United States Patent [19]

Giebel et al.

[11] **3,896,932**

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[54] **FENDER CARTON**

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[52] **U.S. Cl.** ..... **206/335;** 206/448; 206/491; 206/493; 229/14 C

[51] **Int. Cl.**[2] **B65D 85/68;** B65D 81/02; B65D 85/30

[58] **Field of Search** ..... 206/448, 335, 491, 493, 206/451, 303, 45.19, 45.31; 229/14 C, 27, 229/28 BC, 28 R, 15; 248/174

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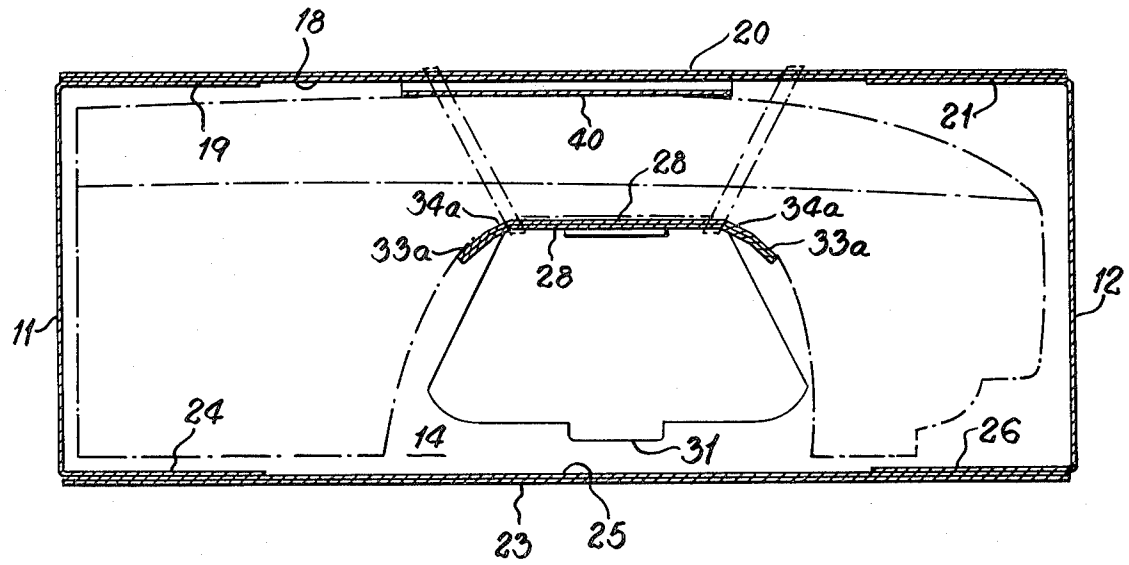
[57] **ABSTRACT**

A carton for packing and shipping automobile fenders which carton is provided with an internal arcuate saddle of double thickness formed from flaps cut out of opposite side panels of the carton and superimposed to support the fender within the carton and the top closure flaps of the carton may, if desired, have cut out rectangular sections which are hinged along longitudinal score lines for reverse folding to provide protection and cushioning action against the top of the fender which is placed in the carton.

2 Claims, 6 Drawing Figures



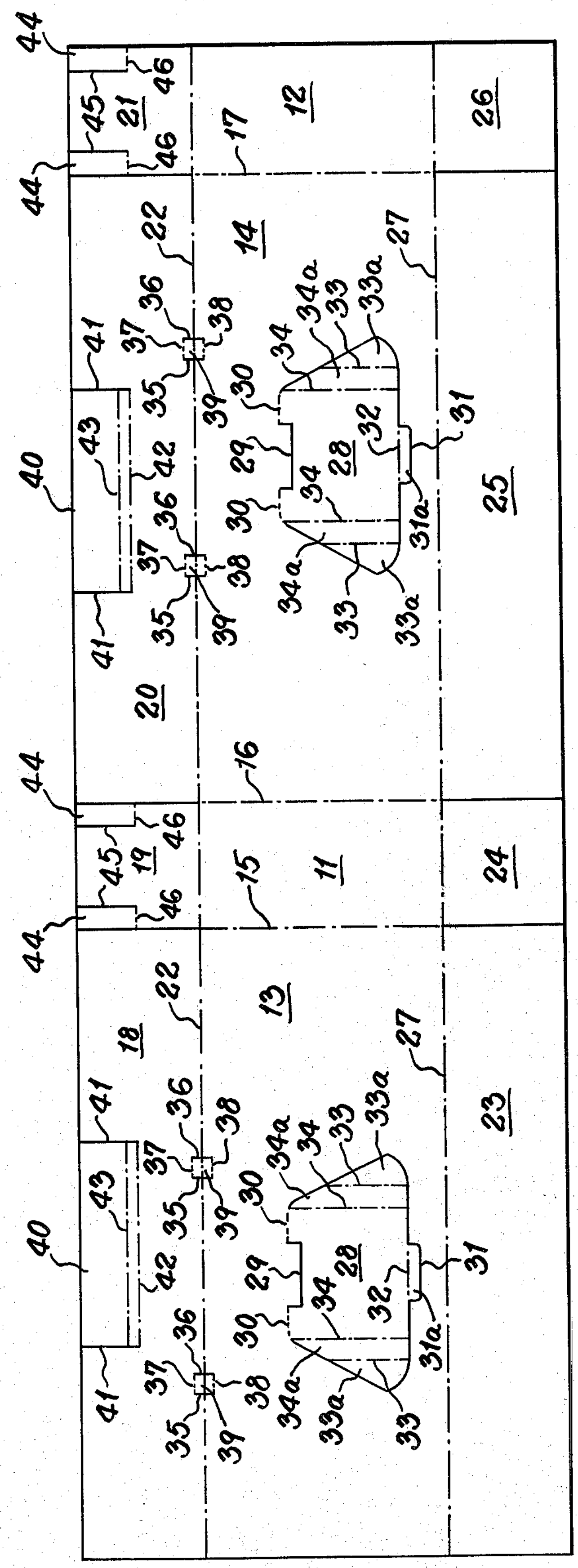


Fig. 1.

Fig. 2.

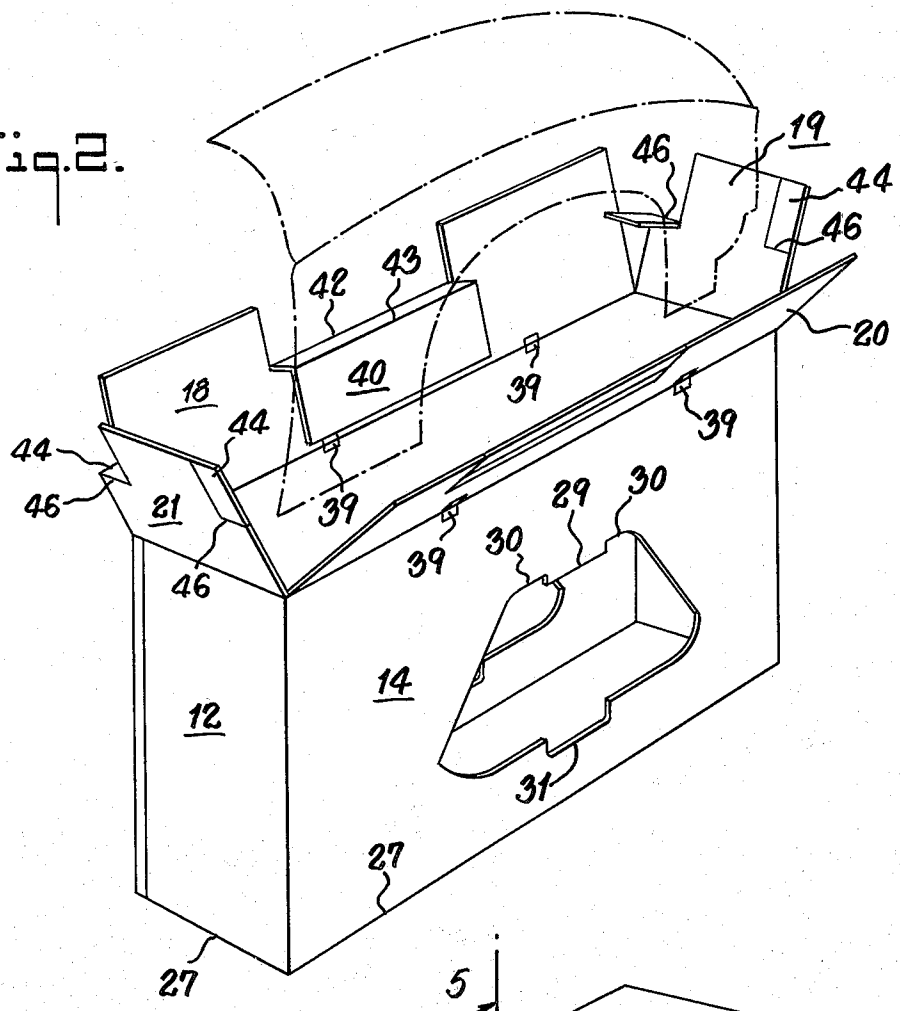

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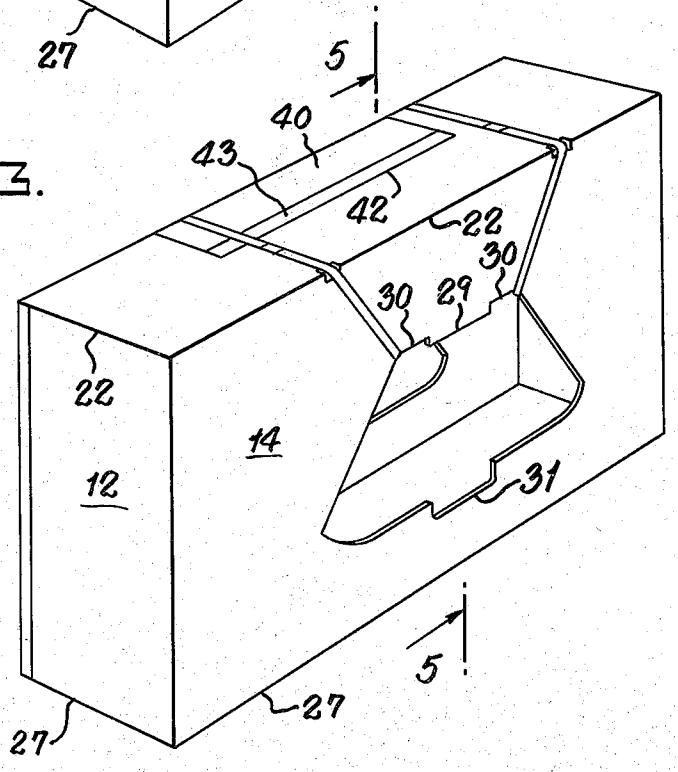
Fig. 3.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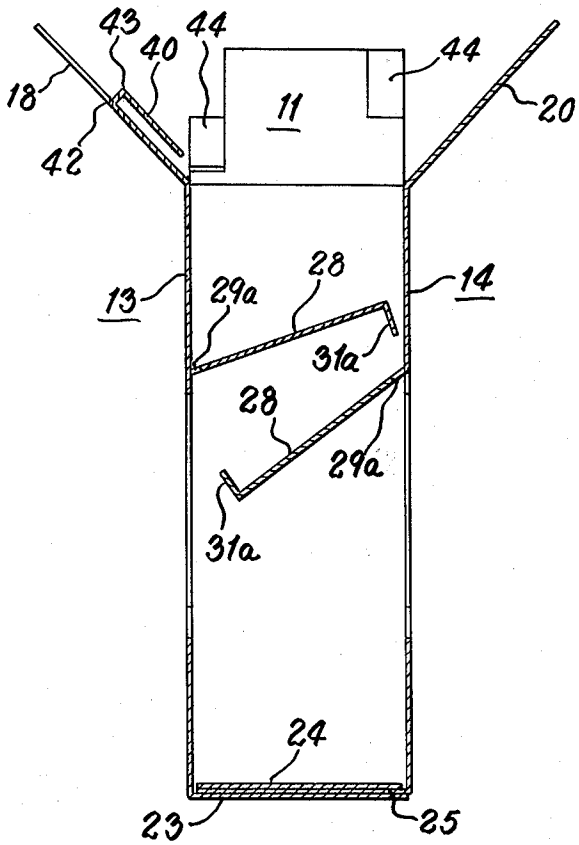


Fig. 4.

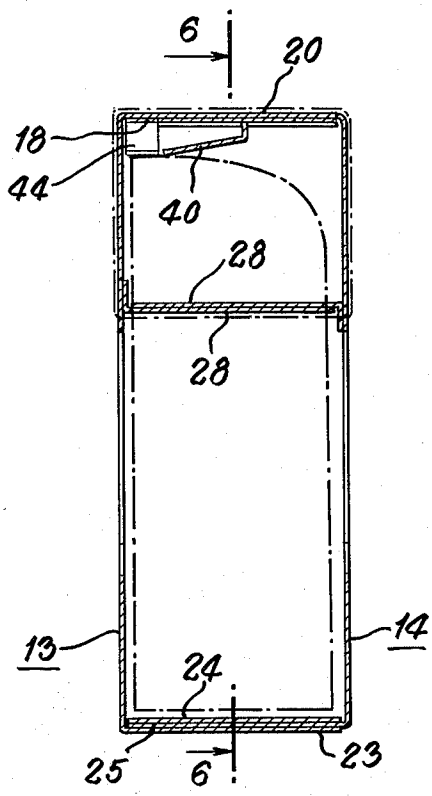
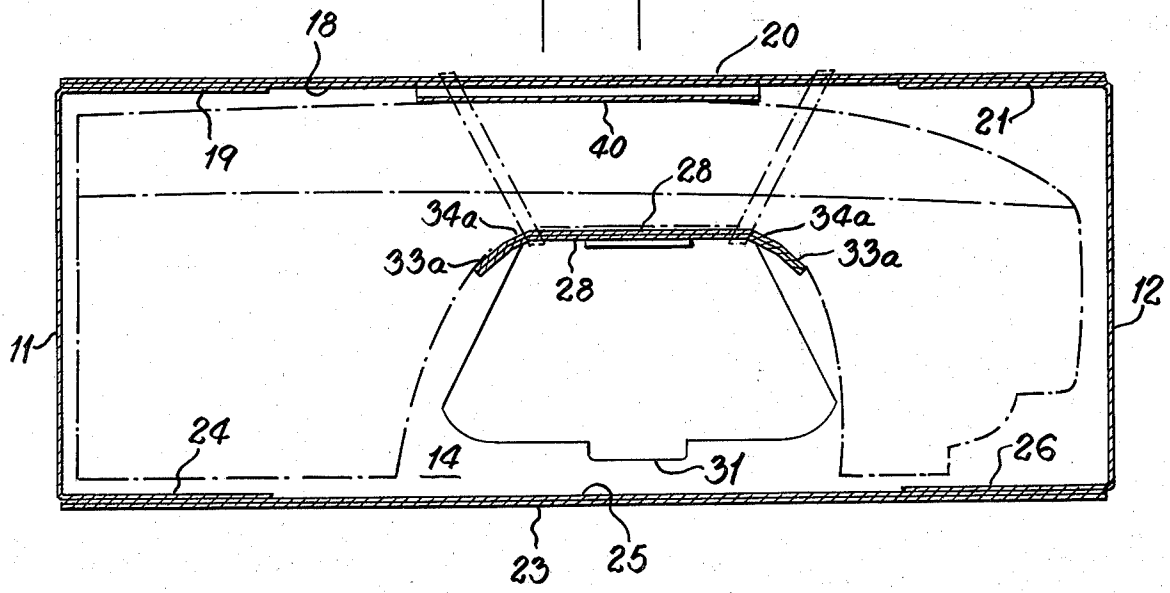


Fig. 5.

Fig. 6.



FENDER CARTON

BACKGROUND OF THE INVENTION

It has been the practice to wrap fenders with heavy paper or board for shipment. Such wrapping fails to provide adequate protection for the fenders with the result that the percentage of damage is high. Furthermore, the shapes of the wrapped fenders prevent stacking for shipping and storage. The carton of the present invention overcomes such disadvantages and eliminates most of the damage in shipment and storage.

SUMMARY OF THE INVENTION

It is an object of the invention to provide a carton with an internal saddle formed from flaps cut out of the side panels of the carton to support a fender and prevent it from bouncing around in the carton.

It is a further object to provide a blank for the fender carton of the present invention which can be shipped flat to the customer, can be stored in flat condition until ready for use, and can then be set up easily for use without tools or other involved labor operations.

It is a further object to provide a carton which retains a fender in a fixed position in the carton and protects such fender during shipment and storage against scratching, denting or other damage.

It is a further object to provide a blank for the fender carton which can be manufactured economically and on conventional equipment.

It is a further object to provide a carton which permits a fender to be easily inserted into the carton and can be closed in a simple manner.

BRIEF DESCRIPTION OF THE DRAWINGS

Other objects and advantages will become apparent from the following description which is to be taken in conjunction with the accompanying drawings, in which:

FIG. 1 is a plan view of the blank for forming the carton of the present invention;

FIG. 2 is a perspective view of the blank set up into an open carton showing the fender being inserted into the carton and the shape of the cut out in one side panel;

FIG. 3 is a view similar to FIG. 2 showing the closed carton with the fender packaged therein and strapping through the cut outs, securing the fender and closure flaps;

FIG. 4 is a sectional view of the carton showing how the saddle flaps cut out of each side panel are raised in forming the saddle;

FIG. 5 is a sectional view along the line 5—5 of FIG. 3 showing the position of the fender with relation to the saddle; and

FIG. 6 is a sectional view along the line 6—6 of FIG. 5.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings there is shown in FIG. 1 a flat substantially rectangular sheet of sheet material, such as corrugated board, fibreboard or the like of a weight suitable for the particular fender or like product to be packaged. The blank **10** consists of end panels **11** and **12** and side panels **13** and **14**, attached to each other along vertical score lines **15, 16** and **17**; top flaps **18, 19, 20** and **21** attached to the end and side panels

along a longitudinal score line **22**; and bottom flaps **23**, 24, 25 and **26**, attached to the end and side panels along a longitudinal score line **27**. The outer edge of end panel **12** can be secured to the outer edge of said panel **13** by a tape or other means to form the blank into a flat tube for shipment to customers. If desirable, a narrow flap can be attached to one of such edges for stitching such edges together to form the flat tube.

In some cases, because of equipment limitations it may be desirable to make such blank in two pieces, each of which would have a side and end panel, a stitch flap and top and bottom flaps. Such two right and left pieces can be joined together by stitching or other means to form the same flat tube as described above for the one piece blank. The hereinafter described construction will be the same for a one piece or two piece blank.

Each side panel **13** and **14** has a central cut out **28** adapted to form a saddle to support the fender to be packaged. Such cut out **28** is shown as flared out from top to bottom but can be of generally rectangular shape depending to some extent on the shape of the fender being packaged. The central upper portion of the cut out **28** has a U-shaped cut **29** to form a locking slot **29***a*. On each side of such U-shaped cut **29** the cut out **28** is scored but not cut to provide a hinge line **30** for the cut out **28.** Except for such scored hinge line **30,** the cut out **28** is cut all around. The central lower portion of the cut out **28** likewise has a U-shaped cut **31** with a score line **32** to form a locking tab **31***a*. The ends of the cut out **28** are provided with score lines **33** and **34** to form panels **33***a* and **34***a*. The purposes of the locking slot, locking tab and score lines **33** and **34** will be described hereinafter.

Along the longitudinal score line **22** spaced from the center of each side panel **13** and **14** are two pairs of parallel cuts **35** and **36** connected at each end by parallel score lines **37** and **38** to form rectangles **39** which are adapted to be depressed when the blank is set up.

A rectangular section **40** is formed in the free longitudinal edge of each panel top flap **18** and **20** by parallel cuts **41** along the ends of such section **40.** The bottom line of such rectangular section **40,** connecting the bottom ends of such cuts **41** is scored to form a hinge line **42.** Spaced a short distance upward from such hinge line **42** and parallel thereto is another score line **43,** which score lines will permit the rectangular section **40** to be reverse folded **180°.**

The top end flaps **19** and **21** are provided with rectangular cut out sections **44** formed in each upper corner of the flap by cuts **45** parallel to the sides of the flap. Such sections **44** are connected to the flaps along hinge lines **46.**

In setting up the carton for use the blank is formed into a rectangular tube and the bottom flaps **23, 24, 25** and **26** are folded over and secured to form the bottom. The cut outs **28** are folded upwardly from the side panels **13** and **14** (FIG. 4) and the locking tab **31***a* of each cut out is inserted into the locking slot **29***a* of the opposite cut out to form a saddle (FIG. 5). The carton is now ready to receive the fender, as shown in FIG. 2, with the fender resting on the saddle. The ends of the saddle are folded along the score lines **33***a* and **34***a* so that the saddle is formed into a generally arcuate shape conforming to the shape of the fender.

The end flaps **19** and **21** are folded into place. The fenders usually have one edge with brackets by which

they are affixed to the body of the car. The rectangular cut out sections **44** are folded normal to the end flaps along the side of the carton where such brackets are located, so that such sections serve as a spacer for the fender along the adjacent side panel. If necessary all four sections **44** can be folded normal to the end flaps to provide spacers for the fender.

The side flaps are folded into place over the end flaps to complete the top closure. The rectangular section **40** of one of the side panels is reverse folded **180°** along the score lines **42** and **43**, so that when that side panel is folded into place the section **40** will provide a flat surface along the top of the fender. This further serves to hold the fender in place with a cushioning action and prevents scratching the upper painted surface of the fender.

To hold the top closure flaps in closed position and further secure the fender in the carton steel strapping is run through the cut outs in each side panel under the saddle and over the side panels. To permit the strapping to be spaced apart and prevent it from slipping the rectangles **39** in the edges of the side panels are depressed to receive the strapping and hold it in place.

Although the carton of the present invention is particularly suited for automobile fenders, it will be understood that the term "fender" used herein includes fenders for other vehicles as well as other objects of similar shape and contour which require support and protection when encased within a carton for shipment and storage.

It will be further understood that the top and bottom closure flaps may be omitted from the blank of the present invention, in which case the tube embodying the side and end panels and cut outs can be closed on the ends with suitable caps or other closures.

The completed package holds and protects the fender against damage and permits stacking such packages. Thus among others, the several aforenoted objects and advantages are most effectively attained. Although a somewhat preferred embodiment of the invention has been disclosed and described in detail herein, it should be understood that this invention is in no sense limited thereby and its scope is determined by that of the appended claims.

Having thus described the invention, what is claimed is:

1. A carton for packaging a fender comprising:

a bottom;

side and end panels secured to the bottom;

a cut out in each side panel which is hinged along a score line to said side panel and folded normal to said side panel;

said cut outs being superimposed on each other and extending to the opposite side panel to form a saddle of double thickness;

said saddle being scored at the ends to form a saddle of arcuate form and being locked in position for supporting the fender; and,

top closure means for closing the top of the carton.

2. A blank of generally rectangular shape adapted for folding into a tube for packaging a fender comprising:

spaced vertical score lines to define opposite side and end panels;

a cut out in each side panel which is scored at the ends and is hinged along a score line generally parallel to the top edge of the blank;

said cut out being of a height equal to the width of an end panel whereby the said cut will extend to the opposite side panel when the blank is set up;

the said cut outs being positioned opposite each other whereby the cutouts can be superimposed on each other when the blank is set up and the cutouts are folded along the hinged score lines normal to the side panels and the end score lines to form an arcuate saddle of double thickness to support the fender;

one of the cutouts being provided with a slot along the hinged score line and the opposite cut out includes a tab on the edge of the cut out opposite the hinged score line, the said tab and slot being of mating size, whereby the tab can be inserted into the slot to lock the cut outs together when in superimposed relation; and,

top closure flaps which are hinged to the tops of the defined side and end panels.

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