



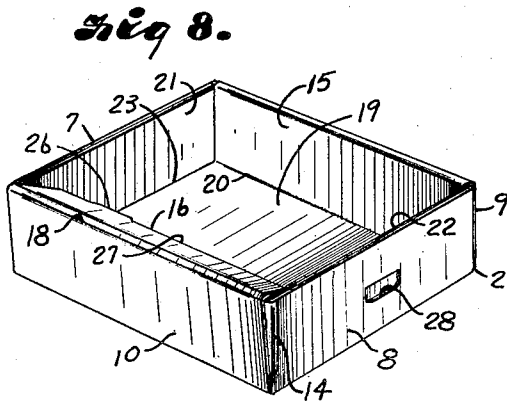
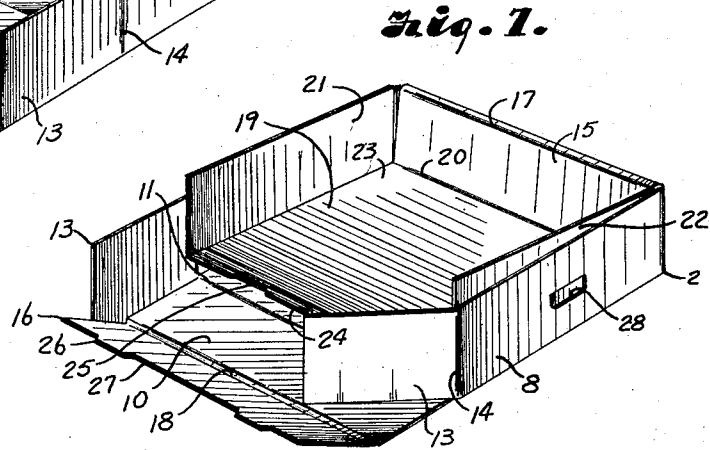
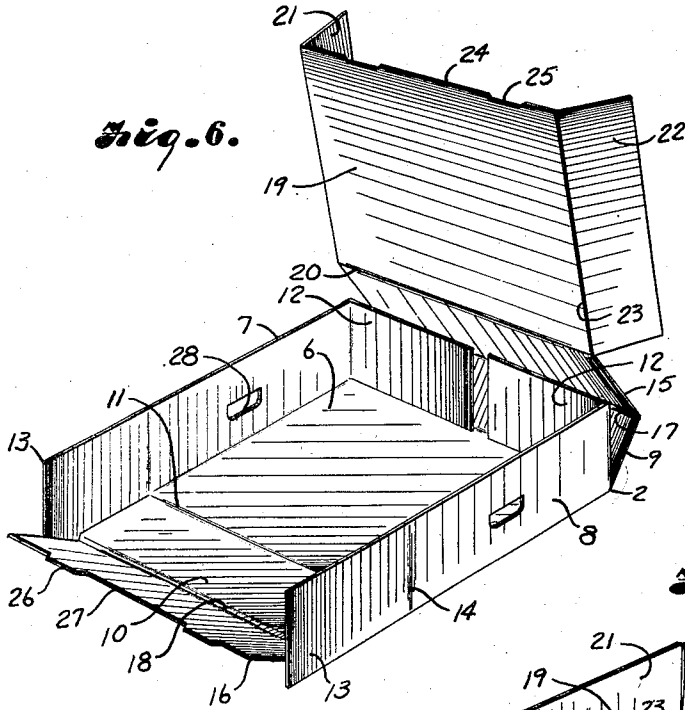
Aug. 14, 1956

R. L. WHITE  
CONTAINER

2,758,781

Filed Aug. 12, 1953

3 Sheets-Sheet 2



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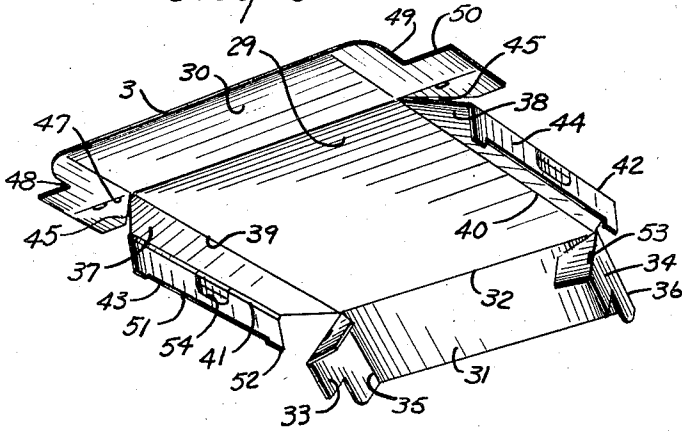
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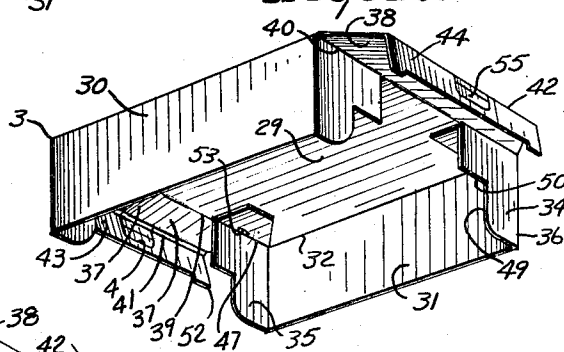
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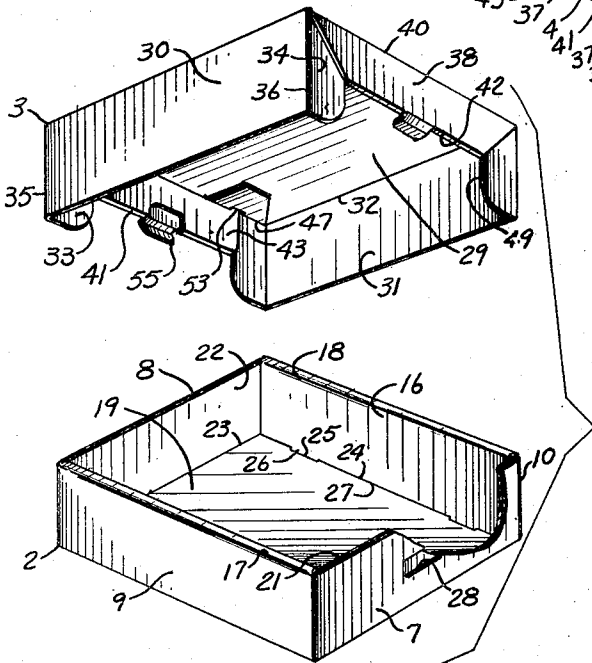
*Fig. 9.*



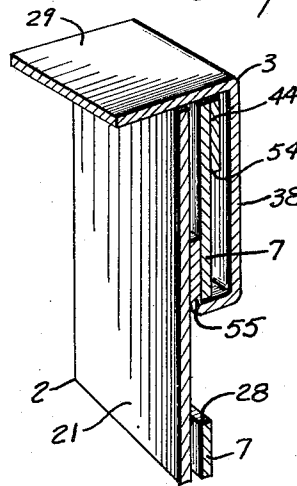
*Fig. 10.*



*Fig. 11.*



*Fig. 12.*



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1

2,758,781

CONTAINER

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Application August 12, 1953, Serial No. 373,711

5 Claims. (Cl. 229-45)

This invention relates to containers or boxes and more particularly to those of that character constructed of fiber or like board and has for its principal object to provide a container and cover therefor which is assembled into a multiple wall structure without the use of stitching or like fasteners.

In the boxing and shipping of meat and like heavy products, it is common practice to use either wood boxes or fiber board boxes with wood stiffeners and/or reinforcing to prevent crushing of the boxes from load resulting in stacking a plurality of such boxes. Meat products are usually frozen and when the box containing such frozen products is moved from cold storage to other places of warmer temperatures, condensation forms on the cold surfaces of the box walls as well as the surfaces of the contained products. Such moisture tends to weaken or reduce load supporting ability of the fiber board. Some fiber board has been treated with asphalt or other suitable materials so the treated fiber board will tend to retain a greater portion of its stiffness and strength when damp or wet. However, even with improved strength while wet characteristics of fiber board, it is still customary to use wood stiffeners and/or reinforcing for fiber board containers or boxes in which meat is packed.

Further objects of the present invention are to provide a container body and cover each of which are formed from single sheets of fiber board and cooperate when assembled to form a structure of increased strength for stacking and increased end and side compression as well as corner strength without materially increasing the cost of the container or the material required in its construction; to provide a container and cover therefor each of which is folded with interengaging parts holding same in erected condition and the cover secured to the container body without the use of tape, stitching or metal fasteners; to provide such a container formed of a single sheet of material which when folded to erected condition provides triple thickness in the side walls and double thickness in the end walls and bottom walls; to provide such a container with a cover having side walls coextensive with the height of the side walls of the container body and end portions coextensive with the height of the end walls of the container body to add to the strength thereof said cover portions being arranged to expose indicia on the ends of the container body to give information regarding the contents thereof; and to provide a container and cover therefor which may be shipped knocked down and erected at the point of use, that is economical to manufacture with substantially no waste of material yet providing a very strong structure which resists crushing and is adapted for the shipment of meats without the use of wood and like reinforcing.

In accomplishing these and other objects of the present invention I have provided improved details of structure, the preferred forms of which are illustrated in the accompanying drawing wherein:

2

Fig. 1 is a perspective view of a container to which a cover is attached in accordance with the present invention.

Fig. 2 is a longitudinal sectional view through the container and cover.

Fig. 3 is a transverse sectional view through the container and cover.

Fig. 4 is a plan view of a blank from which the container body is formed.

Fig. 5 is a plan view of a blank from which the cover is formed.

Fig. 6 is a perspective view of the container body in partially erected condition.

Fig. 7 is a perspective view of the container body with the inner bottom wall or liner being moved to overlie the outer bottom wall.

Fig. 8 is a perspective view of the container body with an inner side wall or liner being moved to interlock with the inner bottom wall or liner to hold the container body in erected condition.

Fig. 9 is a bottom perspective view of the cover in partially folded condition.

Fig. 10 is a perspective view of the cover similar to Fig. 9 but with the side flaps turned downwardly.

Fig. 11 is a disassembled perspective view of the container body and cover in condition for closing of the container.

Fig. 12 is an enlarged partial perspective view taken on the line 12-12, Fig. 1 showing the arrangement of the cover lock and cooperating portions of the container body.

Referring more to the detail of the drawings:

1 designates a container which includes a container body 2 and a cover 3, said body preferably being formed from a single blank 4 of fiber or like board and the cover being formed from a single blank 5 of fiber or like board. The fiber or like board is preferably of a type which tends to retain its strength and stiffness while moist or wet.

The body 2 of the container has a bottom wall 6 provided with upwardly extending end walls 7 and 8 and side walls 9 and 10, the blank 4 being suitably scored or creased as at 11 to facilitate the upward bending of the side and end walls along the proper lines. The end walls 7 and 8 each have side flaps 12 and 13 that fold on score lines or creases 14 adjacent to the corners of the container body whereby said side flaps overlap the side walls 9 and 10. The side flaps 12 and 13 are positioned inside of the side walls 9 and 10 with each of the side flaps having a length slightly less than half the length of the side walls whereby the adjacent ends of the side flaps are separated as illustrated in Fig. 6. Side inner walls or liners 15 and 16 extend from the side walls 9 and 10 respectively and are adapted to fold on score lines 17 and 18 adjacent to the upper edge of the respective side wall whereby the side inner walls or liners 15 and 16 fold over and engage the inner surfaces of the side flaps 12 and 13. A bottom liner 19 extends from the side inner wall or liner 15 on the opposite edge thereof from the side wall 9, the bottom liner being of such size as to overlie and cover the bottom wall when the container body is folded as illustrated in Figs. 7 and 8, the bottom liner 19 folding relative to the side inner wall or liner 15 on a score line or crease 20. End liners 21 and 22 fold upwardly from the ends of the bottom liner 19 on score or crease lines 23 whereby the end liners 21 and 22 are substantially coextensive with the end walls 7 and 8 respectively and lie inside of and substantially engage said end walls to provide a double thickness at the ends of the container body 2. The side edge 24 of the bottom liner 19 opposite from the side inner wall or liner 15 is provided with spaced notches

## 3

25 adapted to receive spaced lugs 26 extending from the edge 27 of the side inner wall or liner 16 whereby the notches 25 and lugs 26 cooperate to retain the container body in folded condition. The end walls 7 and 8 have tongue receiving openings 28 for cooperating with portions of the cover 3 as later described.

The cover 3 has a top wall 29 substantially the same size and shape as the container body 2. The cover has side flaps 30 and 31 that fold on score lines or creases 32 whereby said side flaps extend over and slidably engage the exterior of the container side walls 9 and 10. It is preferable that the side flaps 30 and 31 have the same depth as the side walls 9 and 10. The side flaps 30 and 31 each have corner flaps 33 and 34 that fold on score lines 35 and 36 respectively adjacent to the corners of the cover to extend around the corners of the container body 2 and overlap portions of the end walls 7 and 8 of said container. The cover 3 includes end flaps 37 and 38 that fold on score or crease lines 39 and 40 respectively whereby the end flaps extend over the container end walls 7 and 8 and exteriorly of the corner flaps 33 and 34. The end flaps 37 and 38 have fold lines 41 and 42 spaced from the outer or end edges of the end flaps to form outer end flanges 43 and 44 whereby said end flanges 43 and 44 are adapted to fold under and/or behind portions of the corner flaps 33 and 34 as later described.

The end flanges 43 and 44 are of less length than the length of the end flaps adjacent the score lines 39 and 40 or the width of the top wall 29. The end flaps 37 and 38 and end flanges 43 and 44 are formed by cuts 45 that extend from the intersection of the score lines 32 with the score lines 39 and 40, the cuts converging outwardly until they intersect the score lines 41 and 42 as illustrated in Fig. 5. Then the cuts are provided with portions 46 that extend outwardly substantially perpendicular to the score lines 41 and 42 whereby the corner flaps 33 and 34 are defined by the score lines 35 and 36 and the cuts 45 and 46.

The corner flaps have score lines 47 which in the blank 5 are aligned with the score lines 32. Also the corner flaps are preferably notched out as in 48 whereby an edge 49 of each of the corner flaps is parallel to the score lines 35 and 36 and spaced therefrom a distance substantially corresponding to the spacing between the score lines 47 and the cut portions 46. The notches 48 also provide edges 50 of the corner flaps parallel and spaced from the score lines 47 a distance substantially equal to the depth of the end flaps 37 and 38.

The end flaps 37 and 38 and the end flanges 43 and 44 are substantially the same depth with the outer edge portions of the end flanges cut back as at 51 at the ends thereof to provide lugs 52 adapted to be inserted in slots 53 positioned in the score lines 47 of the corner flaps as later described. Also the end flanges 43 and 44 are provided with substantially U-shaped cuts 54 to form tongues 55 which extend from the score lines 41 and 42 through the tongue openings 28 in the end walls 7 and 8 to lock the cover on the body as later described.

The container bodies 2 and covers 3 may be shipped flat to any desired point of use. Then the container body 2 is erected as is illustrated in Figs. 6 to 8 inclusive. The end walls 7 and 8 are turned upwardly relative to the bottom wall 6 on the score lines 11. The side flaps 12 and 13 are then folded inwardly on the score lines 14 and the side outer wall 9 folded upwardly into engagement with the outer surfaces of the side flaps on the respective side of the bottom wall. The side inner wall or liner is then folded inwardly on the fold lines 17 to extend downwardly in engagement with the inner surfaces of the respective side flaps and simultaneously the bottom liner 19 is folded on the score line 20 and the end liners 21 and 22 are folded on the score line 23 whereby the bottom liner overlies the bottom wall 6 and the end liners 21 and 22 lie on the inside of and substantially engage the inner

## 4

surface of the end walls 7 and 8. This positions the notches 25 adjacent the side wall 10 of the container body. The side wall 10 is then turned upwardly on its respective score line 11 into engagement with the side flaps 13 and the side inner wall or liner 16 is turned downwardly on its score line 18 into engagement with the inner surfaces of the side flaps 13 during which operation the lugs 26 are inserted into the notches 25 whereby the engagement of the lugs 26 with the notches 25 holds the various parts of the container body in erected condition. With this arrangement the bottom and end of the container body are of two thicknesses of material and the sides are of three thicknesses.

The cover 3 is then folded as illustrated in Figs. 9, 10 and 11 by turning the side flaps 30 and 31 downwardly on the score lines 32 and then bending the portions of the corner flaps defined by the cuts 45 and 46 and the score lines 47 into parallel relation with the top wall 29 whereby such portions form top flanges 56 of the corner flaps. The corner flaps are then turned inwardly on the score lines 35 and 36 to form portions of the ends of the cover as illustrated in Fig. 10 in which position the top flanges 56 engage the lower surface of the top wall 29. Then the end flaps 37 and 38 are turned downwardly on the score lines 39 and 40 to overlie portions of the corner flaps and the end flanges 43 and 44 are turned inwardly on the score lines 41 and 42 and then upwardly whereby the score lines 41 and 42 substantially engage the edges 50 of the corner flaps. The end flanges are moved to engage the inner surfaces of the corner flaps and during that operation the lugs 52 are inserted in the slots 53 to provide cooperative engagement that holds the cover 3 in folded condition as illustrated in Fig. 11. Then with contents placed in the container body 2, the cover is applied to the container body with the side flaps 30 and 31 extending downwardly and substantially engaging with the exterior surface of the side walls 9 and 10 of the container body and the corner flaps and end flange on the cover exteriorly of and substantially engaging the end walls 7 and 8 of the container body. The cover is moved onto the container body until the top wall 29 rests on the upper edges of the side and end walls of the container body, then the bottom edges of the side flaps 30 and 31 and the corner flaps 33 are aligned with a bottom wall 6 of the container body. The tongues 55 are bent inwardly through the tongue openings 28 and then upwardly between the end walls 7 and 8 and the respective end liners 21 and 22 as illustrated in Fig. 12 to form a lock which holds the cover on the container body.

When such a container is used for meats or the like that are frozen, it is preferable that the meat be placed in the container body and the container be left open during the freezing operation. It has been common practice to place various indicia on the covers of meat containers indicating the size, number of articles and weight of the contents of the container. However, errors sometime occur and the wrong covers are placed on the container bodies. With the present structure there are exposed portions 57 on the end walls of the container body and the various indicia is placed thereon. Then after the meat is frozen the covers are placed on the containers as above described and the indicia is still visible to show the contents of the container as illustrated in Fig. 1 thereby eliminating possibility of error which could occur when the indicia is placed on the covers of conventional containers.

Since no tape, staples or stitching is used in either the container body or cover, the blanks may be shipped or stored in flat condition either before or after use. Also, during use the sides and ends of the cover cooperate with the sides and ends of the container body to add vertical strength to the entire container making a very strong structure whereby containers of meat and the like may be stacked without danger of crushing the side and end walls of the container and cover structure thereby pro-

5

viding a structure capable of containing heavy articles without the use of wood strips or like reinforcing.

It is believed obvious that I have provided a strong container body and cover structure of great strength that is economical to manufacture with substantially no waste of material and that can be easily assembled and used without auxiliary fastening means such as staples and the like.

What I claim and desire to secure by Letters Patent is:

1. A container of the character described comprising, 10  
a substantially rectangular container body having multiple thicknesses of side, end and bottom walls, a cover for the container having a top wall and outwardly and downwardly turned flaps on the side and end edges thereof, said side flaps having substantially the same depth as the side walls of the container, said end flaps being of substantially less depth than the side flaps, corner flaps on the side flaps and turned inwardly under the end flaps, extensions on the upper portions of the corner flaps and having a depth substantially the same as the depth of the end flaps, inwardly and upwardly turned flanges on the lower edges of the end flaps and extending inwardly of the corner flap extensions whereby said extensions are between the end flaps and end flanges, inturned flaps connected by fold lines to the upper edges of the corner flaps and underlying the top wall, said inturned flaps having slots adjacent the respective fold lines, means on the inturned flanges engaging said slots for holding the flaps in folded positions, and means on the end flaps engaging the end walls of the container body for securing the cover on the container body whereby portions of the end walls below the end flaps and between the corner flaps are exposed.

2. A container and cover structure comprising a container body having a bottom wall, upturned end walls 35  
joining the bottom wall along oppositely disposed foldable lines, upturned side walls joining the bottom wall along other oppositely disposed foldable lines, side wing flaps joining the sides of each of the end walls along foldable lines and extending inwardly to lie along the side walls, side liners joining the side walls along foldable lines and extending inwardly and downwardly from the upper edges of the side walls in engagement with the side flaps whereby the side walls, side liners and side flaps cooperate in forming triple thickness sides in the container, the bottom liner joining one of the side liners along a foldable line and overlying the bottom wall, end liners joining the bottom liner along oppositely disposed foldable lines and upturned to substantially engage the end walls, interlocking portions on the bottom liner and the other side liner for holding the walls and liners in folded position, a cover for the container body having a top wall and outwardly and downwardly turned flaps on the side and end edges thereof, said side flaps having substantially the same depth as the side walls of the container, said end flaps having a substantially less depth than the side flaps, corner flaps on the side flaps and turned inwardly under the end flaps, extensions on the upper portions of the corner flaps and having a depth not greater than the depth of the end flaps, inwardly and upwardly turned flanges on the lower edges of the end flaps and extending inwardly of the corner flap extensions whereby said extensions are between the end flaps and end flanges, inturned flaps connected by fold lines to the upper edges of the corner flaps and underlying the top wall, said inturned flaps having slots adjacent the respective fold lines, interengaging means on the inturned flanges engaging said slots for holding the flaps in folded position, the side and end flaps on the cover extending downwardly and substantially engaging the exterior of the side and end walls of the container body, and means on the end flaps of the cover engaging the end walls of the container body for securing the cover on the container body whereby portions of the end walls below the end flaps and between the corner flaps are exposed.

3. A container of the character described comprising, 75

6

a substantially rectangular container body having a bottom wall and connected side and end walls upstanding therefrom, a cover for the container having a top wall and outwardly and downwardly turned flaps on the side and end edges thereof, said side flaps having substantially the same depth as the side walls of the container, said end flaps being of substantially less depth than the side flaps, corner flaps on the side flaps and turned inwardly under the end flaps, extensions on the upper portions of the corner flaps and having a depth not greater than the depth of the end flaps, inwardly and upwardly turned flanges on the lower edges of the end flaps and extending inwardly of the corner flap extensions whereby said extensions are between the end flaps and end flanges, inturned flaps connected by fold lines to the upper edges of the corner flaps and underlying the top wall, said inturned flaps having slots adjacent the respective fold lines, means on the inturned flanges for holding the flaps in folded positions, and means on the end flaps engaging the end walls of the container body for securing the cover on the container body whereby portions of the end walls below the end flaps and between the corner flaps are exposed.

4. A container and cover structure comprising a container body having a bottom wall, upturned end walls 40  
joining the bottom wall along oppositely disposed foldable lines, upturned side walls joining the bottom wall along other oppositely disposed foldable lines, side liners joining the side walls along foldable lines and extending inwardly and downwardly from the upper edges of the side walls, a bottom liner overlying the bottom wall, end liners joining the bottom liner along oppositely disposed foldable lines and upturned to substantially engage the end walls, means holding the walls and liners in folded position, a cover for the container body having a top wall and outwardly and downwardly turned flaps on the side and end edges thereof, said side flaps having substantially the same depth as the side walls of the container, said end flaps having a substantially less depth than the side flaps, corner flaps on the side flaps and turned inwardly under the end flaps, extensions on the upper portions of the corner flaps and having a depth not greater than the depth of the end flap, inwardly and upwardly turned flanges on the lower edges of the end flaps and extending inwardly of the corner flap extensions whereby said extensions are between the end flaps and end flanges, inturned flaps connected by fold lines to the upper edges of the corner flaps and underlying the top wall, said inturned flaps having slots adjacent the respective fold lines, means on the inturned flanges for holding the flaps in folded position, and means on the end flaps of the cover engaging the end walls of the container body for securing the cover on the container body whereby portions of the end walls below the end flaps and between the corner flaps are exposed.

5. A container and cover structure comprising a container body having a bottom wall, upturned end walls 55  
joining the bottom wall along oppositely disposed foldable lines, upturned side walls joining the bottom wall along other oppositely disposed foldable lines, side wing flaps joining the sides of each of the end walls along foldable lines and extending inwardly to lie along the side walls, side liners joining the side walls along foldable lines and extending inwardly and downwardly from the upper edges of the side walls in engagement with the side flaps whereby the side walls, side liners and side flaps cooperate in forming triple thickness sides in the container, a bottom liner overlying the bottom wall, interlocking portions on the bottom liner and the other side liner for holding the walls and liners in folded position, a cover for the container body having a top wall and outwardly and downwardly turned flaps on the side and end edges thereof, said side flaps having substantially the same depth as the side walls of the container, said end flaps having a substantially less depth than the side flaps, corner flaps on the side flaps and turned inwardly under the end flaps, extensions on the upper portions of the corner flaps and having a depth not greater than the

7

depth of the end flap, inwardly and upwardly turned flanges on the lower edges of the end flaps and extending inwardly of the corner flap extensions whereby said extensions are between the end flaps and end flanges, inturned flaps connected by fold lines to the upper edges of the corner flaps and underlying the top wall, means on the inturned flanges for holding the flaps in folded position, and means on the end flaps of the cover engaging the end walls of the container body for securing the cover on the container body whereby portions of the end walls below the end flaps and between the corner flaps are exposed.

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