then folded to bring the adhesive coated surface of the panel 24 into engagement with the inner surface of the side panel 11. This step of the folding operation is shown in Figure 2 of the drawings and is usually completed when the blank is in a flat state. For the purpose of illustration, however, the carton is shown in tubular form rather than flat form.

After the lower part of the panel 24 has been secured to a part of the side panel 11, the folding operation is continued. Adhesive applied to the inner surface of the panel or flap 15 contacts one side of the outer surface of the rear panel 17 to adhere the flap 15 to this rear panel. Thus

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both of the ends of the carton blank are adhered to the carton panels which they underlie or overlie. Figure 3 of the drawings shows the flap 15 in the process of being folded to overlie the rear panel of the carton while Figure 5 shows the manner in which the flap 15 is adhered to the panel 17.

A cut line 37 extends across the front panel 10 from the fold line 13 to the fold line 14 extending parallel to the fold lines 31 and 36. Cut lines 39 and 40 form a continuation of the cut line 37 and extend angularly across the sides 11 and 12 respectively. The cut line 39 extends from the fold line 13 to the fold line 19 and inclines upwardly toward the top of the carton from the cut line 37. The cut 40 extends from the fold line 14 to the fold line 16 and extends upwardly toward the top of the carton from the cut line 37. The back panel 17 is provided with a transverse crease line 41 extending across the same to connect the higher ends of the inclined cut lines 39 and 40. The panel 15 is provided with a fold line 42 which overlies a part of the crease line 41 and the panel 17 may be cut along the fold line 41 beneath the panel 15. The carton blank is also cut along the fold line 21 from the top of the carton to the crease line 41 as indicated at 43 so as to separate the panels 17 and 20 above the crease line 41.

For the sake of appearance the upper corners of the panels 20 and 24 may be rounded as indicated at 44. This rounding of the corners 44 also is of benefit in preventing the corner from becoming bent or injured.

It will be noted that when the carton is sealed as illustrated in Figure 6 of the drawings, a tight closure is provided, the carton being in the shape of a rectangular glued end carton with an outside glue lap. When it is desired to open the carton, the cap which comprises the upper extremities of the panels 10, 11, 12 and 17, together with the closure flaps 26, 27, 29 and 30 attached thereto, is grasped and folded along the superimposed fold lines 41 and 42. This opens up the top of the carton as indicated in Figure 7 of the drawings in such a manner that the entire top of the carton may be open if desired. This type of construction is desirable for use in the packaging of products such as tobacco, wherein the product is sealed within a bag inside of the carton, making it necessary to open up the bag before removing any of the contents. The liner which is formed by the panels 20, 22, and 24 lies within the walls 10, 11 and 12 having the cut lines 37, 39, and 40 therein so that when

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the carton is opened the liner projects above the top of the remaining portion of the outer lamination of the carton. This structure acts to lock the carton either closed or opened as the fold line 41 is spaced from the top edge of the carton. The provision of the fold line 41 at a point spaced from the top of the carton acts to make necessary the flexing of the carton top in closing or opening the same, thus preventing accidental opening of the closed carton.

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 claim without departing from the spirit of my invention.

I claim:

A carton blank comprising a series of four side wall panels foldably connected together, a glue flap connected to one panel at one end of the series, a series of three liner panels foldably connected to a second side wall panel of the first named series, a fold line in said glue flap and a corresponding fold line in said second side wall panel, a cut line substantially the width of said glue flap forming that portion of the said corresponding fold line to be overlapped by said glue flap, a cut line in said one side wall panel and in the remaining side wall panels of said first series, said cut lines being in continuation of one another and connecting the fold line in said glue flap with the fold line of said second side wall panel, closing flaps hingedly connected to the top and bottom edges of said side wall panels of said first named series, all of the liner panels with the exception of the one connected to said second side wall panel being less than one-half the height of said side wall panels of said first named series.

REYNOLDS GUYER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,320,289	Marx	May 25, 1943
2,361,597	Buttery	Oct. 31, 1944
2,361,659	Smith	Oct. 31, 1944
2,367,476	Tyrseck	Jan. 16, 1945
2,396,150	Bonville	Mar. 5, 1946