United States Patent

Bastian

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[54] TRAY-FORMING CARTON

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[51] Int. Ci. **B65d 5/54**

[58] Field of Search 229/51, 44, 45

[56] **References Cited**

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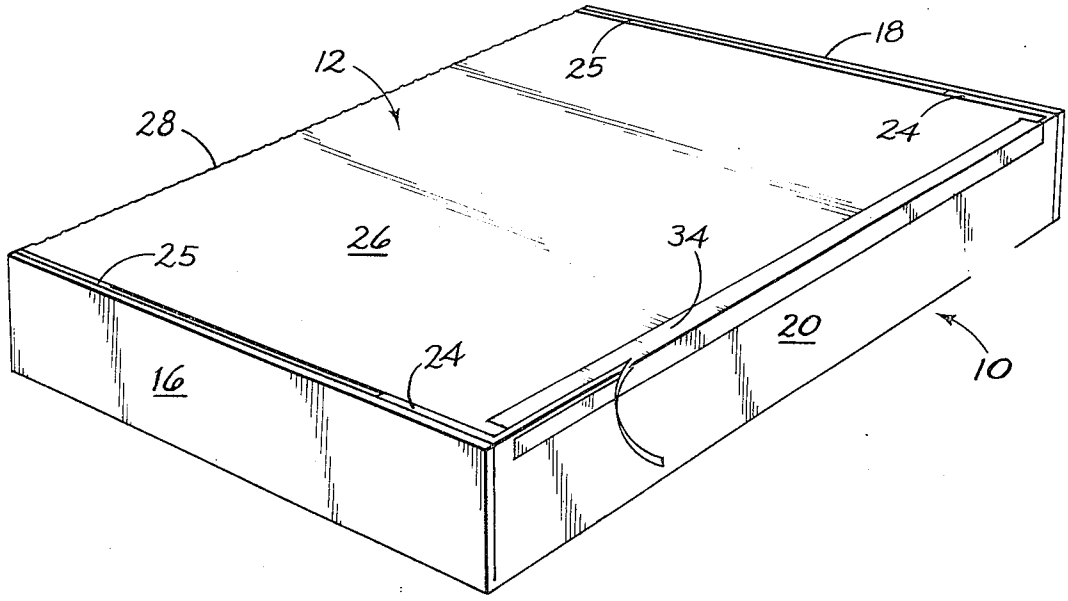
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[57] **ABSTRACT**

A tray-forming carton comprises a folded sheet of stiff paperboard. It includes a bottom having side and end walls, and a top comprising an integral section of the sheet hinged through a fold line at one end to one of the walls of the bottom. A perforated tear line extends across the top, adjacent the fold line. The free end of the top-forming sheet section meets the opposite bottom wall, to which it is secured by releasable securing means such as tear tape. The resulting closed carton may be converted to a tray by releasing the securing means and tearing off the top along the perforated tear line.

4 Claims, 2 Drawing Figures



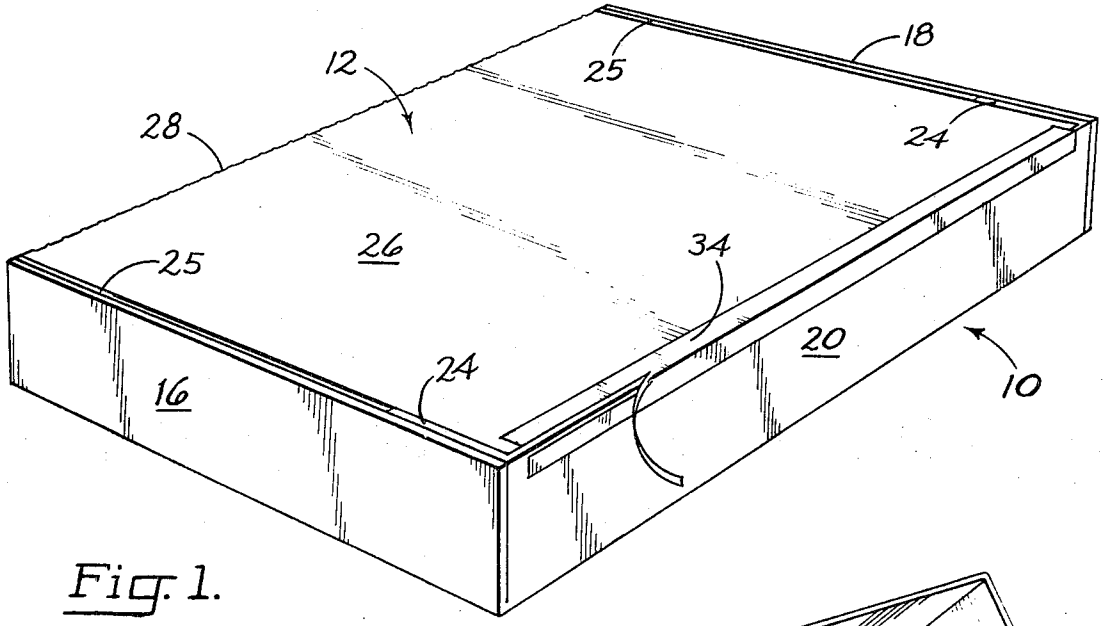


Fig. 1.

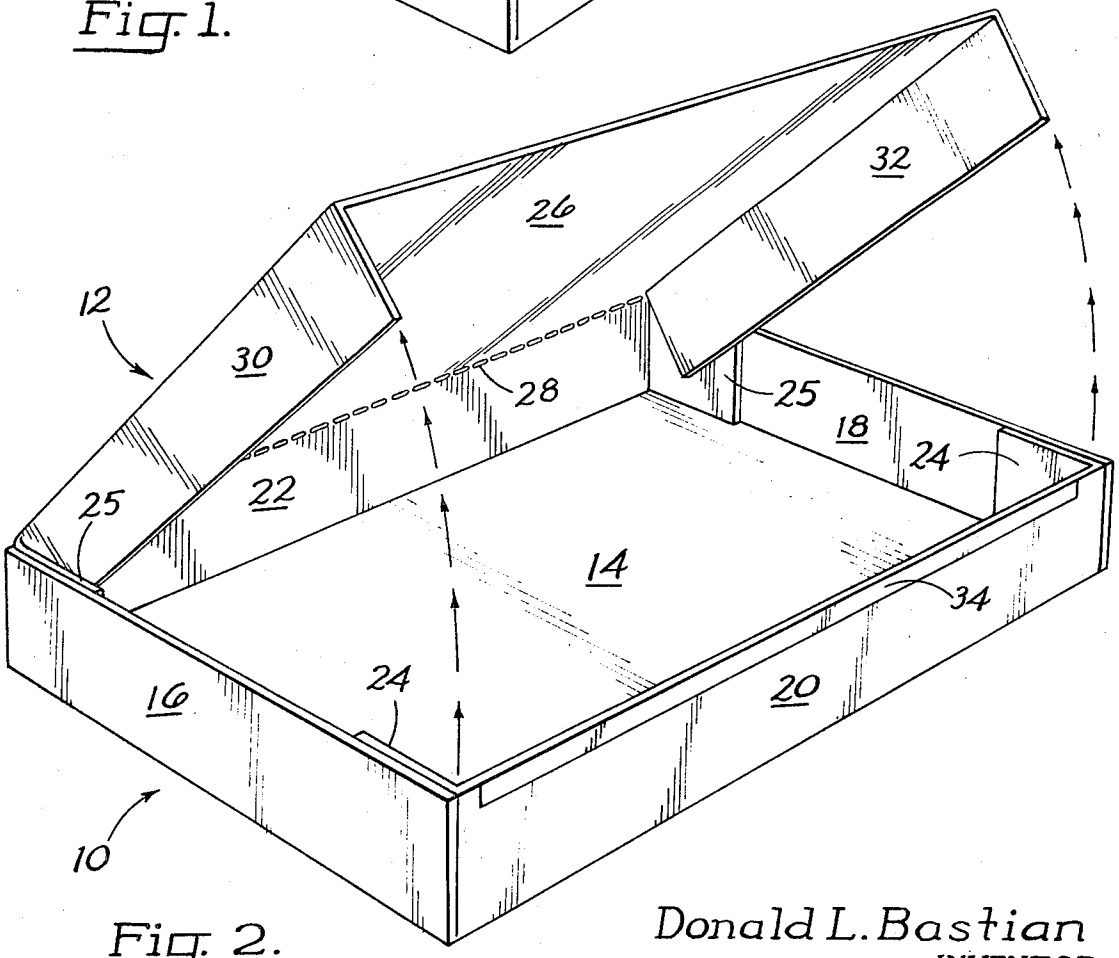


Fig. 2.

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TRAY-FORMING CARTON

This invention relates to paperboard cartons which may be converted by a simple manipulation from a closed condition to an open, tray-forming condition.

In the paperboard field, there exists a need for a carton which readily may be converted from a closed, sealed condition to an open tray condition. For example, in the merchandising of bakery and other food products, it would be desirable to load shallow paperboard containers with the food product, close the containers, store them for whatever period is necessary, transport them to the location in which the products are to be dispensed and then, in a simple operation, remove the top. This displays the products to be merchandised in an open traylike container from which they readily may be dispensed.

It is the general object of the present invention to provide a paperboard container which may readily be converted from its sealed carton form to an open tray form and which in addition is characterized by the following advantageous features: 1. The manipulation by means of which the conversion is effectuated is carried out easily and rapidly. 2. The carton is easily manufactured, using conventional carton-making apparatus. 3. The carton is strong and protects the contents from damage during transportation and storage. 4. The carton may be manufactured in a variety of sizes and shapes as required to suit various products. 5. Although the carton is sealed securely, its contents are not damaged by the manipulation by means of which it is opened and converted to a tray.

The manner in which the foregoing and other objects of this invention are accomplished will be apparent from the accompanying specification and claims considered together with the drawings, wherein:

FIGS. **1** and **2** are views in perspective of the herein described tray-forming carton illustrated, respectively, in its closed and opened conditions.

The carton of my invention may be made of any suitable container material. Preferably it is made of a single sheet of corrugated container board, suitably cut and folded.

It includes a bottom, indicated generally at **10**, and a top indicated generally at **12**.

Bottom **10** includes a bottom piece **14** to which are attached flaps which may be folded appropriately to form end walls **16**, **18**, and sidewalls **20**, **22**. Sidewalls **20**, **22** are provided with minor flaps **24**, **25**, respectively which may be folded inwardly toward each other and secured to the end flaps by suitable means such as staples or glue.

The bottom thus comprised may be of any suitable dimensions, but is generally rectangular in design and shallow in depth since it is the portion which forms the display and dispensing tray during use of the carton.

Top section **12** includes a top piece **26**, connected to one of the bottom walls, for example sidewall **22**, through a fold line which preferably is a perforated, tearable fold line, indicated at **28**. If desired, the fold line and tear line may be separated from each other by predetermined distance, the tear line being located in a desired position along the length of top piece **26**, substantially parallel to the fold line. The tear line is so constituted that by an easy manipulation, top **12** may be removed entirely from bottom **10**.

Further to increase the stability of the carton and to afford increased protection to its contents, there may be provided end flaps **30**, **32** folded downwardly from top piece **26** and lapping end pieces **16**, **18** of bottom **10**. End flaps **30**, **32** are free in that they are not glued nor stapled to other elements of the carton. This makes it easy to raise and lower the lid.

In the FIG. **1** closed condition of the carton, the outer end of top piece **26** meets and lies closely adjacent the upper edge of bottom side piece **20**. Releasable securing means are then provided for releasably securing together the two meeting edges thereby closing the carton.

Although various types of mechanical fasteners may be employed for this purpose, it is preferred to employ a strip of adhesive tape **34**. If the adhesive tape is of the tear-tape variety, i.e., provided with a central string, a strong, semipermanent closure is provided which may be easily unfastened at the time of use.

The box thus is a full overlap style box having all of the attendant manufacturing economies. The box may be shipped flat in a knocked down condition with the tear-tape manufacturer's joint already applied. The customer thus is able to use the box on available packaging machinery which automatically sets it up, fills it, and seals the end flaps.

When it is desired to gain access to the contents, tape **34** is severed or removed and top **12** hinged open. If the carton is to be reclosed, the top is retained in its connected condition. However, if it is desired to convert the carton to a tray, the top may be torn off along perforated tear line **28**. This converts bottom **10** to a tray in which the merchandise may be displayed to advantage and from which it may be dispensed readily.

Having thus described my invention in preferred embodiments, I claim:

1. A tray-forming carton made from a folded sheet of stiff, foldable paperboard, the carton comprising:

a. a bottom including integral side and end walls of uniform height,

b. a top comprising an integral section of the sheet hinged at one end to the top edge of one of the bottom walls through a fold line,

c. a perforated tear line across the top substantially parallel to the fold line,

d. the opposite end of the top-forming sheet section meeting the upper edge of the bottom wall opposite the wall to which the sheet section is hinged, and

e. releasable securing means releasably securing the meeting top-forming sheet section end and upper edge of the bottom wall.

2. The carton of claim **1** wherein the securing means comprises adhesive tape.

3. The carton of claim **2** wherein the adhesive tape comprises string-operated tear tape.

4. The carton of claim **1** including a pair of end flaps folded downwardly from opposite ends of the top and lapping the corresponding end walls of the bottom.

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