July 9, 1963 J. C. BRENEMAN 3,096,900

CONTAINER ASSEMBLY

Filed Dec. 11, 1961 2 Sheets-Sheet 1

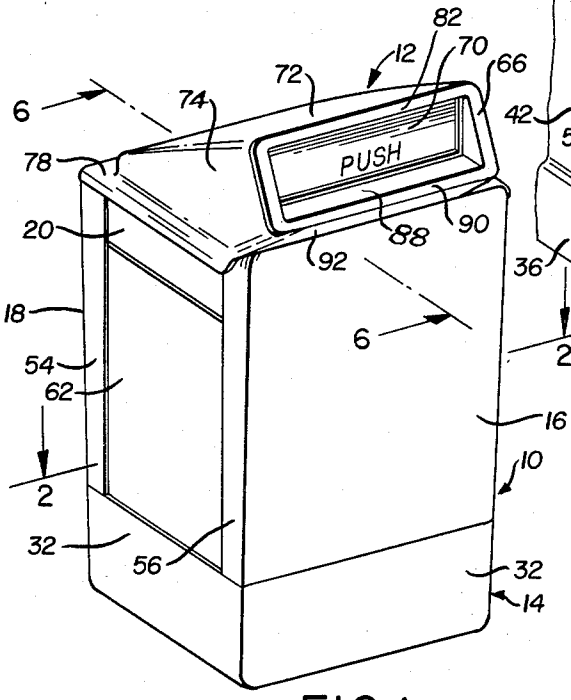


FIG. 1

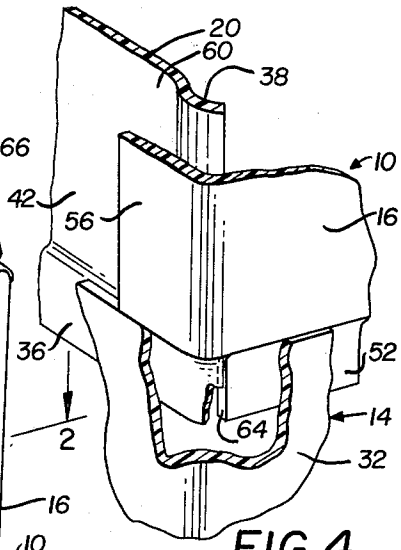


FIG. 4

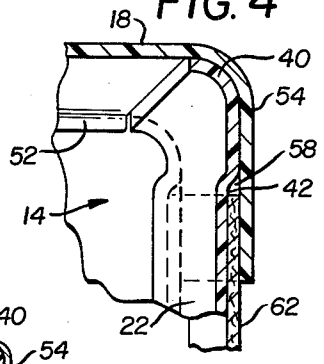


FIG. 5

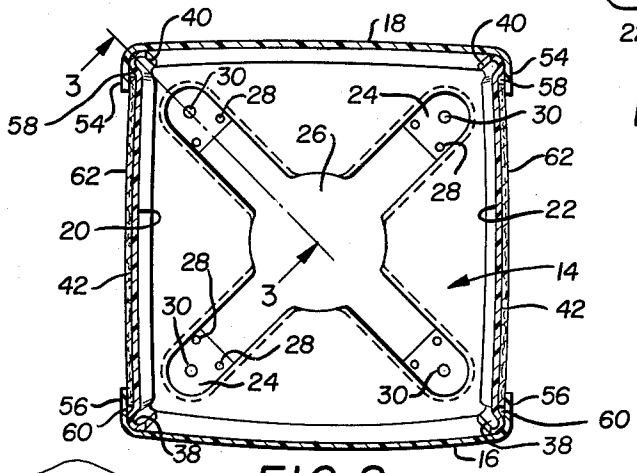


FIG. 2

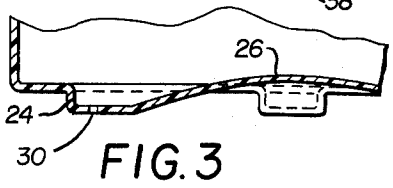


FIG. 3

INVENTOR.
JOSEPH C. BRENEMAN
BY Ely, Fuyc & Hamilton
ATTORNEYS

July 9, 1963 J. C. BRENEMAN 3,096,900

CONTAINER ASSEMBLY

Filed Dec. 11, 1961 2 Sheets-Sheet 2

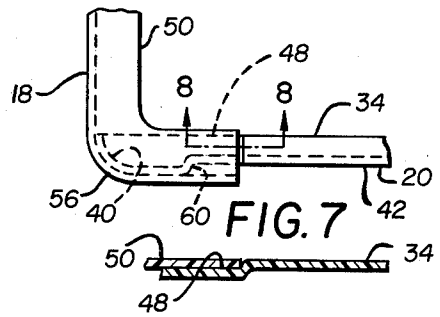


FIG. 7

FIG. 8

FIG. 6

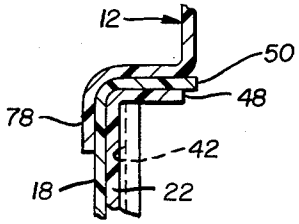


FIG. 9

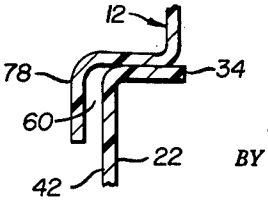


FIG. 10

INVENTOR.
JOSEPH C. BRENEMAN
BY Ely, Fryer & Hamilton
ATTORNEYS

United States Patent Office 3,096,900 Patented July 9, 1963

3,096,900

CONTAINER ASSEMBLY

Joseph C. Breneman, Wooster, Ohio, assignor to Rubbermaid Incorporated, Wooster, Ohio, a corporation of Ohio

Filed Dec. 11, 1961, Ser. No. 158,449
6 Claims. (Cl. 220—4)

This invention relates to containers and in particular to a refuse container assembly.

One of the objects of the invention is to provide a container assembly of sturdy and durable construction.

Another object is to provide a container which serves a dual function of receiving and retaining refuse and providing a holding arrangement for advertising cards.

A further object is to provide a container, the components of which are easily formed and assembled.

Still another object of the invention is to provide a container assembly having top and bottom end shells spaced by supporting panels each panel being arranged to interfit with the end shells and adjacent panels and cooperating with an adjacent panel to form a channel adapted to slidingly receive and retain an edge of an advertising card.

Other objects inherent in the nature of the invention will become apparent to those skilled in the art from the following description and the drawings.

In the drawings:

FIG. 1 is a perspective view of the improved refuse container assembly;

FIG. 2 is a plan sectional view taken along line 2—2 of FIG. 1;

FIG. 3 is a fragmentary cross-sectional view taken along line 3—3 of FIG. 2 showing the arrangement of a supporting leg member integral with the bottom end shell;

FIG. 4 is a perspective fragmentary enlargement of a corner portion of the container with parts broken away and in section;

FIG. 5 is a fragmentary enlargement of a corner section of FIG. 2;

FIG. 6 is a vertical sectional view of the container assembly taken along line 6—6 of FIG. 1, illustrating the open position of the cover assembly or top end shell and access door in phantom lines;

FIG. 7 is an enlarged top plan view of a rear corner section, with the cover assembly or top end shell removed;

FIG. 8 is a fragmentary cross-sectional elevation taken along line 8—8 of FIG. 7.

FIG. 9 is an enlarged fragmentary cross-sectional view taken along line 9—9 of FIG. 6; and

FIG. 10 is an enlarged fragmentary cross-sectional view taken along line 10—10 of FIG. 6.

In reference to FIGS. 1 and 2, the container assembly 10 comprises the following basic components: A top end shell or cover assembly indicated generally at 12, a bottom end shell 14, front and back panels 16 and 18, and side panels 20 and 22.

The container is preferably fabricated from a suitable plastic such as a plastic styrene or acrylic resin, and each of the basic components may be thermo-formed or produced in a vacuum-forming process. Obviously, however, the components could be pressed out of metal or constructed of any other suitable material.

The bottom end shell 14, as shown in FIGS. 1 and 6, is preferably formed from a single piece of material with integral supporting leg members 24 embossed in the bottom surface. As may be observed from FIG. 2, the supporting leg members extend diagonally toward each of the corners from a central convexed area or sump, indicated generally at 26. Each of the supporting leg members are channel-shaped in cross section, as may be observed from FIG. 3, in order to add rigidity to the bottom end shell and to provide a sufficiently wide surface for promoting stability of the container in an upright position. The lowermost portion of each supporting leg member is provided with drainage holes 28, and a hole 30 which may serve as an anchorage point, if desired. Any liquid matter which may become entrapped inside the refuse container may drain from the convexed area 26 toward the holes 28. The upstanding sides 32 of the bottom end shell are arranged to taper outwardly as they extend upwardly a predetermined distance.

The side panels 20 and 22 are each provided along the top edge with an inwardly projecting lip 34 (FIGS. 7, 9 and10) and an offset leg portion 36 along the bottom edge (FIG. 4). The side edges 38, 40 of each side panel are rounded, as shown in FIGS. 2 and 5 for example, for a purpose to be described later. Substantially the entire surface of each side panel is inset a predetermined extent as indicated at 42.

Offset portions 46 and 48 are provided in the surface of the inwardly projecting lip 34 of each side panel adjacent the rounded side edges 38 and 40, respectively, preferably offset an amount substantially equal to the thickness of the material employed. The top of each side panel is greater in width than the bottom so that the assembled container will have an upwardly and outwardly tapering construction. However, the extent of the taper may be varied as desired, or the taper may be omitted entirely.

The front and back panels 16 and 18 are each provided along the top edge with an inwardly projecting lip 50 and an inwardly offset leg portion 52 along the bottom edge. The side edges 54 and 56 are each rounded so as to partially conform in overlying engagement to the outer periphery of the side panel rounded side edges 38 and 40 and extend partially beyond in spaced parallel relation to the side panel inset surface 42 to form marginal channels or grooves 58 and 60, which serve to retain slidably the edges of advertising cards 62. The tops of the front and back panels are also greater in width than the bottoms to provide a tapering construction similar to the side panels.

As shown in FIG. 4, the leg portions 52 of the front and back panels are notched at their ends 64 to conform to the ends of the offset leg portions 36, so that the leg portions 52 do not extend around the corners with the rounded side edges 54 and 56.

The various components described above are assembled so that the offset leg portions 36 and 52 of the panels fit within the upstanding sides 32 of the bottom end shell 14. The side panels 20 and 22 are assembled first and the front and back panels are assembled so that the rounded side edges 54 and 56 wrap around the rounded side edges 38 and 40 of the side panels and seat upon the top edge of bottom end shell 14, as shown in FIG. 4, for example. That portion of the inwardly projecting lip 50 which is adapted to be disposed above each rounded edge of the front and back panels will seat, respectively, in the offset portions 46, 48 of the side panel inwardly projecting lip 34 so as to fit flush with the remaining surface of the side panel lip 34, as shown in FIGS. 6 and 8.

The various components may be secured together in any suitable manner, depending upon the nature of the materials employed. For example, if the components are thermo-formed from some type of plastic, then they may be heat fused together at their common junctures, such as where the surfaces of the offset leg portions 36 and 52 come in contact with the inside surfaces of the bottom end shell upstanding sides 32. If fabricated from metal sheeting, the components may be riveted, bolted, spot welded or fastened together in any suitable and effective manner.

The final component for the refuse container assembly is the top end shell or cover assembly 12. This assembly comprises a recessed front surface 66, an opening 68 within the recessed front surface, a gravity functioning access door 70 covering the opening, a top surface 72 which slopes downwardly from front to back, upstanding side and back surfaces, 74 and 76, respectively, and a flanged peripheral lip 78 which extends outwardly and downwardly from the upstanding side and back surfaces.

The access door 70 is secured above the opening 68 by a hinge 80, preferably a piano hinge, which in turn is secured to an angled projection 82 of the top end shell by a mounting strip 84. The angled projection 82 terminates in an offset flat lip 86 against which the upper portion of the access door abuts in closed position, as shown in solid line position in FIG. 4. Actually the flat lip 86 is only offset with respect to the angled projection and the remainder of the lip presents a continuous flat abutting surface about the periphery of the opening 68 so that the access door will fit flush thereagainst when in closed position.

The recessed front surface 66 is designed to minimize the admittance of weather to the inside of the container when the latter is subjected to rain, snow and the like, but is readily accessible to the user. The lip area 88 adjacent the bottom edge of the opening is sloped outwardly and downwardly so as to drain water and the elements away from rather than into the storage area of the container. The angled marginal surface 90 adjacent the lip area is in the same inclined plane as angled projection 82 and terminates in a rearwardly sloping surface 92 which in combination with the lip area 88 and marginal surface 90 forms a channel-like configuration which provides rigidity for the front surface of the top end shell.

The rearwardly sloping surface 92 serves to provide an anchorage area for a formed channel support 94 which is secured thereto by any suitable method, and which in turn serves as a support for one side of a hinge 96, preferably a piano hinge. The other side of the hinge 96 is secured to the inwardly projecting lip 50 of the front panel 16. This arrangement permits the top end shell or cover assembly to be pivotally mounted to the front of the container assembly and cooperates with the flanged peripheral lip 78 to cover the top edge of the container completely and in a manner to give additional structural rigidity and stability to the entire refuse container assembly.

When it is desired to empty the refuse container assembly, an indented groove (not shown) may be provided in the surface of each side panel 20, 22 to enable a person's fingers to be inserted beneath the flanged peripheral lip 78 for grasping and pivoting upwardly the top end shell to the position shown in phantom lines in FIG. 6.

Advertising matter, in the form of cards, are held flush with the side panels of the refuse container assembly by the channels or grooves 58 and 60.

What is claimed is:

1. A container assembly comprising top and bottom end shells, and pairs of opposing panels for supporting and spacing apart said end shells, each of said panels having an inwardly projecting lip along the top edge for fitting within said top end shell and an offset leg portion along the bottom edge for fitting within said bottom end shell, one of said pairs of opposing panels having inset surfaces, the other of said pairs of opposing panels having integral side edges wrapping around edge portions of said one pair of opposing panels and cooperating with said inset surfaces to form channels adapted to slidingly receive the side edges of advertising cards to retain the latter in overlying relation with said inset surfaces.

2. A single-walled container assembly comprising top and bottom end shells, said bottom end shell being formed with a convex sump and integral leg members having drainage points, and pairs of opposing panels for supporting and spacing apart said end shells, each of said panels adapted to interfit with said end shells, one of said pairs of opposing panels having inset surfaces, the other of said pairs of opposing panels having side edges wrapping around portions of said one pair of opposing panels and cooperating with said inset surfaces to form channels adapted to slidingly receive the side edges of advertising cards to retain the latter in overlying relation with said inset surfaces.

3. A single-walled thermo-formed plastic container assembly comprising top and bottom end shells, said bottom end shell being formed with a convex sump and integral leg members having drainage points, and panels for supporting and spacing apart said end shells, each of said panels adapted to interfit with said end shells and adjacent supporting panels and to cooperate with an adjacent panel to form a marginal channel adapted to slidingly receive and retain an edge of an advertising card.

4. A refuse container assembly comprising top and bottom shells spaced from each other by front, back and side panel members, said panel members having end portions adapted to fit within said top and bottom shells and each having an inwardly projecting flat top edge and an offset shoulder along the bottom edge, said side panel members having rounded side edges and inset flattened center surfaces, said front and back panel members having wrap-around side edges adapted to overlap the side edges of said side members and part of said inset surfaces so as to form with each side panel member pairs of channels adapted to slidingly receive and retain advertising cards, and said bottom end shell being formed with a convex sump and integral leg members having drainage points.

5. A single-walled thermo-formed plastic container assembly comprising top and bottom end shells, and pairs of opposing panels for supporting and spacing apart said end shells, each of said panels having an inwardly projecting lip along the top edge for fitting within said top end shell and an offset leg portion along the bottom edge for fitting within said bottom end shell, the offset leg portions of one pair of opposing panels further adapted to seat upon the edges of said bottom end shell, one of said pairs of opposing panels having inset surfaces, the other of said pairs of opposing panels having integral side edges wrapping around portions of said one pair of opposing panels and cooperating with said inset surfaces to form channels adapted to slidingly receive the side edges of advertising cards to retain the latter in overlying relation with said inset surfaces.

6. A single-walled thermo-formed plastic container assembly comprising top and bottom end shells, said bottom end shell being formed with a convex sump and integral leg members having drainage points, and pairs of opposing panels for supporting and spacing apart said end shells, one of said pairs of panels interfitting within the other of said pairs of panels and entirely within said end shells and having inset surfaces in spaced relation to the other of said panel pairs to form marginal channels adapted to slidingly receive and retain the side edges of advertising cards.

References Cited in the file of this patent

UNITED STATES PATENTS

1,464,771	Murphy	Aug. 14, 1923
1,511,982	Schilling	Oct. 14, 1924