MULTIPIECE PAPERBOARD CONTAINER

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5 Claims

ABSTRACT OF THE DISCLOSURE

A reinforced, multipiece, paperboard container having a box-like body member with inner and outer side wall panels and being open at the top and bottom, and a pair of U-shaped reinforcing elements having side panels disposed between the side wall panels of the body member and having bottom wall panels disposed in overlying relation to close the bottom of the body member.

This invention relates to paperboard shipping containers and more particularly to reinforced, heavy duty shipping containers of the type used for the packaging and transporting of produce and similar material.

The invention comprehends a multipiece container including a tray or body member having multi-ply side and bottom walls and a telescoping cover member.

It is an object of the invention to provide a reinforced container of the type described having maximum thickness in the side walls for stacking strength and utilizing a minimum quantity of paperboard.

A more specific object of the invention is the provision of a body member having opposed pairs of side walls each of which include inner and outer panels and a pair of generally U-shaped reinforcing elements having bottom panels disposed in overlying relation to close the bottom of the body member and having upwardly disposed side panels disposed between the side panels of the respective walls of the body member.

These and other objects of the invention will be apparent from an examination of the following description and drawings wherein:

FIGURE 1 is a perspective view of a completely assembled container embodying features of the invention;

FIGURE 2 is an exploded perspective view of the structure illustrated in FIGURE 1, as shown in a partially assembled condition;

FIGURES 3 and 4 are plan views of the paperboard blanks from which the body and cover members of the previous views may be formed;

FIGURE 5 is a fragmentary perspective view, partly in section, of the body member illustrated in the previous views;

and FIGURES 6 and 7 are views similar to FIGURES 2 and 5, but illustrate a modified form of the invention.

It will be understood that, for purposes of clarity, certain elements may have been intentionally omitted from certain views where they are believed to be illustrated to better advantage in other views.

Referring now to the drawings for better understanding of the invention, and particularly to FIGURE 1 through 5, it will be seen that the composite container includes a tray or body member, indicated generally at 10, and a telescoping cover member, indicated generally at 18, which may be formed from paperboard blanks 13 and 19 as shown in FIGURES 3 and 4, respectively.

The tray or body member 10, as best seen in FIGURES 2 and 5 includes a body, indicated generally at 12, which includes opposed pairs of first side wall panels 20 hingedly interconnected to form a tubular structure open at the top and bottom. Adjacent ends of the first side wall panels at opposite ends of blank 13 may be secured together in any desired manner such as by means of a tape 26.

Body member 10 includes a pair of generally U-shaped first and second reinforcing elements 14 and 16, respectively, which are disposed within the body. Reinforcing element 14 includes a bottom panel 30 and a pair of side panels 32 hinged to and upstanding from opposite side edges thereof. Reinforcing element 16 includes a bottom panel 34 and a pair of side panels 36 hinged to and upstanding from opposite side edges thereof.

It will be noted that the side panels of the respective reinforcing elements are located on opposite sides so that when the reinforcing elements are placed together with their bottom wall panels in overlying relationship their side panels are disposed a right angle to each other to form a generally box-like structure which can be received within body 12. Thus, bottom panels 30 and 34 of the reinforcing elements provide a bottom wall for body member 10.

Side panels 32 and 36 of the respective reinforcing elements are disposed in face-to-face relation with the inside surfaces of body first side wall panels 28. Reinforcing element bottom panels may be adhesively secured to each other, and reinforcing element side panels may be adhesively secured to the inside surfaces of body first side wall panels 20 in such areas as may be desired.

After the reinforcing elements have been inserted into the body member body, second side walls 22, which are hingedly attached to upper edges of related first side wall panels 20 by narrow strips 24, are then folded inwardly and downwardly so as to lie against the inside surfaces of the reinforcing element side panels to thereby form therewith triple ply side walls for the body member. They also may be adhesively secured to the inside surfaces of the reinforcing member side panels where desired.

The body member is a completely self-contained tray-like structure open at the top. This may be used as a tray without or with a cover.

In its preferred form the container includes a cover member, indicated generally at 18 which, as best seen in FIGURE 4, includes a plurality of side wall panels 40 and a glue flap 42 which are hingedly attached to form a tubular structure. Hingedly attached to the upper edges of side wall panels 40 and disposed in overlapping relation are a plurality of top closure flaps 44. They may be held in position in any desired manner, such as by means of strips of tape 46.

Referring now to FIGURES 6 and 7 it will be seen that the embodiment shown therein is similar to the embodiment previously described, except that the position of the reinforcing elements is reversed with respect to the body 12.

In the embodiment illustrated in FIGURES 6 and 7 the reinforcing elements are positioned on the outside of the body with the reinforcing element side panels disposed in face-to-face relation with the outside surfaces of the body first side wall panels and with the body second side wall panels folded outwardly and downwardly so as to lie in face-to-face relation with the outside surfaces of the respective reinforcing element side panels. It is contemplated that this tray member could also be used either alone or in connection with a cover member of the type previously described in connection with the first embodiment.

Thus, it will be seen that, by this novel arrangement, there is provided a container having a tray member with triple-ply side walls and a double-ply bottom wall to provide a maximum amount of rigidity for stacking strength, yet which is formed from a blank having a minimum amount of material at a minimum cost of production.

What is claimed is:

1. A multipiece paperboard container, comprising:
   (a) a body member having opposed pairs of first side
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3. A container according to claim 2, wherein said reinforcing elements are disposed within said body member with their side panels in face-to-face relation with the inside surfaces of said first side wall panels, and wherein said second side wall panels are folded inwardly against inner surfaces of respective reinforcing element side panels.

4. A container according to claim 2, wherein said reinforcing elements are disposed without said body member with their side panels in face-to-face relation with the outside surfaces of said first side wall panels, and wherein said second side wall panels are folded outwardly against outer surfaces of respective reinforcing element side panels.

5. An open top, multipiece, paperboard container comprising:

(a) a body member having opposed pairs of side walls hingedly interconnected to provide a tubular structure open at the top and bottom;

(b) each of said side walls including a pair of inner and outer side wall panels hingedly interconnected along upper edges thereof;

(c) a pair of reinforcing element each having a bottom panel and a pair of side panels hinged to and upstanding from opposite side edges thereof;

(d) said elements being disposed at right angles to each other with their bottom panels in overlapping relation to form a bottom wall, for closing the bottom of the container, and having their side panels interposed between inner and outer side panels of the body member to reinforce said side walls.

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