United States Patent

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[54] **SHIPPING AND DELIVERY SHELVED CONTAINERS FOR FOOD**
3 Claims, 13 Drawing Figs.

[52] **U.S. Cl.** **312/259,** 312/234, 312/293
[51] **Int. Cl.** **A47b 43/02**
[50] **Field of Search** 211/49, 55, 135; 312/42, 234.4, 234.5, 261, 260, 259, 293; 229/27, 28, 15

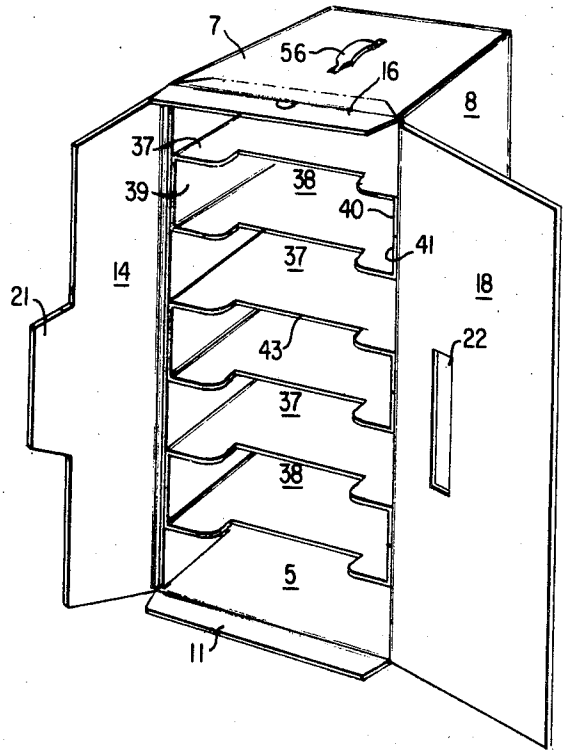
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Attorney—Abraham A. Saffitz

ABSTRACT: A container is erected from a prescored blank to form a carton having a top, sides, a bottom and closure panels for the front and rear thereof. A removable separable shelving assembly is formed by securing a shelf or shelves to side rails. The shelving assembly is inserted as a unit into the erected carton whereby a shelved container is formed. The top of the container is provided with handle means, and the front and rear closure panels are provided with locking tab means, whereby a closed, shelved container is provided for shipping, storage and delivery services.



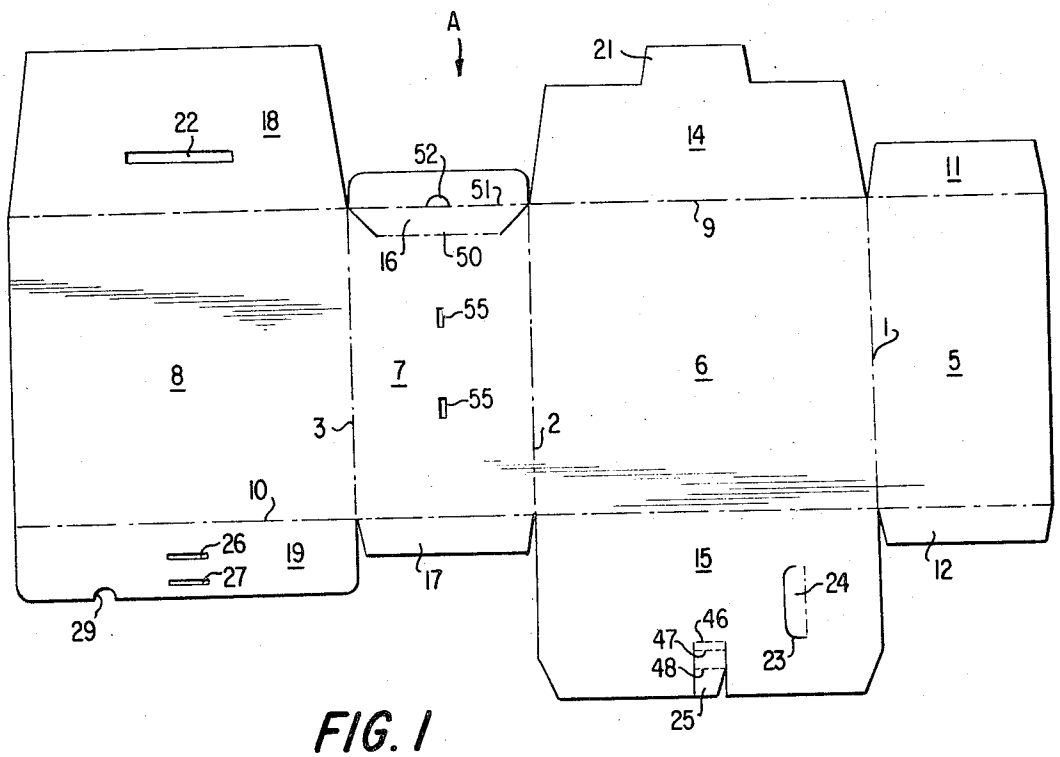


FIG. 1

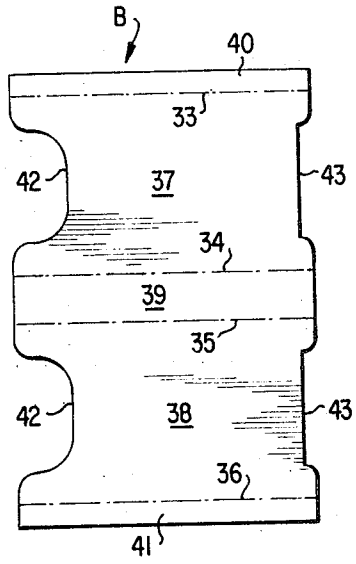


FIG. 3

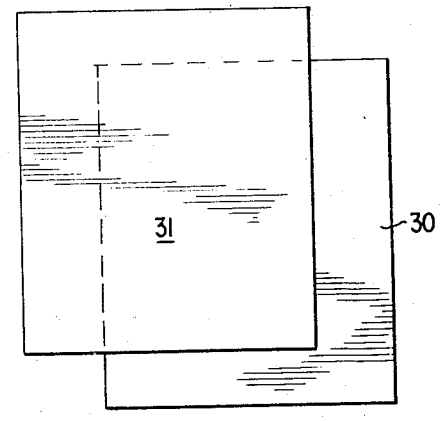
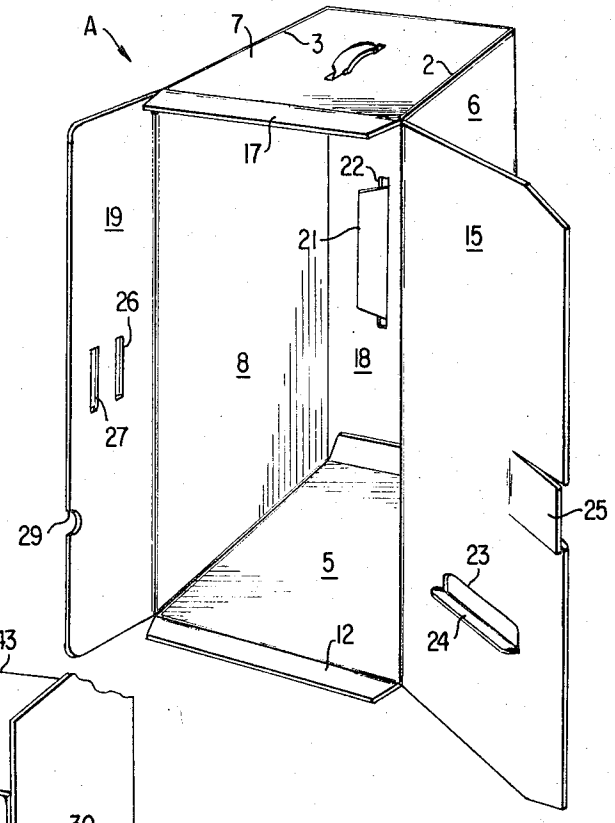


FIG. 2

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FIG. 5



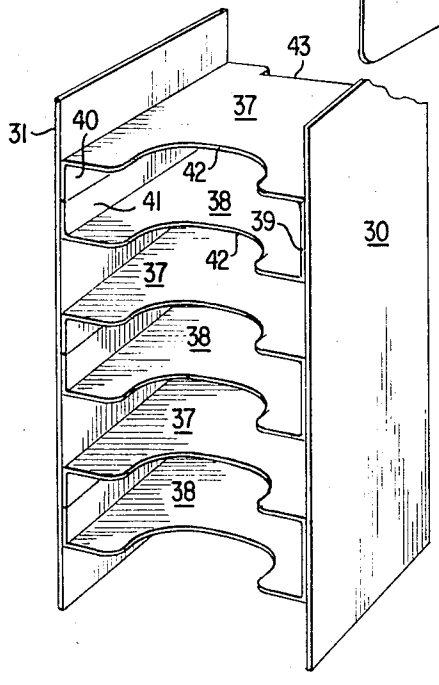


FIG. 4

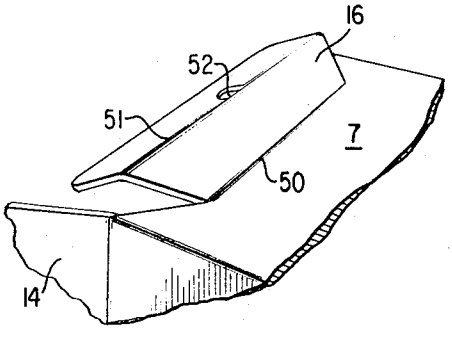
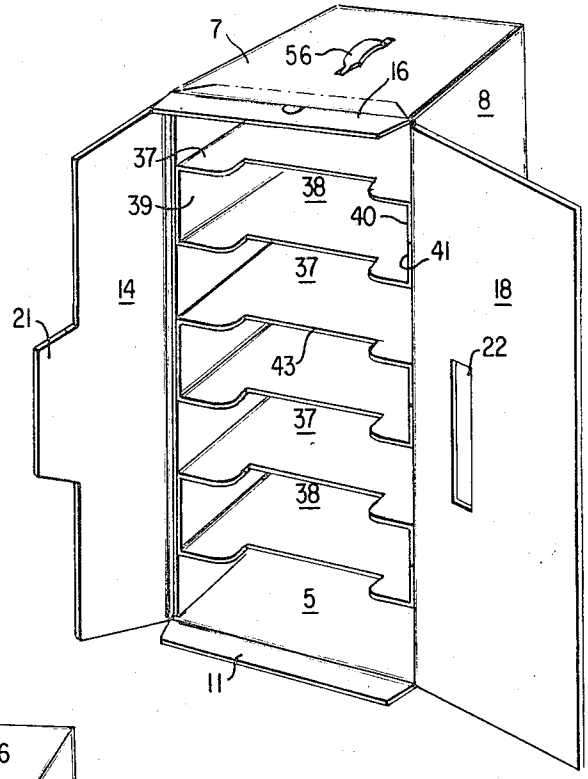


FIG. 9

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FIG. 7



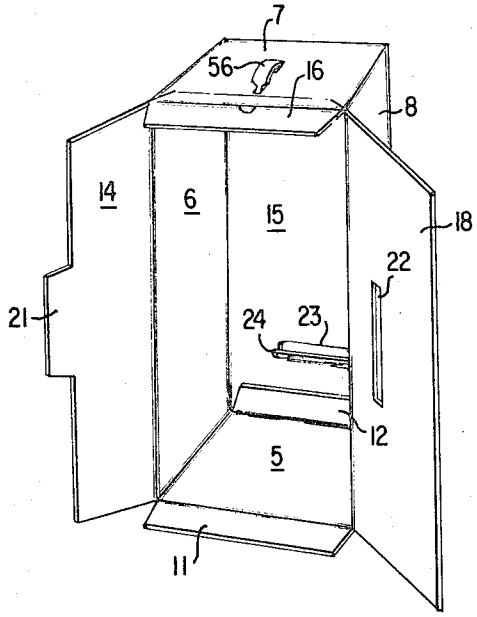


FIG. 6

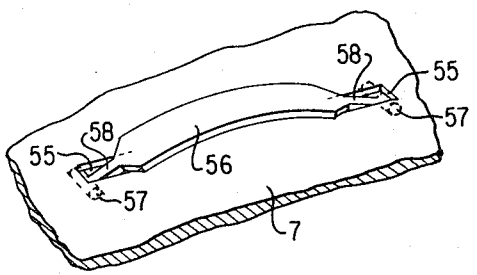


FIG. 8

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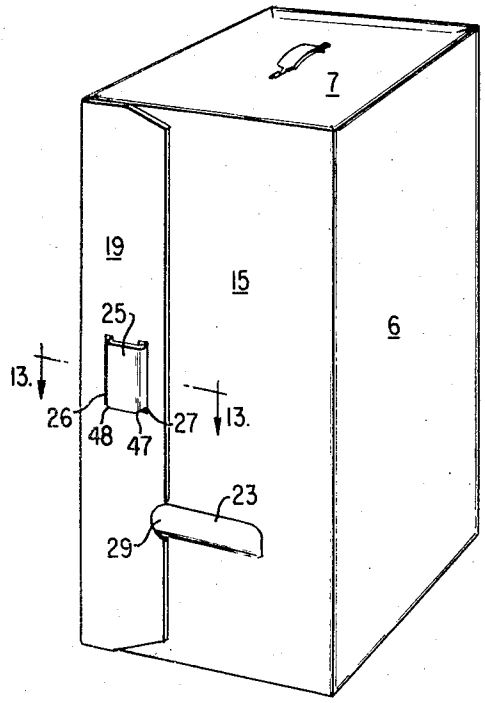


FIG. 10

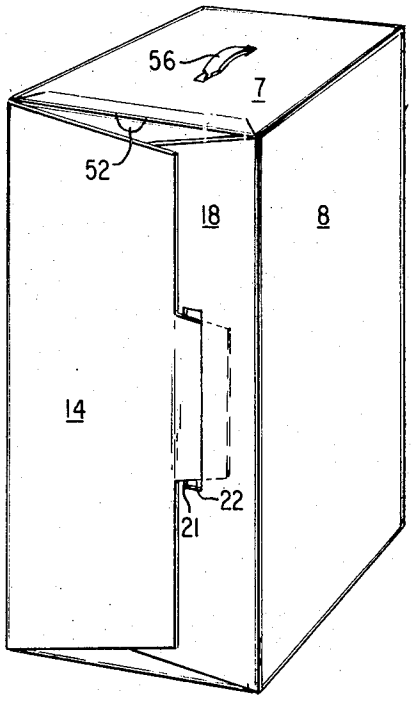


FIG. 11

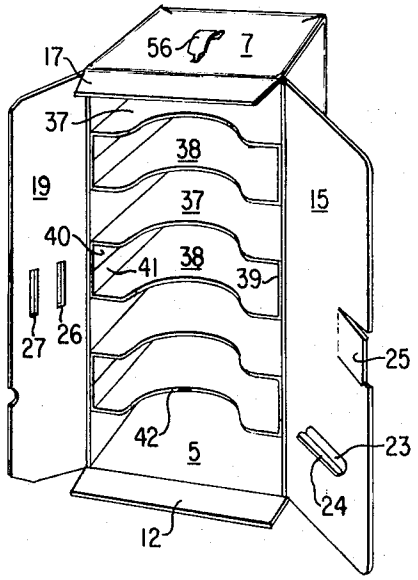


FIG. 12

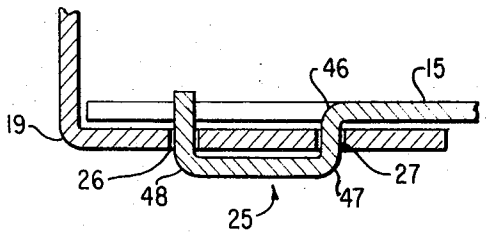


FIG. 13

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SHIPPING AND DELIVERY SHELVED CONTAINERS FOR FOOD

This invention relates to shipping and delivery containers equipped with shelving.

In many delivery services for pies, cakes, prepared food trays, and similar items, wherein the same must be individually supported on shelves, metal containers having shelves are used. Such containers are heavy, costly, and must be returned to the shipper when empty.

An object of this invention is to provide a shelved container made of paperboard, or like inexpensive material, which may be easily erected from prepared flat blanks.

Another object is to provide a shelved container provided with handle means for transporting and delivering prepared food trays from kitchens to aircraft or to other desired places. The prepared trays are individually supported on shelves, since they cannot be stacked.

Another object is to provide a shelved container which is light in weight, inexpensive, and may be considered to be disposable.

Further objects and advantages will be apparent from the following description and accompanying drawings, wherein:

FIG. 1 is a plan view of the flat blank from which the carton is erected;

FIG. 2 illustrates the side rails of the shelving assembly;

FIG. 3 is a plan view of the flat blank from which the shelving is erected;

FIG. 4 is a perspective front view of the shelving assembly;

FIG. 5 is a perspective view of the front of the erected carton with the front closure panels in open position;

FIG. 6 is a perspective view of the rear of the erected carton with the rear closure panels in open position;

FIG. 7 is a perspective view of the rear of the container and shows the shelving assembly housed within the carton;

FIG. 8 is a perspective view of the handle secured to the top of the container;

FIG. 9 is a perspective view of the top rear flap;

FIG. 10 is similar to FIG. 5 but shows the front closure panels in closed position;

FIG. 11 is similar to FIG. 7, but shows the rear closure panels in closed position;

FIG. 12 is similar to FIG. 10, but shows the front closure open and exposes the front of the shelving assembly; and,

FIG. 13 is a fragmentary sectional view on line 13—13 of FIG. 10, showing the interlocking relation between the tab and its cooperating slots.

Referring to FIG. 1, blank A comprises a flat sheet of suitable material, such as corrugated board of suitable strength. The flat sheet is prescored to present a pattern of score and fold lines, and is die-cut and punched to the configuration illustrated in FIG. 1. Transverse score lines 1, 2 and 3 define bottom panel 5, side panel 6, top panel 7 and side panel 8. Horizontal score lines 9 and 10 define end flaps 11 and 12 at opposite edges of bottom 5, closure panels 14 and 15 at opposite edges of side 6, flaps 16 and 17 at opposite edges of top 7, and closure panels 18 and 19 at opposite edges of side 8.

Closure panel 14 is provided with a locking tab 21 which is inserted into locking slot 22 of closure panel 18 when the blank is erected to form a carton for the shelved container. Closure panel 15 is provided with a partly punched out slot 23 having an infolding flap 24. Closure panel 15 is further provided with a locking flap 25 having several score lines. As will be described herebelow, flap 25 cooperates with slots 26 and 27 formed in closure panel 19 for interlocking the two closure panels in closed position. A punched out portion 29 at the edge of closure 19 is complementary to the end configuration of slot 23 when the carton is erected and the closure panels are in closed position, as illustrated in FIG. 10.

The shelving assembly comprises two sides 30 and 31, illustrated in FIG. 2. Each side is a rectangular sheet of suitable material. Preferably, the material is paperboard of suitable rigidity and strength for the desired load.

The several shelves are formed of flat blanks, each properly scored and die cut to the configuration illustrated in FIG. 3.

Each blank B has score lines 33, 34, 35 and 36 which divide the blank into shelf portions 37 and 38, a side 39 and two end flaps 40 and 41, which flaps, when folded at right angles to the shelf portions 37 and 38, provide a side means opposite to side 39. Blank B is provided with front cutout portions 42 along one edge thereof and rear cutout portions 43 along the opposite edge thereof. Cutout 42 allows access to the contents and cutout 43 provides space for dry ice or other coolant.

A blank B is folded along its fold lines to form or erect an open-ended boxlike structure, illustrated in FIG. 4. Thus, the top of the box forms shelf 37 and the bottom of the box forms shelf 38. The desired number of erected boxes are secured to sides 30 and 31 at spaced distances, as illustrated in FIG. 4, to present the desired number of shelves 37 and 38. As shown in the figure, the erected boxes are spaced from each other so that a shelf 37 is below a shelf 38 to provide a space for the articles supported by a shelf 37. The erected boxes may be secured to sides 30 and 31 by any well-known means, such as by utilizing a suitable adhesive or by stapling.

The assembled shelving structure of FIG. 4 may be collapsed or compacted for shipping or storage. In view of fold lines 33 to 36, inward pressure on sides 30 and 31 will cause the individual shelf structures 37 to 41 to collapse, the several parts hinging along the fold lines. Thus, a compact package is formed with sides 30 and 31 close together and the folded shelves therebetween.

The container is erected from blank A by folding sides 6 and 8 along fold lines 2 and 3 and folding bottom panel 5 along fold line 1 to form a rectangular box. Bottom 5 is connected to the lower edge of side 8 by any desired means. Preferably, the connecting means comprises an adhesive tape means located on the outside of the box formation and affixed to the adjacent edges of bottom 5 and side 8. FIGS. 5 and 6 illustrate the erected box formation comprising top 7, sides 6 and 8, bottom 5 and closure panels 14 and 18 and 15 and 19. For explanatory purposes only, the closure means comprising panels 14 and 18 may be considered the rear closure, and the closure means comprising panels 15 and 19 may be considered the front closure of the container. The front closure is the one which is opened to gain access to the interior of the container and its contents supported by the shelves.

The erected box is closed at its rear by folding top tab 16 and bottom tab 11 inwardly, and thereafter folding in panels 18 and 14, with tab 21 being inserted in slot 22 to maintain the closure panels in their closed position, as illustrated in FIG. 11. Top flap 16 is provided with fold lines 50 and 51, whereby fold line 50 can act as a hinge for raising flap 16 from a closed position to an open position, whereby the interior of the container may be inspected without opening panels 14 and 18 and will allow for the insertion of dry ice or other coolant. Flap 16 is provided with a hinged tab 32 which provides a vent opening in and a finger grip for flap 16.

After the rear of the box is closed, as illustrated in FIG. 11, the shelving illustrated in FIG. 4 is inserted into the front of the box, as illustrated in FIG. 12. The contents to be transported and delivered in the unit, such as trays with prepared meals, pies, display merchandise, or similar articles which require individual shelf support, are placed on the shelves 37 and 38.

The box is then closed at its front by folding end flaps 12 and 17 inwardly and thereafter folding panel 15 to close the front opening and folding panel 19 thereon. The folded panels 15 and 19 are locked together by inserting tab 25 into slots 27 and 26. As illustrated in FIGS. 10 and 13, tab 25 is inserted into slot 27 as panel 19 is folded over panel 15. Tab 25 is scored along lines 46, 47 and 48, as illustrated in FIGS. 1 and 13. Thus, portions of tab 25 can be folded along fold lines 46, 47 and 48 and the end of the tab inserted into slot 26 of panel 19. Thus, tab 25 is folded to assume a U-shape, with the legs of the U passing through slots 26 and 27, whereby a strong interlocking joint between panels 15 and 19 is formed. The joint is easily unlocked by pulling the end of tab 25 out of slot 26, straightening out the tab to generally align it with slot 27, and then pulling

panel 19 to disengage slot 27 from the tab. It will be understood that a single panel may be used in place of the two closure panels in either the front or rear of the carton and that other locking means may be employed for either the double- or single-closure panels.

The container is further provided with handle means for carrying it when loaded. As illustrated in FIGS. 1 and 8, top 7 is provided with slots 55. A handle 56, made of plastic or similar material, is provided with end lugs 57 connected by neck portions 58 to the body of the handle. There is sufficient flexibility and resiliency in the handle structure 56—58 to permit insertion of lugs 57 in slots 55, with the final positioning of the lugs into the locking position illustrated in FIG. 8.

A combined vent and hand hold comprising slot 23 and hinged tab 24 is provided in closure panel 15. Slot 23 provides an opening for insertion of fingers to facilitate the manipulation of the container in assembly, storage, stacking, or removing the container from the galley.

Although the invention has been disclosed in a preferred embodiment for purpose of illustration, it will be evident that various changes and modifications may be made therein without departing from the scope and spirit of the invention.

What is claimed is:

1. A shelved container comprising a container consisting of: a carton-type enclosure having top, bottom, sidewalls and backwalls; front closure means; and a removable shelving structure therein;

said front closure means comprising: a closure panel which is hinged to one sidewall; a second closure panel which is hinged to the other sidewall opposite said first panel; and means to secure said closure means in closed position consisting of a locking tab on one of said closure panels and a slot in the other of said closure panels to receive said locking tab when the closure panels are in closed position;

said backwall comprising two back panels, each hinged to a corresponding edge of the sidewalls, said back panels being folded to form the backwall with means for locking the panels in folded position;

said removable shelving structure comprising two sides rails and shelving secured therebetween so that the shelving structure may be inserted into and removed from the container as a unit;

the shelves of said shelving structure comprising an open-ended box structure having sides secured to the side rails to form a unit presenting two shelves, additional open-ended box structures being spaced along the side rails to provide additional shelves when needed.

2. A shelved container as claimed in claim 1, wherein the second panel has two spaced slots to cooperate with a tab on the first panel, said tab having score lines to permit folding the tab into a U-shape as it is serially inserted into the slots, the legs of the U being positioned in the slots to form an interlocking joint between the two panels.

3. A shelved container as claimed in claim 1, wherein handle means is secured to the top of said container to insure that the container is carried in its proper loaded position.

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