Feb. 4, 1969 P. J. MILLER 3,425,537

COMBINATION SHIPPING AND DISPLAY CARTON

Filed Nov. 13, 1967

Sheet 1 of 2

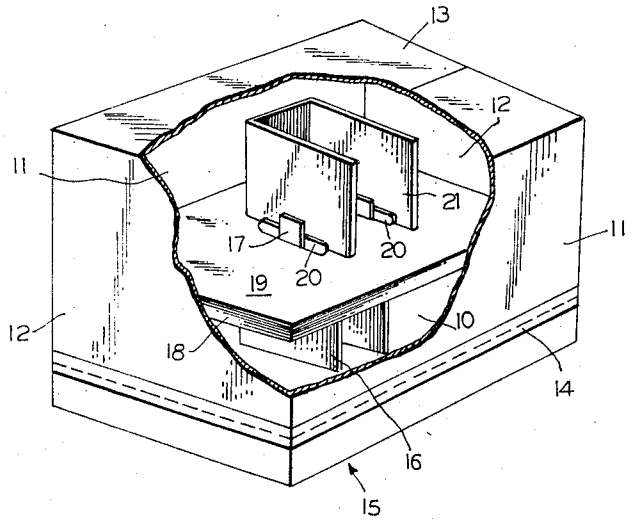


FIG. 1

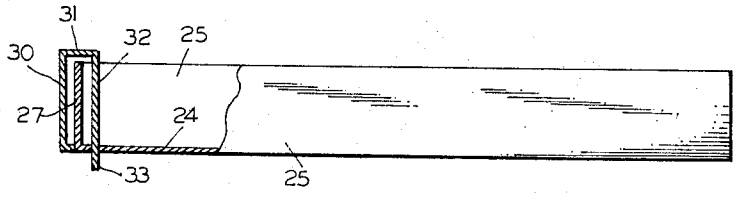


FIG. 2

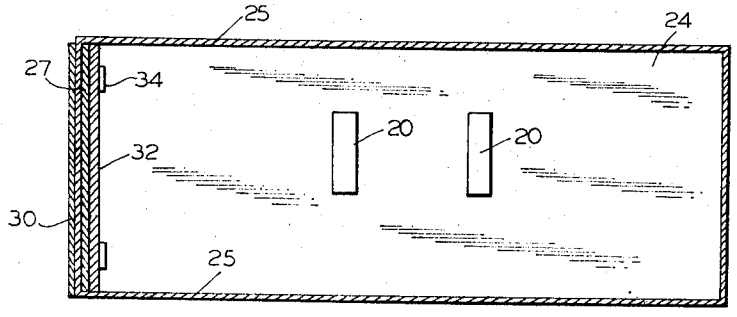


FIG. 3

INVENTOR
PHILLIP J. MILLER

BY Wenderoth, Lind & Ponack
ATTORNEYS

Feb. 4, 1969 P. J. MILLER 3,425,537

# COMBINATION SHIPPING AND DISPLAY CARTON

Filed Nov. 13, 1967 Sheet 2 of 2

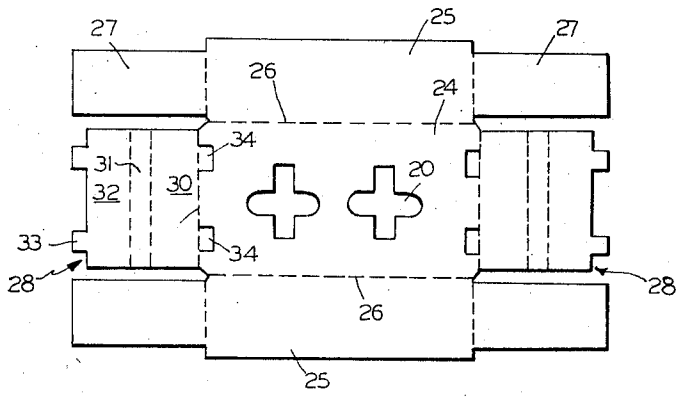


FIG.4

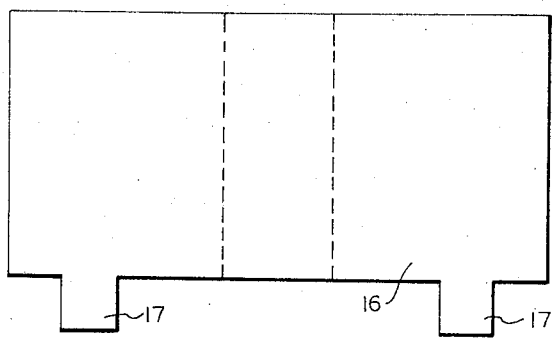


FIG.5

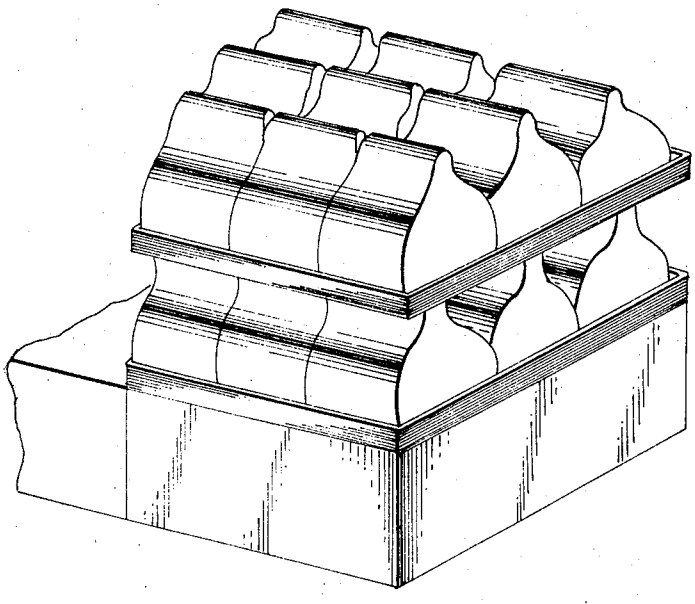

FIG.6

INVENTOR
PHILLIP J. MILLER

BY Wenderoth, Lind & Ponack
ATTORNEYS

United States Patent Office

3,425,537

Patented Feb. 4, 1969



3,425,537

# COMBINATION SHIPPING AND DISPLAY CARTON

Philip J. Miller, Anchorage, Ky., assignor to Independent Boxmakers, Inc., Louisville, Ky.

Filed Nov. 13, 1967, Ser. No. 682,035

U.S. Cl. 206—44 7 Claims

Int. Cl. B65d 5/50, 5/52

## ABSTRACT OF THE DISCLOSURE

A combination shipping and display carton comprising an outer carton having a bottom, side walls, end walls and a top, a tear tape around the side walls and the end walls near the bottom of the said walls, a lower support member on the bottom of the carton and having vertically extending panels extending upwardly into the carton, at least one upper tray within said carton and supported on said lower support member, whereby when said tear tape is removed, the upper portions of said side and end walls and the top of the outer carton can be removed as a unit, to change the carton into a display carton and an upper support member can be placed on said upper tray, and like cartons can be supported on the display carton.

This invention relates to a carton which can be converted to a display for objects or packages which have insufficient strength to support a stack of like objects or packages.

In the marketing of fragile or low strength objects, such as packages of food products such as cookies, or light bulbs, fruit and the like it is desirable to have a carton of corrugated cardboard or the like which can be converted to a display of the objects contained therein. There is no problem where the objects such as cans, are strong enough to support a stack of like objects, it only being necessary to provide for the removal of part of the carton. When the converted cartons are stacked, the strength of the objects in the lower part of the stack will support the weight of the cartons and objects in the upper part of the stack. However, where the articles are fragile, if the cartons were stacked, the weight of the cartons and articles in the upper part of the stack will crush or break the articles in the lower part of the stack.

It is an object of the present invention to provide a carton which will overcome the drawbacks of the prior art combination cartons and display devices.

It is a further object of the present invention to provide a combination shipping and display carton which will enable the shipping and display of fragile articles and products without danger of crushing the articles or products.

To achieve the objects of the preesnt invention, the present invention provides a carton which has around the lower portion of the side and end walls thereof a tear tape which when it is torn off separates the upper portions of the side and end walls from the lower portions thereof, leaving the lower portions of the side and end walls attaced to the bottom of the carton to form a tray. Within the carton is provided a further tray, and between the further tray and the bottom of the carton is provided a U-shaped support member which supports the further tray above the bottom of the carton, and between the further tray and the top of the carton is a further U-shaped support member. When the carton is packed with fragile articles, for



example bags of cookies, a layer of bags is placed on the bottom of the carton, a U-shaped support member is positioned among the layer of bags, and the further tray is placed on the support member over the layer of bags, the further tray resting on the support member rather than on the layer of bags. The further tray is then packed with a second layer of bags, and the further support member is positioned among the second layer of bags. After the closed carton has been shipped, and it is desired to make a display, the tear tape is removed, and the upper portions of the side and end walls and the top of the carton are lifted off the remaining tray as a single unit, thus exposing the lower layer of bags, the further tray, and the second layer of bags. Additional cartons can be prepared in a like manner and stacked up, the support members and trays carrying the weight of the bags and their contents.

The invention will now be described in greater detail with reference to the accompanying drawings, in which:

FIGURE 1 is a perspective view, partially cut away, of the combination shipping and display carton according to the invention;

FIGURE 2 is a side elevation view, partly in section, of a further tray forming part of the carton of FIGURE 1;

FIGURE 3 is a plan view, partly in section, of the tray of FIGURE 2;

FIGURE 4 is a developed view of the tray of FIGURES 2 and 3;

FIGURE 5 is a developed view of a support member; and

FIGURE 6 is a perspective view of a plurality of cartons according to the invention stacked in a display.

The carton according to the invention comprises an outer carton having the usual bottom **10**, side walls **11**, end walls **12** and top **13**. This outer carton is conventional in every respect except for the presence of a tear tape **14**, of a conventional type, around the side walls **11** and end walls **12** at a level slightly above the bottom **10**, which tear tape, when it is removed, separates the lower portions of the side walls **11** and end walls **12** from the upper portions. When the tear tape **14** has been thus removed, there remains a lower tray **15** formed of the lower portions of the side walls **11** and the lower portions of the end walls **12** and the bottom **10**. The upper portions of the side walls **11** and end walls **12** together with the top **13** form for a unit which can be lifted off the lower tray **15** as such, i.e., without it being necessary to open the top in any way.

Resting on the bottom **10** within the carton is a lower support member **16** having a plurality of vertically extending panels. While this support member has been shown as a U-shaped member, which is a convenient and economic form of such a member, it is of course possible to provide any other convenient shape which will, accommodate within middle portion of the support member the articles to be contained in the carton. As can be seen from FIGURE 4, the support member has two tabs **17** projecting from one of the horizontal edges thereof. The lower supporting member **16** is positioned with the opposite edge, i.e., the edge having no projections, against the bottom **10** with the projections pointing upwardly. It will be clear that the articles to be packed and shipped and then displayed will be packed between the panels making up the U-shaped support member **16**. In the embodiment shown, as seen in FIGURE 6, there is one bag width between the spaced parallel panels

of the U-shaped support member and one bag width between the outside of the panels and the end of the tray.

Supported on the edge of the U-shaped support member **16** which has the projections **17** extending therefrom is a further or upper tray **18** which in the embodiment shown has the same outside dimensions as the inside dimensions of the carton. The bottom **19** of the tray **18** has a pair of slots **20** therein through which the projections **17** of the lower support member **16** project to hold the lower support member **16** in position within the carton. Resting on the bottom **19** of the upper tray **18** is an upper support member **21** which preferably has the same configuration as does the lower support member **16**. The projections on the edge of the upper support member **21** extend downwardly through the slots **20** in the bottom **19** of the upper tray **18** in order to hold the upper support member **21** in position. The upper edge of the upper support member **21** extends to the top **13** of the carton. Articles to be packed and shipped and then displayed will be packed between the panels making up the upper U-shaped support member **21** in the same manner as in the bottom of the carton. All the parts, i.e., the outer carton, the support members and the support tray are of corrugated cardboard or the like.

It will be appreciated that during the packing of the carton, the top panel **13** is open in the same manner as in a conventional carton, and when packing is finished, the top of the carton is closed and sealed in the conventional manner.

The construction of the upper tray **18** can be any appropriate construction which will have sufficient strength to support the articles packed therein. However, it is preferred to form the upper tray as shown in FIGURES 2–4. As seen in FIGURE 4, the blank from which the upper tray **18** is formed has a bottom panel **24** which has the two slots **20** therein, and two side wall panels **25** which are hinged to the side edges of the bottom panel along crease lines **26**. Extending from each end of each side panel **25** is an end flap **27** which is substantially the same length as the width of the bottom panel **24**. End wall panels **28** are hinged to the end edges of the bottom panel along crease lines **29**, and each is divided by crease lines into three portions, an inner portion **30**, a top portion **31**, and an outer portion **32**. Projecting from the outer edge of the outer portion **32** are tabs **33**. Tab receiving apertures **34** are formed in the bottom panel **24** adjacent the crease line **29**.

To form the upper tray from the blank **28** the side wall panels are folded up along the crease lines **26** and the end flaps **27** are folded inwardly so that they lie along the end edges of the bottom panel **26**. The end wall panels **28** are then folded up along the crease lines **29** so that the inner portions **30** lie against the inwardly folded end flaps **27**. The top portions **31** are then folded down against the top edges of the end flaps **27**, and the outer portions **32** are folded down so that they lie against the inner surfaces of the end flaps **27**, and the tabs **33** are inserted through the tab receiving apertures **34**, thus securing the end wall flaps in position and securing the side wall flaps in position by virtue of the holding of the end flaps **27** within the folded end wall flaps.

As pointed out above, in order to open the carton, after it has reached its destination, it is only necessary to remove the tear tape **14**, after which the upper portions of the side walls and end walls and the top of the carton can be lifted off the lower tray **15** as a unit, leaving the lower tray with the articles packed therein and the upper tray **18** with articles therein and supported on the U-shaped support member **16** in the lower tray. The upper tray **18** will also have the U-shaped support member **21** therein, but with only a single carton, this will serve no further purpose than to maintain some of the articles separate from each other. As shown in FIGURE 6, a plurality of such opened cartons can be stacked one on the other, in which case the upper support member **21** will carry the load of the opened carton stacked thereon, while the lower support member **16** will carry the weight of the upper tray and its contents and the weight of cartons stacked above the upper tray. Thus, the load carrying members are the support members **16** and **21**, which by virtue of their vertical alignment form a column-like member extending down through the stack of opened cartons.

It is desirable that the upper support member **21** be inserted into the carton before closing it, in order to provide support for the cover **13** during shipping and storage, and to support the weight of the articles in the bottom should the carton accidentally be turned upside down. However, it is not essential that the upper support member **21** be in place, since the side and end walls of the carton will normally provide sufficient support to carry the weight of cartons stacked above a given carton during shipping and storage. However, a folded or unfolded upper support **21** should be inserted into the box, simply by laying it on top of the articles in the upper tray, before closing the carton.

It will be seen that there has been provided a combination shipping and display carton which provides means for packing and supporting layers of articles which are easily crushed in a carton, and which can be opened in such a way that the opened cartons can be stacked in an attractive display of the articles.

While the present invention has been disclosed as having only one upper tray, it will be appreciated that there can be any number of such trays, each having a support member thereon supporting the weight of the tray and its contents next above. Likewise, other forms of an upper tray and a support member can be used, it being only necessary that they have the strength to carry the weight of the articles to be packed therein and to support such articles and like cartons stacked up on them when the cartons are opened into display cartons.

What is claimed is:

**1.** A combination shipping and display carton comprising an outer carton having a bottom, side walls, end walls, and a top, a tear tape around the side walls and the end walls near the bottom of the said walls, a lower support member on the bottom of the carton and having vertically extending panels extending upwardly into the carton, at least one upper tray within said carton and supported on said lower support member, whereby when said tear tape is removed, the upper portions of said side and end walls and the top of the outer carton can be removed as a unit to change the carton into a display carton and an upper support member can be placed on said upper tray, and like cartons can be supported on the display carton.

**2.** A combination shipping and display carton as claimed in claim **1** in which the lower support member is a U-shaped member.

**3.** A combination shipping and display carton as claimed in claim **1** in which said lower support member has projections on the upper edge thereof, and said upper tray has apertures in the bottom thereof through which said projections extend to fix said lower support member in position in said carton.

**4.** A combination shipping and display carton as claimed in claim **1** further comprising an upper support member on said upper tray and having vertically extending panels extending upwardly in the carton.

**5.** A combination shipping and display carton as claimed in claim **4** in which the said upper support member has projections on the lower edge thereof, and said upper tray has apertures in the bottom thereof through which said projections extend to fix said upper support member in position in said carton.

**6.** A combination shipping and display carton as claimed in claim **4** in which the upper support member is a U-shaped member.

7. A combination shipping and display carton as claimed in claim 1 in which said at least one upper tray has a bottom panel, side wall panels extending upwardly from the side edges of said bottom panel, end tabs extending across the end edges of said bottom panel from the ends of said side wall panels, end wall panels each having an inner portion extending upwardly from the end edge of the bottom panel, a top portion extending over the top edges of said end tabs, and an outer portion extending downwardly over the inner faces of said end tabs, the free ends of said end wall panels having tabs thereon extending through the bottom panel for holding the end wall panels in the folded position.



**References Cited**

UNITED STATES PATENTS

| | | | |
|---|---|---|---|
| 2,911,124 | 11/1959 | Seidman | 206—44 |
| 3,043,490 | 7/1962 | Burnett | 206—44 |

JAMES B. MARBERT, *Primary Examiner.*