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Hanson

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[54] **COMPARTMENTED DISPLAY CONTAINER**

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[52] **U.S. Cl.** **229/27,** 206/45.31

[51] **Int. Cl.** **B65d 5/48**

[58] **Field of Search** ..... 229/27, 29 B, 29 C, 229/45.31

[56] **References Cited**

UNITED STATES PATENTS

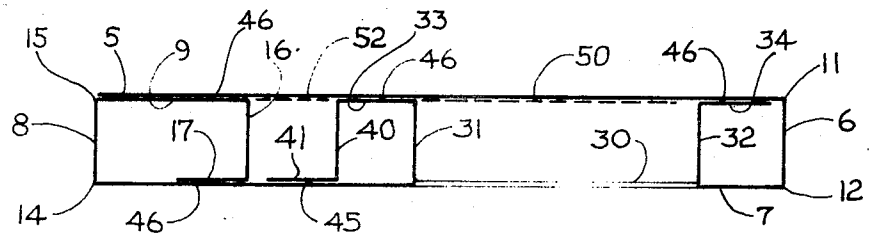
2,913,101	11/1959	Daily	229/27
3,680,687	8/1972	D'Alessio	229/27
3,288,348	11/1966	Brackett	229/27
348,924	9/1886	Munson	229/27

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[57] **ABSTRACT**

A one-piece paperboard compartmented display container is made from a T-shaped blank. The post or vertical part of the T is folded inside the container and has enough compartment-forming panels connected thereto as to divide the container into a number of compartments.

9 Claims, 5 Drawing Figures



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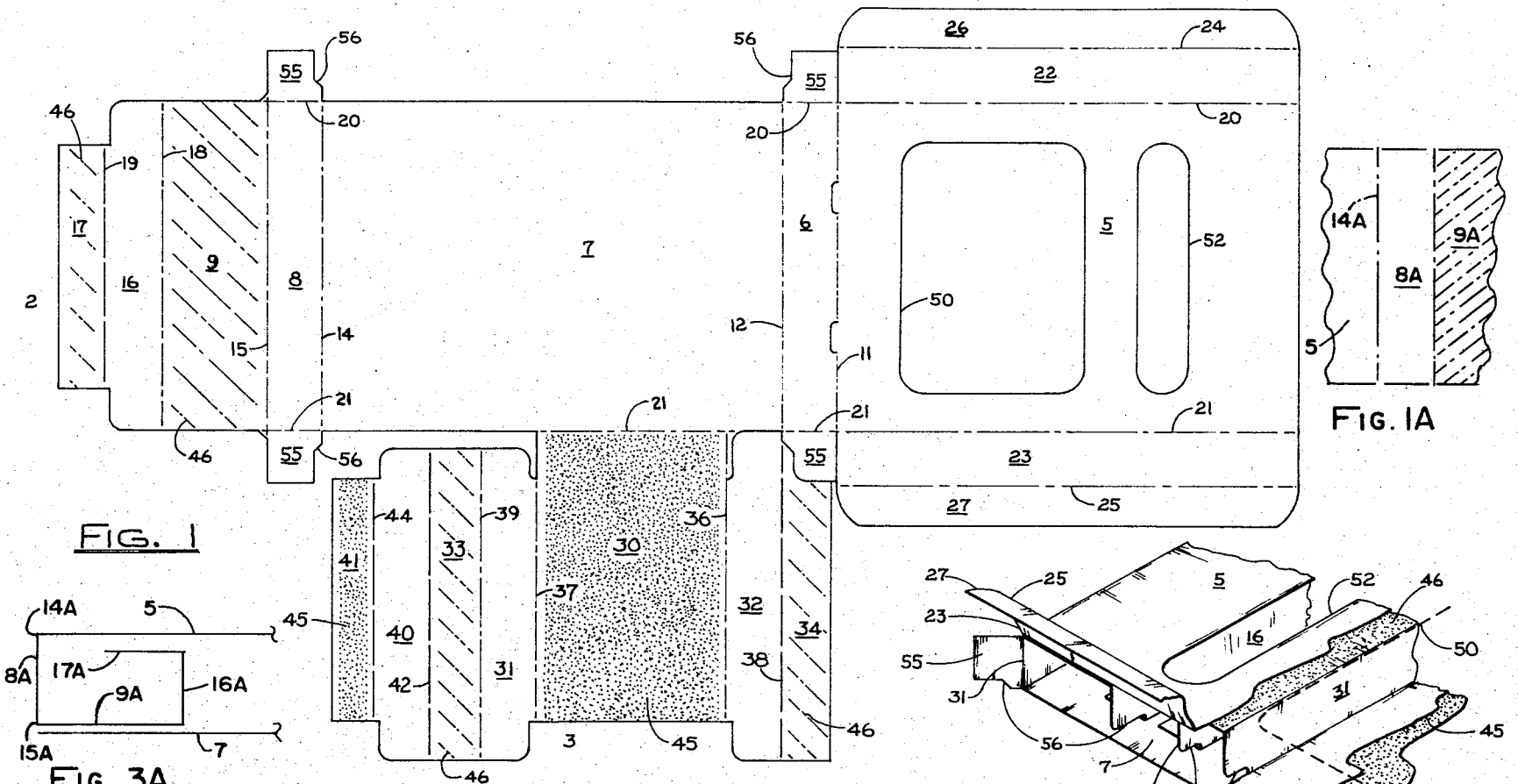


FIG. 1

FIG. 1A

FIG. 3A

FIG. 2

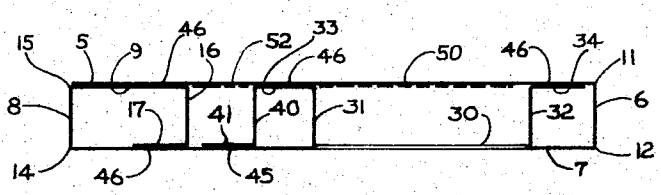


FIG. 3

COMPARTMENTED DISPLAY CONTAINER

SUMMARY AND BACKGROUND OF INVENTION

This invention relates to a compartmented display container. One aspect of the invention relates to such a container made of one piece of foldable material. Another aspect of the invention relates to a container having at least one but preferably several windows which look in on individual compartments, the container being made out of one piece of paperboard or similar material in connection with which the invention without being limited thereto will be described.

Compartmented containers have in the past generally been made from several separate pieces of material which are assembled to form the complete but compartmented container. Quite often one piece of material will form the container per se while additional pieces of material will form one or more of the compartments. This common type of design, therefore, requires separate operations of setting up the container, assembling the compartment materials, and then assembling the compartment to the container.

The present invention has for an object providing a one piece carton which can be so made as to require only one operation to form a complete compartmented container. Another object of the invention is to provide a container design which is made from only one piece of foldable material such as paperboard. An object of the invention is to provide a container the printing for which can all be done on one side of the blank.

According to the present invention these objects are obtained by a container made from a T-shaped piece of foldable material such as paperboard. The crossbar of the T is divided into a series of panels which when folded together form the outer walls of the container. The post or vertical member of the T is also divided into panels and can be folded so that it lies flat on the crossbar and thereby located within the container. The post portion has certain glue panels which can be secured by suitable adhesives to certain panels in the crossbar portion. This construction permits making a container which can be folded flat in the usual fashion for purposes of shipment to a user who then erects the container, places objects within it, closes it, and ships the filled erected container.

Other objects, advantages and features will become apparent from reading the following specification and claims in conjunction with the drawings wherein:

FIG. 1 is a plan view as seen from the inside of the container of a blank from which the container can be erected; FIG. 1A is a modification of part of FIG. 1;

FIG. 2 is an isometric view of a partially cutaway erected container made from the blank of FIG. 1;

FIG. 3 schematically shows an assembled container in side view FIG. 3A is a modification of the FIG. 3 embodiment incorporating the FIG. 1A modifications.

The blank 1 of FIG. 1 can be so folded as to form the erected container of the other figures. The blank is cut preferably from a piece of paperboard. It needs only be printed on one side but yet can appear when the box is erected as if both the inside and outside of the box has been printed.

The blank 1 is a substantially T-shaped piece of foldable material wherein the crossbar 2 of the T forms the outside of the container and the post or vertical member 3 of the T blank forms most of the compartments. When the container is erected as in FIGS. 2 and 3, the post is folded back upon panels of the cross-bar and adhered to them by suitable adhesives.

The T crossbar 2 comprises a front panel 5, end panel 6, rear panel 7, end panel 8 and crossbar front glue panel 9 arranged seriately, in line and connected by suitable vertical fold lines 11, 12, 14 and 15. If desired, crossbar compartment and glue panels 16, 17 respectively may be attached by suitable hinge or fold lines 18, 19 to the crossbar front glue panel 9. It will be observed that one end panel 6 via fold lines 11, 12 connects one end of the front panel 5 to an end of the rear panel 7 and that this end panel has extending from each side thereof a closure tab. The other end panel also has closure tabs of similar shape extending from ends thereof. The closure tabs are separated from the end panels by lateral score lines or folding lines.

Lateral fold lines 20, 21 run along the opposite sides of the front panel to connect thereto the side closure lids 22, 23. Each side closure lid is connected by a lid fold line 24, 25 to a side closure flap 26, 27.

The post portion 3 comprises a main support panel 30 which is hingedly connected to the rear panel by a lateral fold line 21. Extending from each side of the main support panel are first and second compartment panels 31, 32 and first and second internal glue panels 33, 34. The compartment panels, as illustrated, lie between the respective glue panels and the main support panel and are intended to comprise internal vertical means to separate the inside of the container into different compartments as best seen in FIGS. 2 and 3. Vertically extending fold lines 36, 37, 38 and 39 connect the glue, compartment, and main support panels.

In the present embodiment, a third compartment panel 40 and rear inside glue panel 41 are also provided in order that additional compartmentation be achieved. They are hingedly connected to the first glue panel 33 by fold line 42 and to each other by fold line 44. The rear glue panel 41 and main support panel 30 are adhered by glue 45 to the rear panel as illustrated in FIGS. 2 and 3 whereas the internal glue panels 33, 34 and 17 are adhered by glue 46 to the inside of the front panel. The glue 45, 46 can be any conventional adhesive. Glue 45 is ordinarily applied to the unprinted side of the blank and glue 46 is applied to the outside or printed side of the blank.

It will be observed that the main support panel 30 is so located on the rear panel 7 that it comes into full register with the large window 50 cut in the front panel. In this way printed material or colors on one side of the main support panel can be readily seen in the window and at the same time the advantage of having to print on only one side is realized. Normally, of course, a window in a container would look glue on the unfinished or unprinted side of the container material unless said material way dyed or printed on both sides.

In the illustrated embodiment a second small window is also cut in the front panel and looks in on a compartment formed by the third compartment panel 40 and the rear inside glud panel 41.

Except for glue 45 this construction only requires gluing on one side of the container. Almost all the gluing and printing could be done in one operation if desired.

Closure of the container and maintenance of an erect position is facilitated by four tabs 55 all of which are formed by extensions of lateral scores 20 and 21. Suitable cut lines separate the tabs from adjacent members.

The tabs are also shaped (FIG. 2) to let side closure flaps **26, 27** easily slide under by "cutouts" **56.** Similar cutouts **56** shape the compartment panel ends for the same reason.

As shown in FIG. 3 the container can be erected to a rectangular position from a flattened blank where the glue **45, 46** is already adhered and fold lines **15, 12, 44** and **38** are (when in flat blank form) flat or folded so that the adjacent panels lie on each side of each of such lines and scores **14, 11, 37, 39** and others are folded acutely to 0° to put their adjacent panels on (when flat blank) one side of the fold. Upon erection the 180° folds reduce or close partly to 90° and the 0° folds open up to 90° resulting in the arrangement illustrated in FIG. **3.**

I claim:

1. A compartmented display container made from one piece of foldable material comprising a blank of a substantially T-shaped piece of foldable material, the panels that are within and compose the crossbar of the T forming the outside of the container and the panels that are within and compose the post of the T forming the compartments and being folded within the container structure formed by the crossbar; a front panel, rear panel, and an end panel hingedly connected between said front and rear panels, means including another end panel for connecting between said front panel and said rear panel, and a plurality of substantially vertical fold lines each of which is between each two of said panels and means and hingedly connects the same, all of which panels and lines are arranged seriately and alternately in one line within and constituting said cross-bar; and within said post — a main support panel, an internal glue panel, and a compartment panel which is substantially the same depth as said end panels hingedly connected between one end of said main support panel and internal glue panel by vertical fold lines, the said main support panel being hingedly connected to said rear panel by a lateral score line and reversely folded along said lateral score line into face to face contact with said rear panel, and said internal glue panel being connected to the inside of said front panel.

2. A container according to claim **1** wherein said front panel has a window cut in it and said main support panel is, when the container is erected, in register with said window and folded against said rear panel.

3. A container according to claim **1** wherein there is printing on only one side of said blank.

4. A container erected from the blank of claim **1** and having said internal glue panel secured to the other one of said front and rear panels and the first-said glue panel is secured to one of the first-said end panel and the front and rear panels.

5. A container according to claim **1** further comprising a second internal glue panel and a second compartment panel hingedly connected between the other end of said main support panel and said second internal glue panel by vertical fold lines.

6. A container erected from the blank of claim **5** and having both said internal glue panels secured to said front panel.

7. A container according to claim **5** wherein said front panel has a window cut in it and said main support panel is in register with said window, and said internal glue panels are respectively secured on the inside of the container to said front panel above and below said window whereby the carton is erected the window looks in upon said support panel.

8. A container according to claim **7** having printing on one side only thereof, namely on that side forming the outside of the container.

9. A container according to claim **7** wherein said another end panel is connected to said rear panel, both said end panels have extending from each end thereof closure tabs, and 1st and 2nd side closure lids are hingedly secured to opposite sides of said front panel by lateral fold lines.

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