April 29, 1952 R. C. CASSELMAN ET AL 2,594,394

CARTON

Filed Oct. 9, 1948 2 SHEETS—SHEET 1

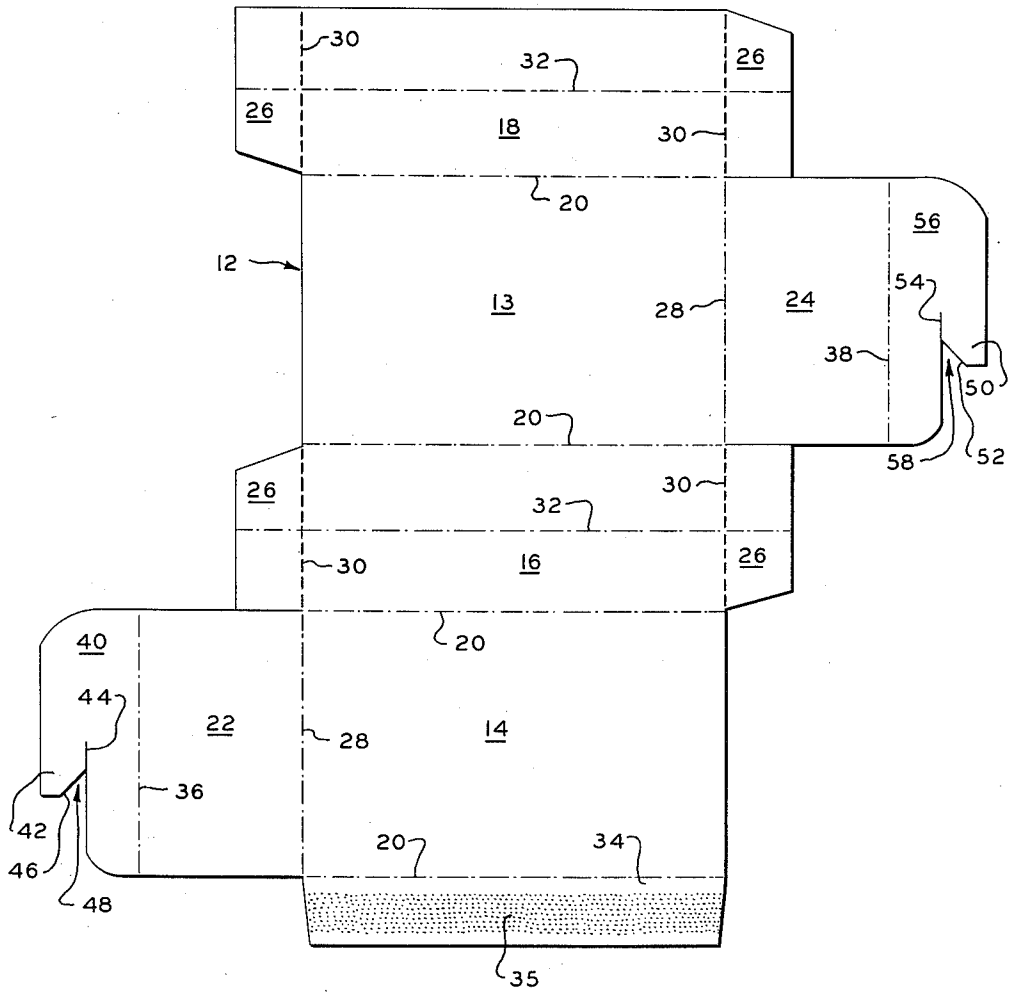


FIG. 1

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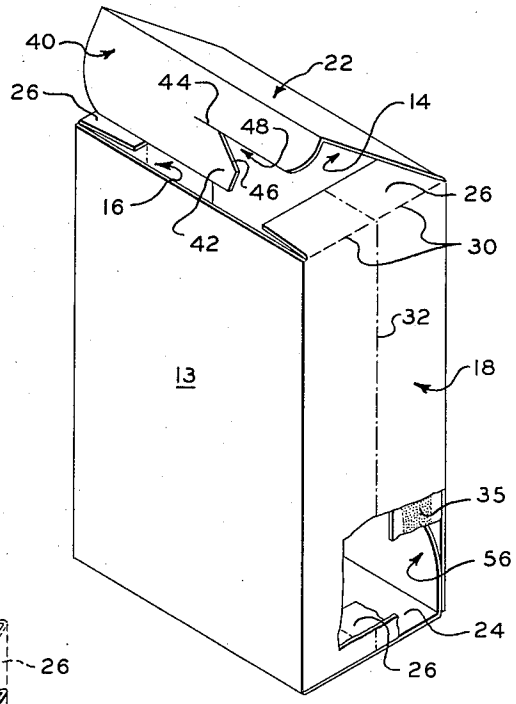


FIG. 2

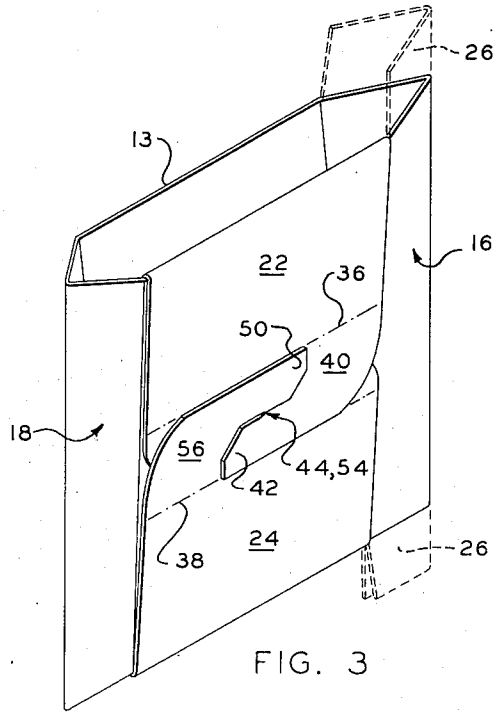


FIG. 3

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CARTON

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9 Claims. (Cl. 229—38)

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This invention relates to cartons and more particularly to novel cartons which are particularly useful for holding rolls of photographic sheet materials.

A principal object of the present invention is to provide improved cartons of the above type which are simple and cheap to manufacture, and which are easy to assemble and load with the photographic materials to be carried thereby.

Another object of the invention is to provide such a carton which can be converted, in a very simple manner, into an open-mouthed envelope for receiving a photographic print.

Still another object of the invention is to provide a carton of the above type which, when formed into the envelope, is so arranged that the mouth thereof is held slightly open to facilitate the insertion therein of the photographic print or other materials, the envelope having sufficient rigidity to prevent creasing of its contents during handling or mailing of the envelope.

These and other objects of the invention will in part be obvious and will in part appear hereinafter.

The invention accordingly comprises the product possessing the features, properties and the relation of components which are exemplified in the following detailed disclosure, and the scope of the application of which will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description taken in connection with the accompanying drawings wherein:

Figure 1 is a plan view of a preferred form of blank used for making a carton in accordance with the present invention;

Fig. 2 is a persective front view, with a part broken away, of a carton formed from the blank of Fig. 1, the top of the carton being shown in the half-closed position; and

Fig. 3 is a perspective view of the carton of Fig. 2 after it has been converted into an open-mouthed envelope in accordance with the teachings of the present invention, Fig. 3 being a back view.

This invention relates generally to novel cartons which are particularly useful for holding rolls of photosensitive sheet materials. The photographic sheet materials for which this carton is particularly designed comprise, in one form thereof, a roll of negative photosensitive sheet material and a roll of positive sheet material. These two sheets are preferably associated with liquid-carrying containers and are adapted to be used in a camera of the type shown in United States Patent 2,435,717, which camera produces a positive print on a predetermined area of the positive sheet, this positive print being subsequently severed from the remainder of the sheet. A carton of the present invention is constructed and arranged to safely hold two sheets in roll form for shipping to the camera owner. The carton is so arranged that, after removal of its contents, it may be collapsed to form an open-mouthed envelope for receiving the positive prints produced in the camera.

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A preferred type of carton is formed of a single sheet of material, such as a wax-lined chip board, which is cut into a blank, and suitably scored and perforated as described hereinafter. This blank is then formed into a carton having lateral walls, including front and back walls and end walls. The carton also includes top and bottom closures having portions forming the top and bottom walls. The top closure constitutes an upward extension of either the front or rear wall, while the bottom closure constitutes a downward extension of the other of said front and rear walls. The sheet material is preferably scored along the lines defining the boundaries between the various walls so as to assist in folding the blank during formation of the carton. The end walls preferably include extensions providing top and bottom flaps for assisting in closing the top and bottom of the carton, the boundaries between these flaps and their respective end walls being preferably perforated. Each of the end walls is preferably scored along a median line thereof, the scoring extending from the top to the bottom of each end wall to permit said end walls to be collapsed along this scored median line.

In order that the above-described carton may be readily converted into an open-mouthed envelope, the sum of the lengths of the top and bottom closures is at least as great as the distance from the bottom to the top of the carton. Associated with one or both of these top and bottom closures is a locking means, this means being preferably positioned near the extremity of each closure. Thus, when the end walls are collapsed, and the top and bottom closures are folded into alignment with each other along either the front or rear wall of the container, the ends of the top and bottom closures may be locked together, thereby holding the carton in its collapsed position and forming an open-mouthed envelope therefrom.

Referring now to the various figures wherein like numbers refer to like elements, a carton is formed from a blank 12 preferably cut from a single sheet of material such, for example, as commercial wax-lined chip board. The carton includes a front wall 13, a rear wall 14, a first end wall 16 and a second end wall 18. A plurality of score lines 20 define the boundaries between the various walls enumerated above. A top closure 22 is provided as an extension of the rear wall 14 and a bottom closure 24 is provided as an extension of the front wall 13, score lines 28 being provided to define the boundaries between the top and bottom closures and their associated front and rear walls. A plurality of tabs 26 are included as extensions of the end walls 16 and 18, the lines defining the boundaries between these tabs and their associated end walls comprising perforations 30. Each end wall 16, 18 is provided with a median score line 32 which extends preferably from the top of the end wall to the bottom thereof and, for convenience, also runs along the median line of the tabs 26. Another tab 34 constitutes a lateral extension of the rear wall 14, this tab being coated with an adhesive 35 for securing tab 34 to the inner surface of end wall 18 during the manufacture of the carton.

To permit ready bending of the top closure 22, during formation of the top wall of the assembled carton, there is provided a score line 36 extending across the top closure. A similar score line 38 is provided for the bottom closure 24. The outer end 40 of the top closure includes a locking means, shown schematically as a transversely extending finger 42 partially separated, by a transverse slit 44, from the remainder of the end 40 of top closure 22. A tapered end 46 of finger 42 defines a V-shaped groove 48 terminating in slit 44. A similar, complementary locking means, comprising a finger 50 having a tapered end 52, and a transverse slit 54, is provided near the outer end 56 of the bottom closure 24, said complementary locking means on bottom closure 24 being constructed and arranged to interlock with the locking means on top closure 22. A V-shaped groove 58 is similarly defined by tapered end 52. As can be seen from an examination of Figs. 1 and 3, the slits 44 and 54 are, in the preferred form, spaced along their respective closures, from their respective score lines 28, by a distance substantially equal to half the height of the carton.

When forming the carton, shown in Fig. 2, from the blank of Fig. 1, blank 12 is creased along vertical score lines 20 to form a rectangular carton body, the outer surface of the tab 34 being secured, by means of the adhesive 35, to the inner surface of the end wall 18. Bottom tabs 26 are then folded inwardly, the bottom closure 24 is folded along score lines 28 and the outer end 56 thereof is folded along score line 38 and tucked inside of the rear wall 14. The product to be carried by the carton is then inserted within the carton, the top tabs 26 are folded inwardly, and the closing of the carton is then completed by folding the top closure along the score line 28, folding the outer end 40 thereof along the score line 36 and tucking it behind front wall 13. When it is desired to remove the contents of the carton, the top closure 22 is lifted, the tabs 26 are moved to the side, and the contents removed.

In a preferred use of the carton, the bottom closure is also removed when the carton is

empty and the front and rear walls are squeezed together, thereby collapsing the end walls 16 and 18 along the median score lines 32. The top closure 22 is then folded backwardly so that its outer surface is in face-to-face relation with the outer surface of the rear wall 14. The bottom closure 24 is then folded under the bottom of rear wall 14 and up along the back surface of rear wall 14 till the ends 40, 56 of the bottom and top closures are in alignment. Then the slit 44 is aligned with the slit 54 and the two fingers 42, 50 are moved into engagement to lock the bottom and top closures in the position shown in Fig. 3, the V-shaped grooves 48, 58 guiding the elements into locked position. When the top and bottom closures are so locked together, the carton is converted to an envelope which is open at the top and closed at the bottom. The extending tabs 26 may then be readily torn off along the lines defined by perforations 30 to form a neat rectangular envelope. Two of the tabs 26 are shown in dotted line position in Fig. 3 and two are omitted. Due to the resilience of the chip board, the score lines 32, running lengthwise of the ends of the container, resist collapsing of the container, when no compression is applied to the outer surfaces thereof, so that the container mouth, at least, is held open. In a perferred form of the invention, the sum of the distance from the top score line 28 to the locking means associated with the top closure and the distance from the bottom score line 28 to the locking means associated with the bottom closure is equal to the height of the carton. With such dimensions the bottom of the carton is quite thin, the front and rear walls touching at the bottom of the formed envelope, and tapering outwardly from the bottom to the open mouth.

Since certain changes may be made in the above product without departing from the scope of the invention herein involved, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

What is claimed is:

1. A collapsible carton comprising a pair of walls, one of said walls being a front wall and the other of said walls being a rear wall, two end walls, said front, rear and end walls being joined together, scores at the junctions between said walls, a top closure including a portion forming the carton top wall, a bottom closure including a portion forming the carton bottom wall, said bottom closure constituting an extension of one of said pair of walls and said top closure constituting an extension of the other of said pair of walls, scores between said closures and their associated walls, top and bottom flaps constituting extensions of said end walls, a score running lengthwise of each said end wall along the median line thereof from the top to the bottom of said end wall, a top interlocking portion associated with said top closure and a bottom interlocking portion associated with said bottom closure, said bottom interlocking portion being complementary to said top interlocking portion, said top and bottom interlocking portions being adapted to interlock to connect said closures together when the ends of said closures are folded into alignment along the outer surface of one of said pair of walls, said bottom closure being foldable from its associated wall under and along the outer surface of the

wall associated with the top closure when said carton is in flattened condition, said interlocking portions being adapted to hold said top and bottom closures in said folded relationship, said bottom closure, when said interlocking portions are interlocked, maintaining the bottoms of said pair of walls substantially together to form an open-mouthed envelope.

2. A collapsible carton comprising a pair of walls, one of said walls being a front wall and the other of said walls being a rear wall, two end walls, said front, rear and end walls being joined together, scores at the junctions between said walls, a top closure including a portion forming the carton top wall, a bottom closure including a portion forming the carton bottom wall, said bottom closure constituting an extension of one of said pair of walls and said top closure constituting an extension of the other of said pair of walls, scores between said closures and their associated walls, top and bottom flaps constituting extensions of said end walls, a score running lengthwise of each of said end wall along the median line thereof from the top to the bottom of said end wall, a top interlocking portion associated with said top closure and a bottom interlocking portion associated with said bottom closure, said bottom interlocking portion being complementary to said top interlocking portion, said top and bottom interlocking portions being adapted to interlock to connect said closures together when the ends of said closures are folded into alignment along the outer surface of one of said pair of walls, said bottom closure being foldable from its associated wall under and along the outer surface of the wall associated with the top closure when said carton is in flattened condition, said interlocking portions being adapted to hold said top and bottom closures in said folded relationship, said bottom closure, when said interlocking portions are interlocked, maintaining the bottoms of said pair of walls substantially together to form an open-mouthed envelope, said scores associated with said end walls having sufficient strength so as to maintain the inner surfaces of said front and rear walls spaced apart at least at the mouth of said formed envelope.

3. A collapsible carton comprising a pair of walls, one of said walls being a front wall and the other of said walls being a rear wall, two end walls, said front, rear and end walls being joined together, scores at the junctions between said walls, a top closure including a portion forming the carton top wall, a bottom closure including a portion forming the carton bottom wall, said bottom closure constituting an extension of one of said pair of walls and said top closure constituting an extension of the other of said pair of walls, scores between said closures and their associated walls, top and bottom flaps constituting extensions of said end walls, a score running lengthwise of each said end wall along the median line thereof from the top to the bottom of said end wall, a top interlocking portion associated with said top closure and a bottom interlocking portion associated with said bottom closure, said bottom interlocking portion being complementary to said top interlocking portion, said top and bottom interlocking portions being adapted to interlock to connect said closures together when the ends of said closures are folded into alignment along the outer surface of one of said pair of walls, said bottom closure being foldable from its associated wall under and along the outer surface of the wall associated with the top closure when said carton is in flattened condition, said interlocking portions being adapted to hold said top and bottom closures in said folded relationship, said bottom closure, when said interlocking portions are interlocked, maintaining the bottoms of said pair of walls substantially together to form an open-mouthed envelope, said interlocking portions on said top and bottom closures constituting cooperating transverse fingers and slots which serve to connect said ends of said top and bottom closures together.

4. A collapsible carton comprising a pair of walls, one of said walls being a front wall and the other of said walls being a rear wall, two end walls, said front, rear and end walls being joined together, scores at the junctions between said walls, a top closure including a portion forming the carton top wall, a bottom closure including a portion forming the carton bottom wall, said bottom closure constituting an extension of one of said pair of walls and said top closure constituting an extension of the other of said pair of walls, scores between said closures and their associated walls, top and bottom flaps constituting extensions of said end walls, a score running lengthwise of each said end wall along the median line thereof from the top to the bottom of said end wall, a top interlocking portion associated with said top closure and a bottom interlocking portion associated with said bottom closure, said bottom interlocking portion being complementary to said top interlocking portion, said top and bottom interlocking portions being adapted to interlock to connect said closures together when the ends of said closures are folded into alignment along the outer surface of one of said pair of walls, said bottom closure being foldable from its associated wall under and along the outer surface of the wall associated with the top closure when said carton is in flattened condition, said interlocking portions being adapted to hold said top and bottom closures in said folded relationship, said bottom closure, when said interlocking portions are interlocked, maintaining the bottoms of said pair of walls substantially together to form an open-mouthed envelope, said interlocking portions comprising a transversely extending finger on each closure, each said finger defining a V-shaped groove terminating in a slit, said V-shaped groove on said bottom closure opening towards one end wall and said V-shaped groove on said top closure opening towards said other end wall.

5. A carton, particularly adapted for distribution of photographic materials in roll form, which can be collapsed when its contents are removed, to form an open-mouthed print-receiving envelope, said carton being constructed from sheet material and comprising lateral walls including a front wall, a rear wall and end walls, a top closure constituting an extension of the top of said rear wall, a bottom closure constituting an extension of the bottom of said front wall, and top and bottom flaps constituting extensions of said end walls, said sheet material being scored on a line which is substantially the median line extending from the bottom to the top of each said end wall, said top closure including top interlocking means comprising a top slit, said bottom closure including bottom interlocking means comprising a bottom slit, the sum of the distance

from said top of said rear wall to said top slit plus the distance from said bottom of said front wall to said bottom slit being slightly greater than the length from the top to the bottom of said rear wall, said interlocking means acting to lock together the ends of said top and bottom closures when said end walls are collapsed along said median lines and said bottom and top closures are folded into overlapping relationship along the outside of said rear wall, said top and bottom closures, when locked together by said last-named means, holding said end walls in collapsed condition, forming a closure for the bottom of the side walls and holding apart the tops of the side walls.

6. A carton, particularly adapted for distribution of photographic materials in roll form, which can be collapsed when its contents are removed, to form an open-mouthed print-receiving envelope, said carton being constructed from sheet material and comprising lateral walls including a front wall, a rear wall and end walls, a top closure constituting an extension of the top of said rear wall, a bottom closure constituting an extension of the bottom of said front wall; said sheet material being scored along lines defining boundaries between said various walls, top and bottom flaps constituting extensions of said end walls, and perforations defining the boundaries between said flaps and their associated end walls, said sheet material being scored on a line which is substantially the median line extending from the bottom to the top of each said end wall; said top closure including top interlocking means comprising a top slit, said bottom closure including bottom interlocking means comprising a bottom slit, the sum of the distance from said top of said rear wall to said top slit plus the distance from said bottom of said front wall to said bottom slit being substantially equal to the distance from the top to the bottom of the carton, said interlocking means acting to lock together the ends of said top and bottom closures when said end walls are collapsed along said median lines and said bottom and top closures are folded into overlapping relationship along the outside of said rear wall, said top and bottom closures, when locked together by said last-named means, holding said end walls in collapsed condition, forming a closure for the bottom of the side walls and holding apart the tops of the side walls.

7. A carton, particularly adapted for distribution of photographic materials in roll form, which can be collapsed when its contents are removed, to form an open-mouthed print-receiving envelope, said carton being constructed from sheet material and comprising lateral walls including a front wall, a rear wall and end walls, a top closure constituting an extension of the top of said rear wall, and bottom closure constituting an extension of the bottom of said front wall, said sheet material being scored on a line which is substantially the median line extending from the bottom to the top of each said end wall, said top closure including top interlocking means comprising a top slit, said bottom closure including bottom interlocking means comprising a bottom slit, the sum of the distance from said top of said rear wall to said top slit plus the distance from said bottom of said front wall to said bottom slit being slightly larger than the distance from the top to the bottom of the carton, said interlocking means acting to lock together the ends of said top and bottom closures when said end walls are collapsed along said median lines and said bottom and top closures are folded into overlapping relationship along the outside of said rear wall, said top and bottom closures, when locked together by said last-named means, holding said end walls in collapsed condition, forming a closure for the bottom of the side walls and holding apart the tops of the side walls.

8. An open-mouthed envelope for receiving a photographic print, or the like, comprising lateral walls including a front wall, a rear wall and end walls, the top edges of said lateral walls defining an envelope mouth, a bottom extension extending from the bottom of said front wall under the bottom of said rear wall and long the outside surface of said rear wall, another extension extending from the top of said rear wall and being bent into face-to-face relation with the outer surface of said rear wall, and means for interlocking the ends of said extensions.

9. An open-mouthed envelope for receiving a photographic print, or the like, comprising lateral walls including a front wall, a rear wall and end walls, the top edges of said lateral walls defining an envelope mouth, a bottom extension extending from the bottom of said front wall under the bottom of said rear wall and along the outside surface of said rear wall, another extension extending from the top of said rear wall and being bent into face-to-face relation with the outer surface of said rear wall, and means for interlocking the ends of said extensions, the total distance along said two interlocked extensions being only slightly greater than the height of said rear wall whereby said front and rear walls are held substantially together at the bottoms thereof, said end walls including median score lines running from the top to the bottom of said envelope and having sufficient resilience to maintain said envelope mouth open.

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