Feb. 15, 1949. W. B. CRANE ET AL 2,461,879

CONTAINER

Filed Oct. 29, 1947

Fig. 1

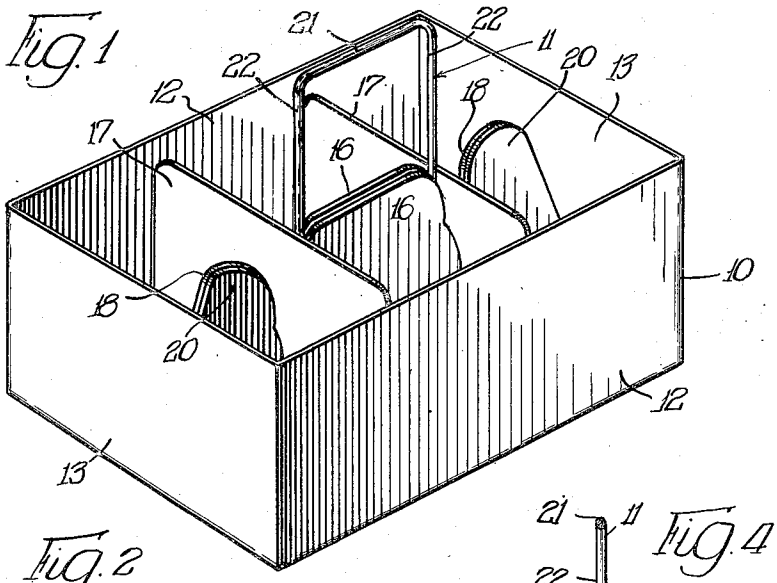


Fig. 2

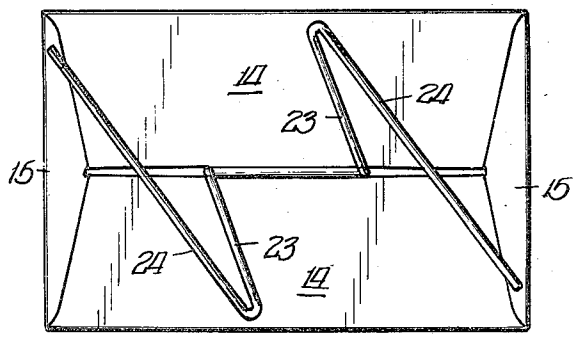
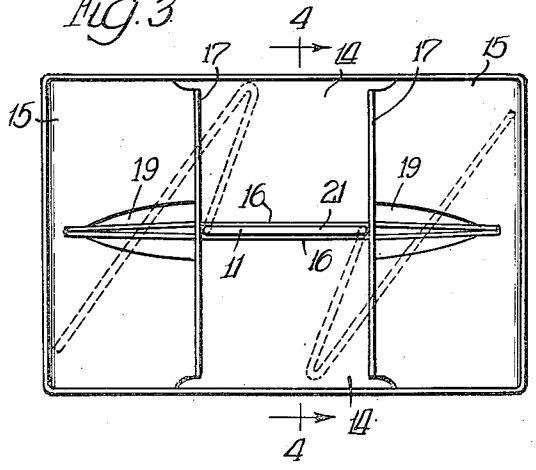


Fig. 3



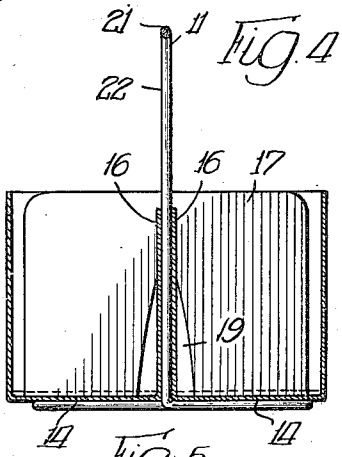
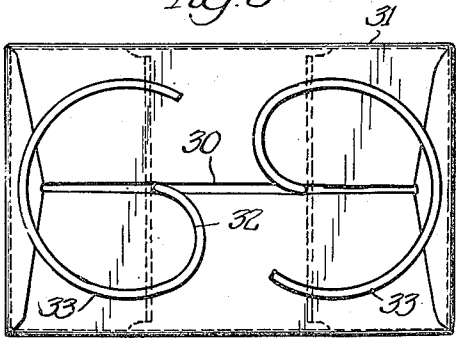


Fig. 4

Fig. 5



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CONTAINER

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Application October 29, 1947, Serial No. 782,920

9 Claims. (Cl. 224—48)

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This invention relates to containers and is particularly concerned with improvements in a handle forming and bottom supporting structure for a container of the type which is adapted to be manufactured of relatively flexible material such as paperboard.

It is an object of the invention to provide a collapsible cellular type carton preferably formed from a single blank of cut and scored paperboard material which is adapted when in erected or set-up condition to receive a plurality of relatively heavy articles such as jars, bottles and the like and a relatively rigid supporting structure for cooperation with the carton which structure is preferably formed of wire or similar material and which embodies both a handle portion for the carton and supporting members having portions positioned beneath the bottom of the carton to reinforce and strengthen the carton and provide additional support for the articles placed in the carton.

It is a further object of the invention to provide a handle and supporting structure in combination with a paperboard container, wherein the container includes a central partition consisting of a pair of upwardly extending flap-like members which are positioned in juxtaposed relation and wherein the handle and supporting structure comprises a bent wire frame member having a bail-like handle portion positioned between the central partition members and extending above the top edge of the same and laterally extending bottom supporting members which are bent or shaped to extend beneath the bottom of the container to provide bottom reinforcing and supporting means.

It is a more specific object of the invention to provide a container of the type described having interlocking transverse and longitudinal partitions which are formed by cooperating end extensions on the bottom forming flap members, which end extensions assume partition forming relation within the container when the container is in erected or set-up position, and a combination handle and supporting member for the container which includes a rectangular upstanding handle forming portion adapted to be vertically positioned centrally of the container between juxtaposed longitudinal partition members and laterally bent members on the bottom of the handle forming portion which extend toward the outer walls of the container beneath the bottom thereof and which are shaped to provide a rigid support beneath a substantial portion of the bottom of the container.

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These and other objects of the invention will be apparent from a description of the preferred form thereof which is illustrated in the accompanying drawings, wherein:

Fig. 1 is a perspective view of an open top cellular container having a handle and supporting structure combined therewith which embodies the principles of the invention;

Fig. 2 is a bottom view;

Fig. 3 is a plan view;

Fig. 4 is a transverse section on the line 4—4 of Fig. 3; and

Fig. 5 is a bottom view of a modified form of the invention.

Referring to the drawings, the invention is illustrated as incorporated in an open top cellular paperboard container 10 in combination with a relatively rigid wire structure or member 11 which constitutes a handle and bottom supporting means for the container. The particular wire structure illustrated is of course adapted for use with the specific container construction shown. In applying the invention to other container structures, the handle and supporting structure will be shaped to cooperate with the specific container structure to obtain the maximum rigidity and strength.

The container 10, which is open topped and generally rectangular in shape when in set-up or erected condition as shown, comprises upstanding side and end walls 12 and 13 and a bottom which is formed by side and end flaps 14 and 15. The bottom side flaps 14 are provided with end extensions 16 which are folded to project upwardly in juxtaposed relation within the container and which form a two-ply longitudinal partition means. The bottom end flaps 15 are provided with end extensions 17 which are folded to extend upwardly within the container to form longitudinally spaced single-ply transverse partitions. The spaced transverse partition members 17 cooperate with the double-ply longitudinal partition to divide the container into six cells or pockets for receiving a half dozen bottles or other similar articles of merchandise.

The partition forming end extensions 16 of the bottom flaps 14 are provided with slots 18 which extend inwardly from their free edges for receiving the transverse partition members 17 and which have curved edges for cooperation with the transverse partitions in the setting up of the container. The bottom end flaps 15 and their partition forming extensions 17 are provided with apertures 19 of a generally oval shape which

are adapted to receive the end portions 20 of the longitudinal partition members 16.

When the carton is being set up the bottom end flaps 15 and their transverse partition forming members 17 are folded inwardly after which the bottom flaps 14 and their longitudinal partition forming members 16 are folded inwardly to bring the end portions 20 of the members 16 through the apertures 19 and by a camming action move the members 17 in the slots 18 into transverse partition forming relation with the longitudinal partition forming members 16.

A more detailed description of the structure and operation of the type of container here illustrated is contained in the copending application of Walton B. Crane, Serial No. 643,671 filed January 26, 1946 to which reference is made for details not specifically described herein.

The combined handle and supporting device 11, which is preferably formed by bending operations from a relatively rigid wire-like material, provides an upstanding inverted U-shape or rectangular frame portion having a handle forming bight or top cross member 21 and depending legs 22 which extend downwardly to transversely or laterally bent bottom supporting portions or members 23 which terminate in reversely bent end portions 24. As seen in Fig. 2 the portions 23 and 24 form a laterally directed support beneath a substantial portion of the bottom of the container.

The bent wire structure 11 is assembled with the container 10 by inserting the upstanding frame portion between the longitudinal partition forming members 16 and moving it upwardly until the bottom flaps of the container rest on the laterally extending bottom frame members 23 and 24. In this position the bight portion 21 of the structure 11 extends in bail-like position above the top edge of the longitudinal partition members 16 a sufficient distance to provide adequate clearance for the hand of the user when the handle is gripped in carrying the container. The bottom supporting members 23 and 24 extend transversely over and provide support for a substantial area of the bottom of the container. The members 23 and 24 are preferably arranged so that they provide a portion extending beneath each of the cells of the container to provide support for the bottles placed in the same. The bottom frame members 23 and 24 are preferably arranged so that filled cartons may be stacked in superimposed relation and the bottom of each carton will rest squarely on the tops of the bottles in the carton immediately below without any interference by the members 23 and 24.

In Fig. 5 there is illustrated a modified form of handle forming and bottom supporting structure or frame 30 combined with a container 31 which is the same type as container 10 in the preferred form. In this form of the invention the frame 30 comprises an upstanding inverted U-shaped portion 32 which provides a bight or handle and depending legs which may be identical with the frame portions 21 and 22 of the preferred form. The bottom support forming members 33 extend laterally at the bottom end of the frame portion 32 and members 33 are bent or shaped to provide semi-circular or curved supporting elements extending beneath the cells of the container. The particular configuration of the bottom support forming members is capable of various other specific forms

which will effectively carry out the purposes of the invention.

In both forms of the device which have been illustrated the use of the relatively rigid handle and supporting structure permits the manufacture of the carton with lighter and less rigid material than would be otherwise required. The additional support provided by the laterally extending bottom supporting members provides a more rigid construction of the container with the lighter materials.

While the invention is illustrated as incorporated in an open top container having two longitudinal rows of three cells each, it will be understood that it is capable of being adapted to a closed top container having any number of rows of cells, the handle forming member being positioned in a generally central portion of the container.

Specific details of construction and materials have been referred to in describing the preferred forms of the invention, but it will be understood that other details of construction and other materials may be resorted to within the spirit of the invention.

We claim:

1. In combination with a bottle holding container wherein bottle receiving cells are defined by vertically arranged interlocking longitudinal and transverse partition means, and wherein a central portion of a longitudinal partition is formed by juxtaposed integral end sections extending upwardly from longitudinal bottom flap-forming members of the container, a separable frame structure comprising a relatively rigid bent wire member having an inverted U-shaped upstanding bail forming portion which is positioned between the upstanding juxtaposed sections of the longitudinal partition with the bight thereof forming a handle in spaced relation above the top edge of the partition and with the legs thereof depending to the outside of the bottom of the container and said handle member having integral bottom support forming portions extending laterally of the bottom ends of the legs and providing substantial support beneath the bottom of the bottle receiving cells.

2. In combination with an article holding container wherein article receiving cells are defined by vertically arranged interlocking longitudinal and transverse partition means, and wherein a central portion of a longitudinal partition is formed by juxtaposed integral end sections extending upwardly from longitudinal bottom flap forming members of the container, a separable supporting structure comprising a relatively rigid frame having a generally rectangular upstanding portion which is positioned between the upstanding juxtaposed sections of the longitudinal partition with a top cross member thereof forming a handle projecting above the top of the partition and with side members thereof depending to the outside of the bottom of the container and terminating in integral reversely bent bottom support forming members extending laterally within the confines of the bottom and providing substantial support beneath the bottom of the article receiving cells.

3. A supporting device for a bottle receiving cellular container which container includes a central partition means comprising upstanding juxtaposed members which are integrally connected to bottom flaps extending in opposite directions, said supporting device comprising an

upstanding frame portion which is adapted to be positioned between the juxtaposed partition members to form a bail-like handle extending above the partition and bottom supporting portions which extend laterally of the upstanding portion beneath the bottom of the container to provide a rigid support for the bottom wall of the container.

4. A supporting device for a cellular container which container includes a central partition formed by upstanding juxtaposed members which are integrally connected to bottom forming flaps extending in opposite directions, said supporting device comprising an upstanding frame portion which is adapted to be positioned between the juxtaposed partition members to provide a horizontal handle forming member extending above the partition and bottom frame end portions which extend in opposite directions laterally of the upstanding portion of the frame and beneath the bottom of the container to provide a rigid support for a substantial area of the bottom wall of the container.

5. A supporting device for a cellular bottle container which container includes a central partition means formed by bottom flap members having portions positioned in unstanding juxtaposed relation, said device comprising an upstanding bail-like portion positioned between the juxtaposed partition members which extends above the partition and provides a carrying handle and rigid bottom portions which extend horizontally beneath the bottom of the container to provide additional support for the bottom of bottles in the container.

6. A carrying device for use with a cellular container which container includes bottom flap members having end extension members arranged in vertical partition forming relation within the container, one of the partitions having a portion centrally located in the container and constituted by a pair of juxtaposed flap end extension members, said carrying device being shaped to provide a rigid frame having an upstanding generally rectangular portion positioned between said juxtaposed partition members and horizontally extending bottom portions positioned in a plane beneath the bottom of the cells in said container in supporting relation to articles in the cells.

7. A carrying device for use with a cellular container which container includes bottom flap members having end extension members arranged in vertical partition forming relation with the container, one of the partitions having a portion centrally located in the container and constituted by a pair of juxtaposed flap end extension members, said carrying device being formed of rigid wire-like material and being bent to provide an upstanding handle forming frame portion positioned between said juxtaposed partition members and horizontally extending reversely bent bottom frame portions positioned in a plane beneath the bottom of the cells in said container in supporting relation to articles in the cells.

8. In combination with a bottle holding container wherein bottle receiving cells are defined by vertically arranged longitudinal and transverse partitions, a separable frame structure comprising a relatively rigid bent wire member having an inverted U-shaped upstanding bail forming portion which is positioned between said vertically arranged partitions with the bight thereof forming a handle in spaced relation above the top edge of the partitions and with the legs thereof depending to the outside of the bottom of the container, and said handle member having integral bottom support forming portions extending laterally of the bottom ends of the legs for substantially the width of the container and providing substantial support beneath the bottom of the bottle receiving cells.

9. In a bottle carrying carton having bottle separating partitions and an opening in the bottom wall of the carton between said partitions, the improvement comprising a supporting and carrying device which is characterized by an upstanding bail-like portion passing through said opening between said partitions which extends above the partitions and provides a carrying handle, and bottom portions rigid with said bail-like portions which extend horizontally beneath the bottom of the carton for substantially the width of the carton to provide additional support for the bottoms of bottles in the carton.

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No references cited.