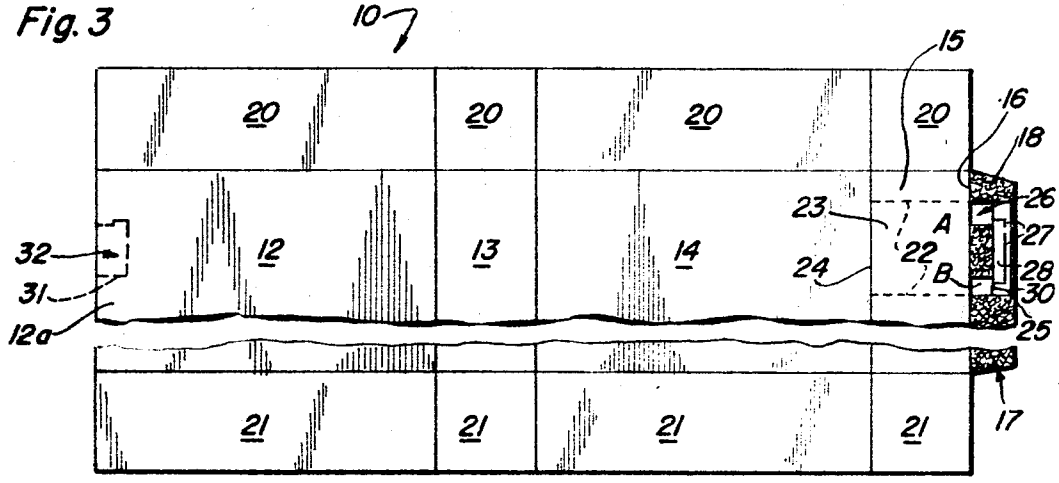
Aug. 20, 1968 C. L. CHAMPLIN 3,397,833

RECLOSABLE FOLDING CARTON AND BLANK THEREFOR

Filed Sept. 12, 1966

Fig. 3



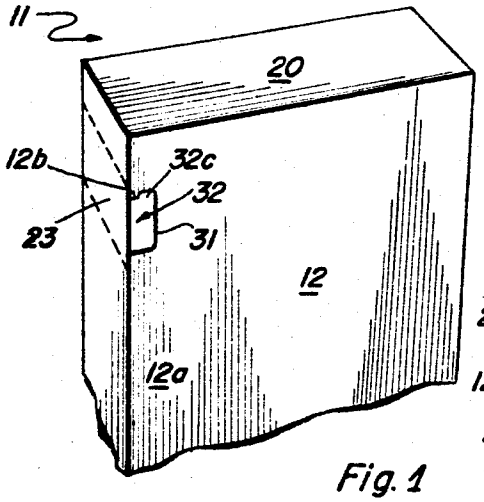


Fig. 1

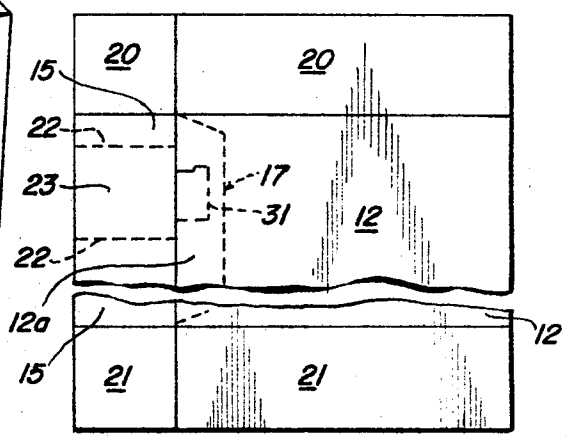


Fig. 4

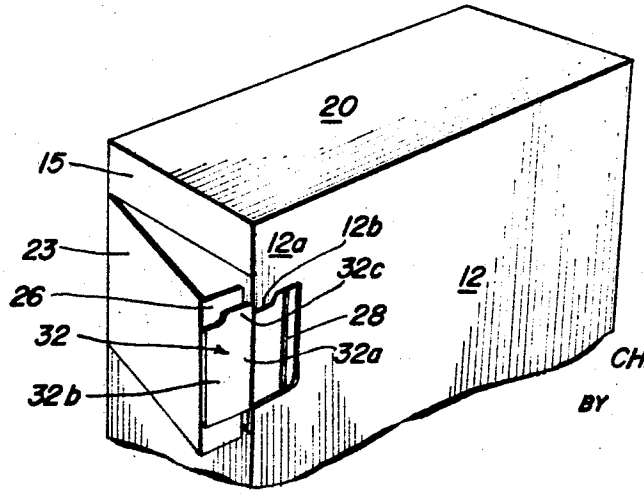


Fig. 2

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United States Patent Office 3,397,833 Patented Aug. 20, 1968

3,397,833

RECLOSABLE FOLDING CARTON AND BLANK THEREFOR

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Filed Sept. 12, 1966, Ser. No. 578,782
3 Claims. (Cl. 229—51)

ABSTRACT OF THE DISCLOSURE

A folding carton provided with a reclosable flap formed from one side wall of the carton. The flap includes a foldable extension having a first portion severable from the carton glue panel and a laminated second portion severable from an adjacent side wall. An unsevered portion of the glue panel and the adjacent side wall cooperating to retain the foldable extension and flap in reclosed position.

Background of the invention

Various cartons for such use have heretofore been proposed, however, because of their particular design they are of complex and costly construction, difficult to set up with conventional equipment, and/or are ineffective in retaining the reclosing flap in a closed position subsequent to its being initially opened.

Thus, it is one of the objects of this invention to provide a reclosable folding carton which is not beset with the aforenoted shortcomings associated with prior cartons of this general type.

It is a further object of this invention to provide a blank for a reclosable folding carton which is of simple design, may be readily formed on high speed apparatus, and adhesive may be applied to various portions thereof with conventional gluing equipment.

It is a still further object of this invention to provide a blank for a reclosable folding carton which results in but a minimum of material waste.

Further and additional objects will appear from the description, accompanying drawing, and appended claims.

Summary of the invention

In accordance with one embodiment of this invention a reclosable folding carton is provided which comprises a plurality of foldably connected side walls, and a glue panel foldably connected to one side wall and secured to the interior surface of a second side wall whereby said side walls cooperate to form a tubular member. Foldably connected to opposite ends of the side walls are end closure flaps which cooperate with one another to form top and bottom end walls. The one side wall to which the glue panel is foldably connected is provided with a pair of spaced tear scores which extend angularly thereacross and define a reclosable flap. The corresponding one ends of the tear scores terminate at the foldline connection for the glue panel. The glue panel is provided with a first slit, the ends of which coincide with said one ends of said tear scores and define a first folding tab. The glue panel is also provided with second slits which define a folding second tab. The folding axes of said first and second tabs are in spaced substantially parallel relation.

The second side wall, which overlies and is connected to the glue panel, is provided along its marginal portion with a rupturable score which defines a tuck flap. The tuck flap is in registration with and is secured to the first tab formed in the glue panel. Upon a depressing force being initially applied to the exposed surface of the tuck flap, the latter is severed from the second side wall whereupon the reclosable flap with the first tab and tuck flap attached thereto can be readily torn to an open

position with one side of the reclosable flap remaining hingedly connected to the carton. Upon reclosing of the reclosable flap, the tuck flap will be engaged by the second tab of the glue panel and said tuck flap will become interlocked with a remaining portion of the second side wall.

Description

For a more complete understanding of this invention reference should be made to the drawing, wherein:

FIG. 1 is a fragmentary perspective view of one form of the improved reclosable folding carton prior to initial opening of the reclosable flap or with the reclosable flap locked in its fully closed position;

FIG. 2 is similar to FIG. 1 but on a slightly larger scale and showing the reclosable flap in a partial open position;

FIG. 3 is a fragmentary top plan view of a blank for the carton shown in FIG. 1; and

FIG. 4 is a fragmentary top plan view of the blank of FIG. 1, but shown in a collapsed tubular condition suitable for storage with a plurality of similar empty cartons.

Referring now to the drawing and more particularly to FIG. 3, a blank **10** formed of suitable sheet material, e.g. paperboard, is shown which is adapted to be set up to form a carton **11**, see FIG. 1. Blank **10** in the illustrated embodiment includes side walls or panels **12**, **13**, **14**, and **15** which are arranged in side-by-side relation and are foldably interconnected. Side walls **13** and **15** are relatively narrow and are arranged in alternate relation with wider side walls **12** and **14**.

Connected by foldline **16** to an elongated side edge of panel **15** is a glue panel **17** which extends substantially the full height of panel **15**. Glue panel **17** is adapted to have an adhesive coating **18** applied to substantially the entire one surface thereof whereby said panel **17** may be bonded to the interior surface of panel **12** so as to form either a collapsed tubular member, as seen in FIG. 4 or an erected tubular member. The empty carton when in a collapsed tubular form, FIG. 4, is in condition to be readily stacked with other like carton either for storage or bulk shipment.

End closure flaps **20** annd **21** are foldably connected to the top and bottom edges, respectively, of panels **12–15** and form a seal end carton when the blank **10** is set up, as shown in FIG. 1. Prior to flaps **20** being folded to an overlapping closed position and subsequent to flaps **21** being folded to form the closed bottom of the carton, the product to be accommodated in the carton is deposited therein. The setting up and filling of the carton are usually accomplished with automatic equipment.

Panel **15**, adjacent its upper end is provided with a pair of spaced tear scores **22** which extend thereacross and define a reclosable flap **23**. The corresponding one ends of scores **22** terminate at the foldline connection **16** between side wall **15** and glue panel **17**. The other corresponding ends of scores **22** terminate at the foldline connection **24** between side walls **14** and **15**.

Glue panel **17** is provided with a first slit **25**, which in the illustrated embodiment is C-shaped and has the ends thereof terminating at the junctures of the tear score ends and foldline **16**. Slit **25** defines a first tab **26** which is foldably connected to the free edge of reclosable flap **23** and is carried thereby once the flap has been initially opened, see FIG. 2. Glue panel **17** is also provided with second slits **27** which define a retainer second tab **28**.

It will be noted in FIG. 3 that tab **26** has only the center portion A thereof coated with an adhesive. Retainer tab **28**, portions of tab **26** above and below area A, and portions above and below and to one side of tab **28** cooperate with one another to form a C-shaped adhesive-free

area B. It is important to note that a narrow strip **30** of adhesive is provided between area B and the outer edge of panel **17**. Thus, by reason of strip **30** there is a continuous adhesive bond throughout the length of glue panel **17**.

The marginal portion **12***a* of panel **12** which is adapted to overlie and be bonded to glue panel **17**, see FIG. 4, is provided with rupturable score **31** which cooperates with the elongated edge of panel **12** to define a tuck flap **32**. It will be noted in FIG. 2 by reason of adhesive area A on glue panel tab **26** that tuck flap **32** remains attached to tab **26** once the reclosable flap **23** is initially opened. The configuration of tuck flap **32** is such that it projects beyond the elongated edge of tab **26**, see FIG. 2. The projecting portion **32***a* of the tuck flap has a greater vertical dimension than the portion **32***b* which is adjacent foldline **16**. By reason of this dimensional differential, one end of portion **32***a* forms an upright shoulder **32***c* which is adapted to fit behind a depending shoulder **12***b* formed in the marginal portion **12***a* of side wall **12** and effect interlocking of the tuck flap with respect to side walls **12** and thereby retain the reclosable flap **23** in a closed position as shown in FIG. 1.

In order to facilitate the retention of flap **32** in its interlocking position, tab **28** engages the concealed side of the projecting portion **32***a* of the tuck flap **32** and thus maintain shoulders **32***c* and **12***b* in substantial coplanar, abutting, interlocking relation. In instances where heavy gauge material is used in forming the blank **10**, retainer tab **28** may be omitted.

It is to be understood of course that the shape, size, and location of the reclosable flap **23**, tab **26**, and tuck flap **32** may be readily varied from that shown without departing from the scope of this invention.

Thus, it will be seen that a carton and blank therefor having an improved reclosable feature has been provided which facilitates opening and reclosing of the carton, enables the blank to be readily glued and set up to form a carton by use of high speed automatic equipment and does not detract to any appreciable extent from the exterior appearance of the carton.

While a particular embodiment of this invention has been described above, further modifications may be made thereto and it is contemplated, therefore, by the appended claims, to cover any such modifications as fall within the true spirit and scope of this invention.

I claim:

1. A reclosable folding carton comprising a plurality of foldably connected side walls, a glue panel foldably connected to the side edge of one side wall and connected to the interior surface of a second side wall whereby said side walls cooperate to form a tubular member, and a plurality of end flaps foldably connected to opposite end edges of said side walls and cooperating with one another to form closure end walls; said one side wall being provided with a pair of spaced tear scores extending angularly thereacross and defining a foldable reclosure flap, each tear score having an end thereof terminating at the folding connection between said glue panel and said one side wall, said glue panel being provided with a first slit having ends thereof spaced apart and terminating at the folding connection for said glue panel and cooperating therewith to form a tab; said second side wall being provided with a tear score delimiting a tuck flap, said tuck flap being in registered relation with and bonded to said glue panel tab and severable from said second side panel when said reclosable flap is initially moved to an open position with respect to said second side panel, said tuck flap having a substantial portion thereof projecting beyond said glue panel tab, the vertical dimension of said tuck flap projecting portion being greater than the corresponding dimension of the tuck flap bonded to said glue flap tab, said glue panel having a hinged portion adjacent said tab and in contact with but not secured to said second side wall and cooperating therewith for retaining said tuck flap when said reclosable flap is in a reclosed position with respect to said one side wall.

2. The carton of claim **1** wherein the glue panel hinged portion has a hinge axis spaced from and substantially parallel to the folding connection between said glue panel and said one side wall.

3. A blank of foldable sheet material for a reclosable folding carton, comprising a plurality of side wall panels foldably connected to one another and arranged inside-by-side relation, a glue panel foldably connected to the side edge of one of the side wall panels for securement to the interior surface of a second side wall panel to form a tubular member when said blank is set up to form a carton, and end closure flaps foldably connected to the end edges of said side wall panels; the one side wall panel to which said glue panel is connected being provided with a pair of spaced elongated, angularly extending tear scores defining a reclosable flap, one end of each tear score terminating at the foldline connection for said glue panel; said glue panel being provided with a slit the ends of which terminate at said glue panel folding connection and define a tab; said glue panel being provided with second slits which define a hingedly mounted retainer flap with an edge thereof coincident with but shorter than an edge of said glue panel tab; said second side wall panel having a rupturable score formed in the marginal portion thereof, and defining a tuck flap which is adapted to overlay the glue panel and be in registration with and project beyond the glue panel tab when said blank is set up.

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