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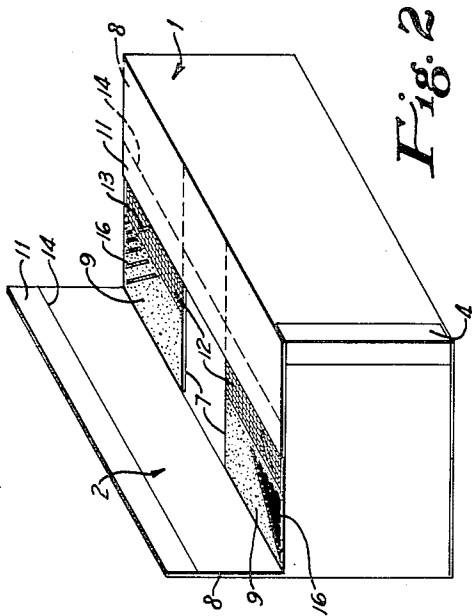
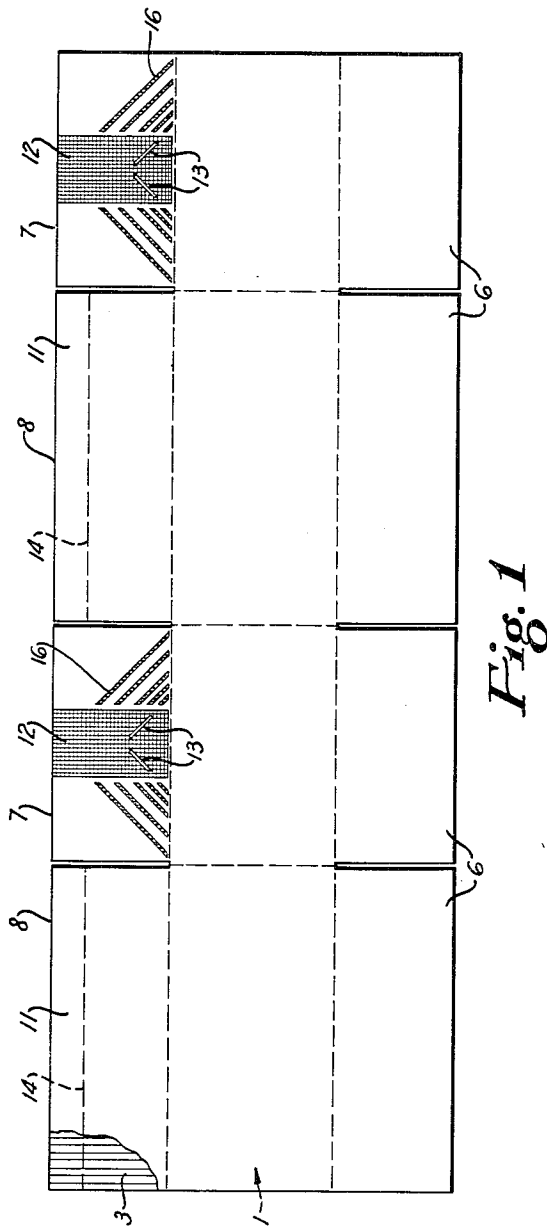
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2,745,592

EASY OPENING CORRUGATED PAPERBOARD CARTON

Filed Aug. 13, 1953

2 Sheets-Sheet 1



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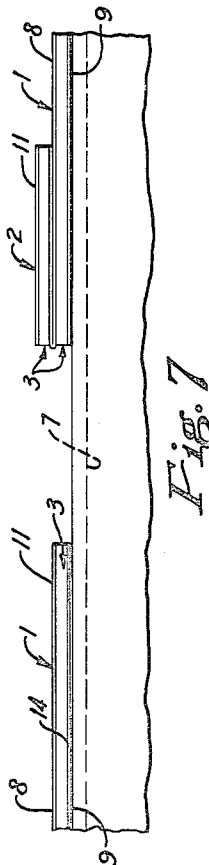
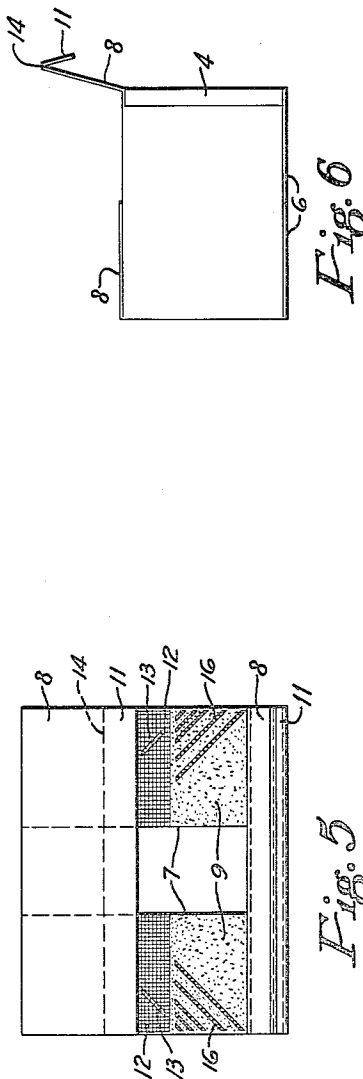
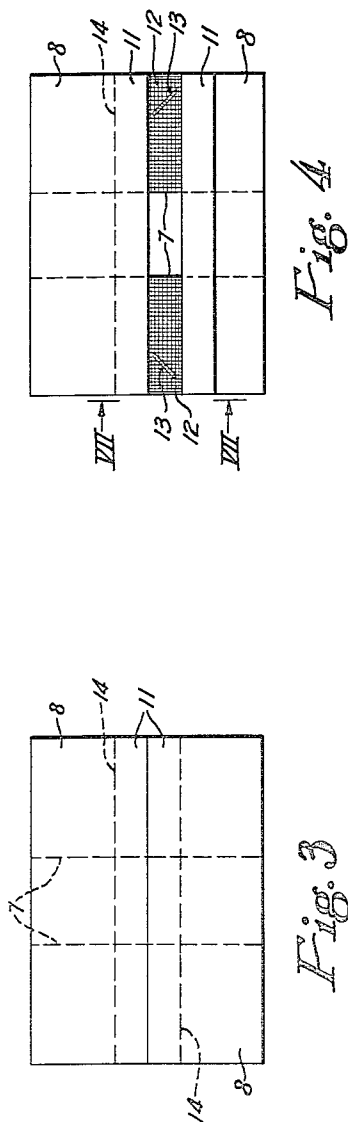
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EASY OPENING CORRUGATED PAPERBOARD CARTON

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2 Claims. (Cl. 229—51)

This invention relates to corrugated paperboard cartons, and more particularly to a construction which permits sealed cartons to be opened easily.

Ordinary corrugated paperboard cartons, such as those that canned goods are packed in, have at top and bottom intumed end flaps, to the outer surfaces of which overlying side flaps are glued. It is customary to apply the glue or adhesive to the entire areas of the outer surfaces of the end flaps, as a result of which the outer flaps have most of their areas sealed to the inner flaps. Also, the adjacent longitudinal edges of the outer flaps generally engage each other or have only a slight space between them. Consequently, such cartons are difficult to open without the use of a knife or a tool of some sort, because it is difficult to insert the fingers between and beneath the outer flaps in order to pull them upward and tear them away from the inner flaps.

It is among the objects of this invention to provide a corrugated paperboard carton which can easily be opened with the hands alone, and yet which is adequately sealed and has the necessary strength before it is opened.

In accordance with this invention, the corrugated paperboard carton has at its top intumed inner flaps that are covered by intumed outer flaps. The outer flaps are glued to the inner flaps, with the inner longitudinal edges of the outer flaps close to each other. The lower surface of at least one of the outer flaps has a slit extending across it lengthwise near its inner edge to define a marginal strip. The areas of the inner flaps beneath the strip or strips are free or nearly free of adhesive so that when it is desired to open the carton, a marginal strip can be lifted easily and folded back onto the outer flap to provide a space between the two outer flaps for insertion of the hand. The outer flaps can then be pulled up away from the inner flaps.

The preferred embodiment of the invention is illustrated in the accompanying drawings, in which

Fig. 1 is an outside view of a blank from which my carton is made;

Fig. 2 is an isometric view of my carton just before the second outer flap is folded down and sealed;

Fig. 3 is a top view of the sealed carton;

Fig. 4 is a top view with a marginal strip folded back onto the rest of the outer flap;

Fig. 5 is a view similar to the preceding figure, but with the same outer flap pulled up away from the inner flaps;

Fig. 6 is an end view of Fig. 5; and

Fig. 7 is an enlarged fragmentary view taken on the line VII—VII of Fig. 4.

Referring to Figs. 1 and 7 of the drawings, the carton is formed in the usual way from a rectangular blank of corrugated paperboard that has two smooth paper facings 1 and 2 separated by a corrugated sheet 3 of paper attached to both facings. The blank is cut and scored so that it can be folded into a rectangular tube and have the central portions of its opposite ends at-

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tached to each other by a tape 4 (Fig. 2). One side of the blank is formed of the usual flaps 6 that are folded across the bottom of the rectangular tube and glued together to form the bottom of the carton. The opposite side of the blank has end flaps 7 and side flaps 8 that likewise are turned inward into overlapping relation to form the top of the box. The end flaps are bent in first and then the side flaps are bent over them. A suitable adhesive 9 is applied to the outer surfaces of end flaps 7 for sealing the outer flaps to them. The inner edges of the end or inner flaps generally are spaced several inches apart as shown in Figs. 4 and 5, but the inner longitudinal edges of the side or outer flaps are close together or actually touching in order to completely close the carton (Fig. 3).

In accordance with this invention a marginal strip 11 extending longitudinally along the inner edge of at least one outer flap 8, but preferably both flaps, is not glued to the inner flaps 7. This lack of adhesion can be obtained by omitting adhesive from an area across the center of each inner flap, or by printing such areas with ink 12 that will seal the pores of the outer facing of the paperboard and thereby prevent the adhesive that is applied to the end flaps from adhering to the printed areas. There still will be sufficient areas of the outer flaps adhering to the inner flaps to give the carton the necessary strength, especially since marginal strips 11 are at the top of the carton and need not be more than one and one half inches wide each. If desired, these strips need not be completely free of the inner flaps, but can have their opposite ends tacked to the inner flaps by small spots or bars 13 of adhesive which will prevent any tendency of the strips to curl or warp away from the inner flaps.

A feature of this invention is that the inner facing 2 of each outer flap 8 is slit scored lengthwise, substantially parallel to its free inner edge. The slit 14 is along one side of the unglued strip 11 of that flap and defines one edge of the strip. Since the slit does not extend into the intermediate corrugated sheet, the entire outer flap lies flat against the inner flaps. The carton is made with the corrugations of sheet 3 extending transversely of the outer flaps; that is, across the slits so that the full thickness of the corrugated sheet will be available for strength at the slits.

When it is desired to open this carton, it is a simple matter to catch the fingernails or tips of the fingers under the central part of the free inner edge of either one of the outer flaps and to pull upward on the free marginal strip 11. Very little effort will be required to lift the strip because it is not glued down to the inner flaps or, at most, is only adhesively tacked to them by bars 13. Furthermore, it is easy to lift the free strip because of the slit 14 through its inner facing. When a little upward force is exerted on the strip, the corrugated sheet 3 will break easily along the slit below it and the strip will swing upward on its outer facing as a hinge. The raised strip is folded over and down onto the rest of the outer flap, as shown in Figs. 4 and 7, to leave a central hole in the top of the carton between the end flaps. The fingers can be inserted in this hole and beneath the outer flap which then can be pulled upward to tear it away from the inner flaps, as shown in Figs. 5 and 6. The double thickness of the outer flap, due to the folded back strip 11, strengthens the outer flap and thereby aids in pulling it up. The other outer flap then can be pulled away in the same manner as the one just mentioned, and the carton is open.

From the strength standpoint, it is not as important that the inner corners of the outer flaps 8 beside strips 11 be secured to the inner flaps as well as the rest of the outer flaps. Therefore, it is preferred to print some

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parallel diagonal bars 16 on the inner flaps to prevent adhesion with the outer flaps at those points so that it will be easier to pull the outer flaps away.

According to the provisions of the patent statutes, I have explained the principle of my invention and have illustrated and described what I now consider to represent its best embodiment. However, I desire to have it understood that, within the scope of the appended claims, the invention may be practiced otherwise than as specifically illustrated and described.

I claim:

1. A corrugated paperboard carton having at its top intumed inner flaps covered by intumed outer flaps, the outer flaps having inner longitudinal edges in close proximity to each other, the lower surface of an outer flap having a slit extending across it lengthwise near its inner edge to define a marginal strip extending the full length of said flap and overlying the inner flaps, and adhesive securing the outer flaps to the inner flaps, the areas of the inner flaps beneath said strip being substantially free of adhesive, whereby in opening the carton said strip can be lifted away from the inner flaps easily and folded back onto the outer flap to provide a space between the outer flaps.

2. An easy opening carton formed of paperboard having a corrugated sheet of paper sandwiched between

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paper facing sheets, the carton having at its top intumed inner flaps covered by intumed outer flaps, the outer flaps having inner longitudinal edges in close proximity to each other, the lower facing sheet of an outer flap having a slit extending across it lengthwise near its inner edge to define a marginal strip extending the full length of said flap and overlying the inner flaps, and adhesive securing the outer flaps to the inner flaps, the areas of the inner flaps beneath said strip being substantially free of adhesive, whereby said strip can be lifted away from the inner flaps easily and folded back onto the outer flap to provide a space between the outer flaps, the corrugations of said corrugated sheet extending across said slit so that they have to be broken when said strip is lifted and folded back.

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