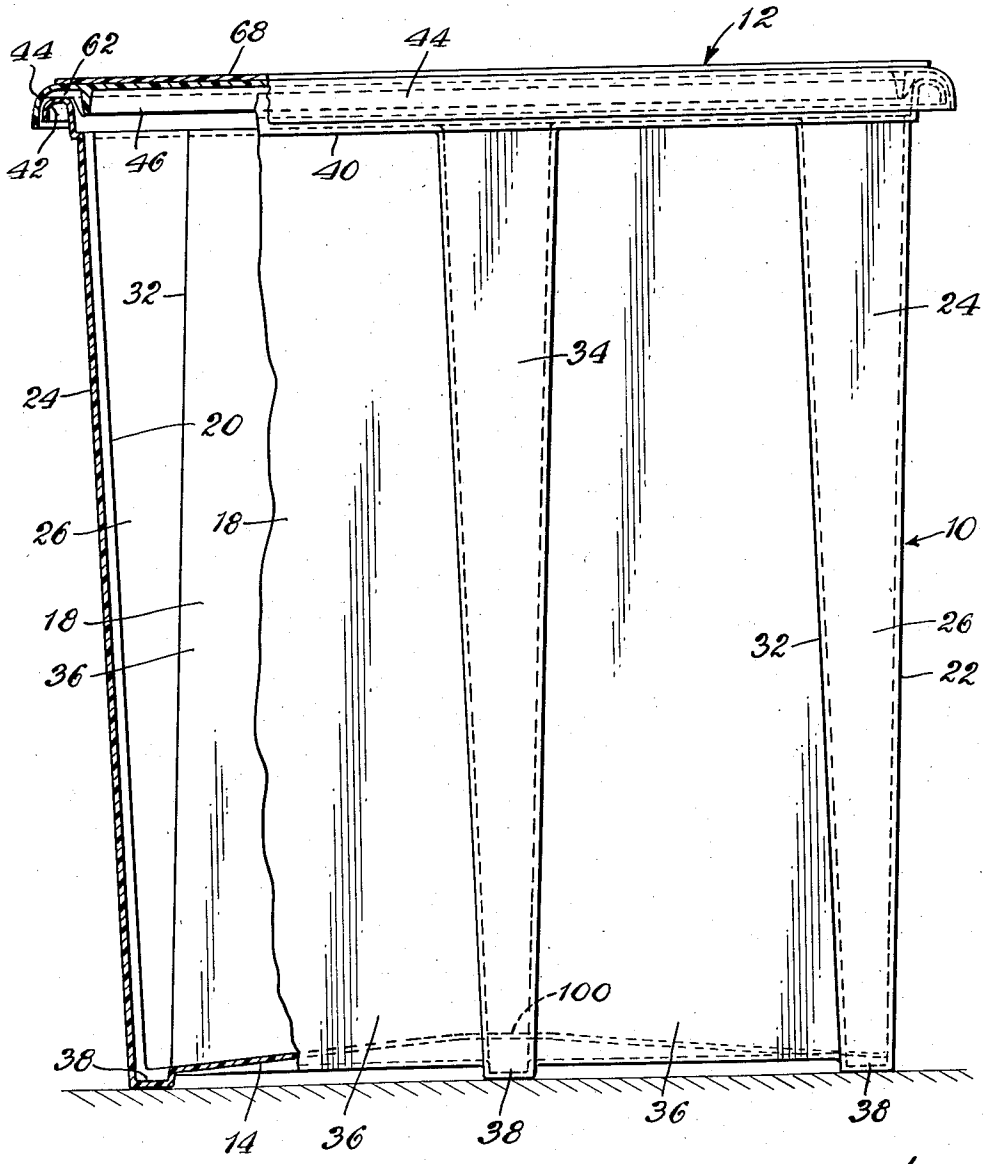
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CLOTHES HAMPER

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Fig. 1



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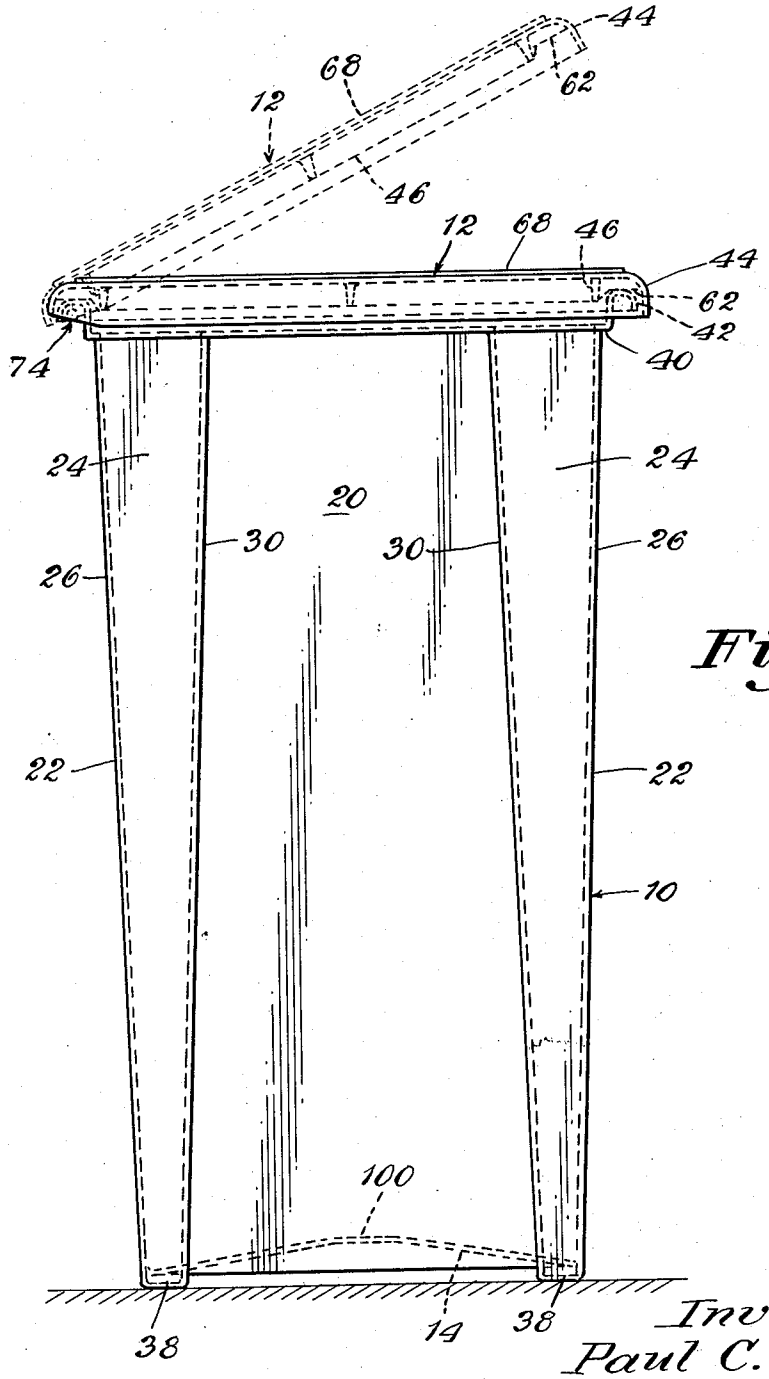


Fig. 2

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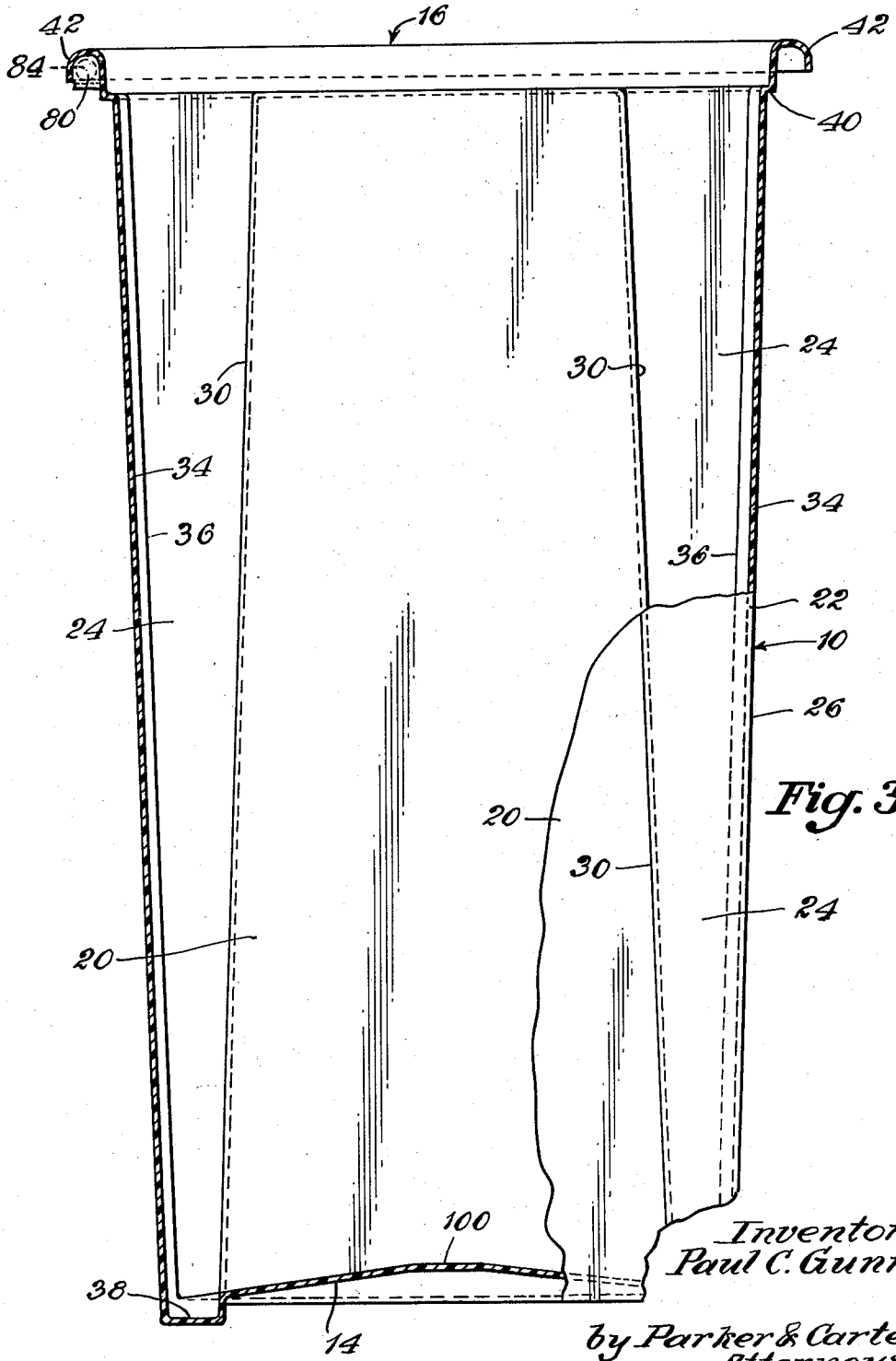


Fig. 3

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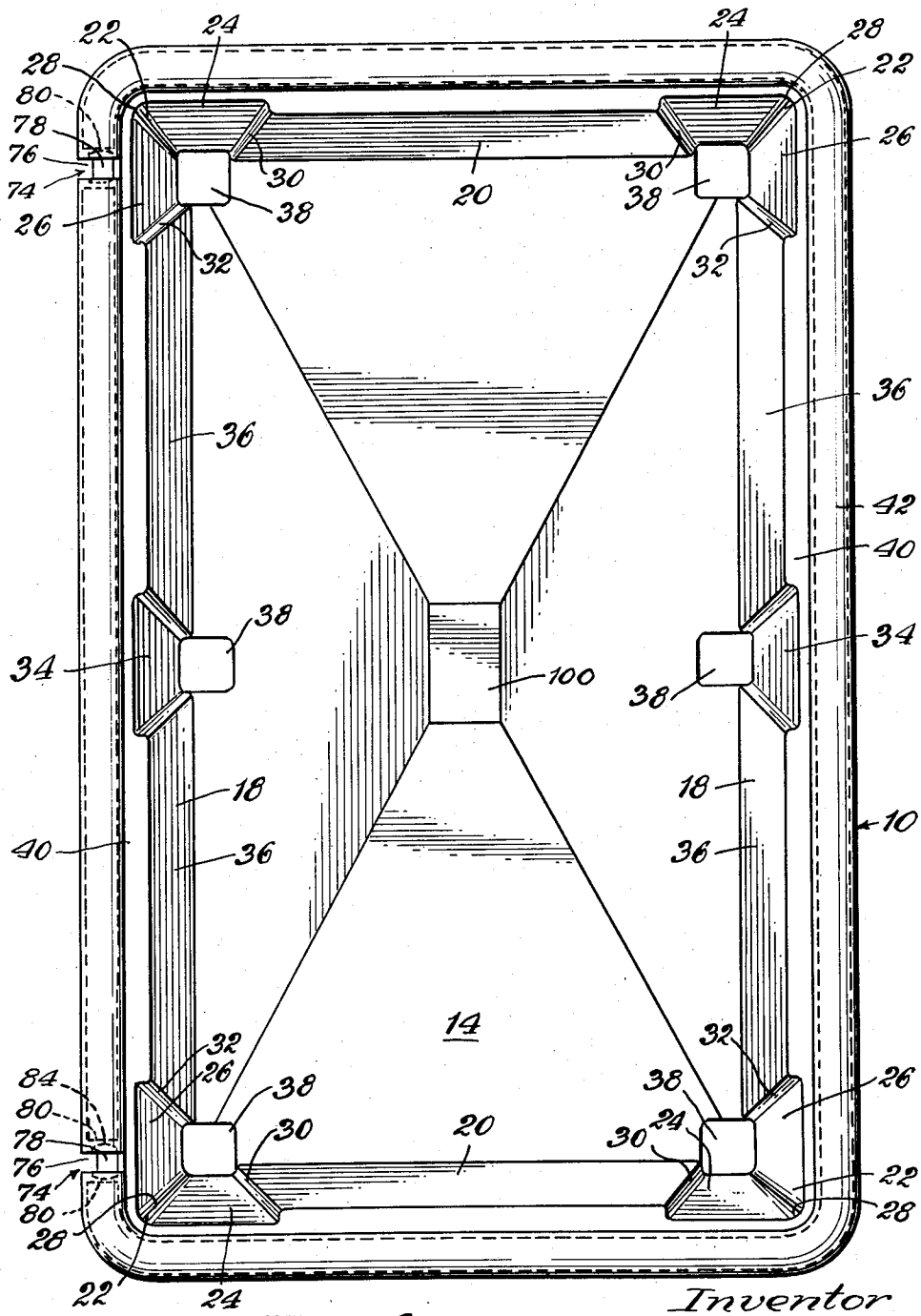


Fig. 4

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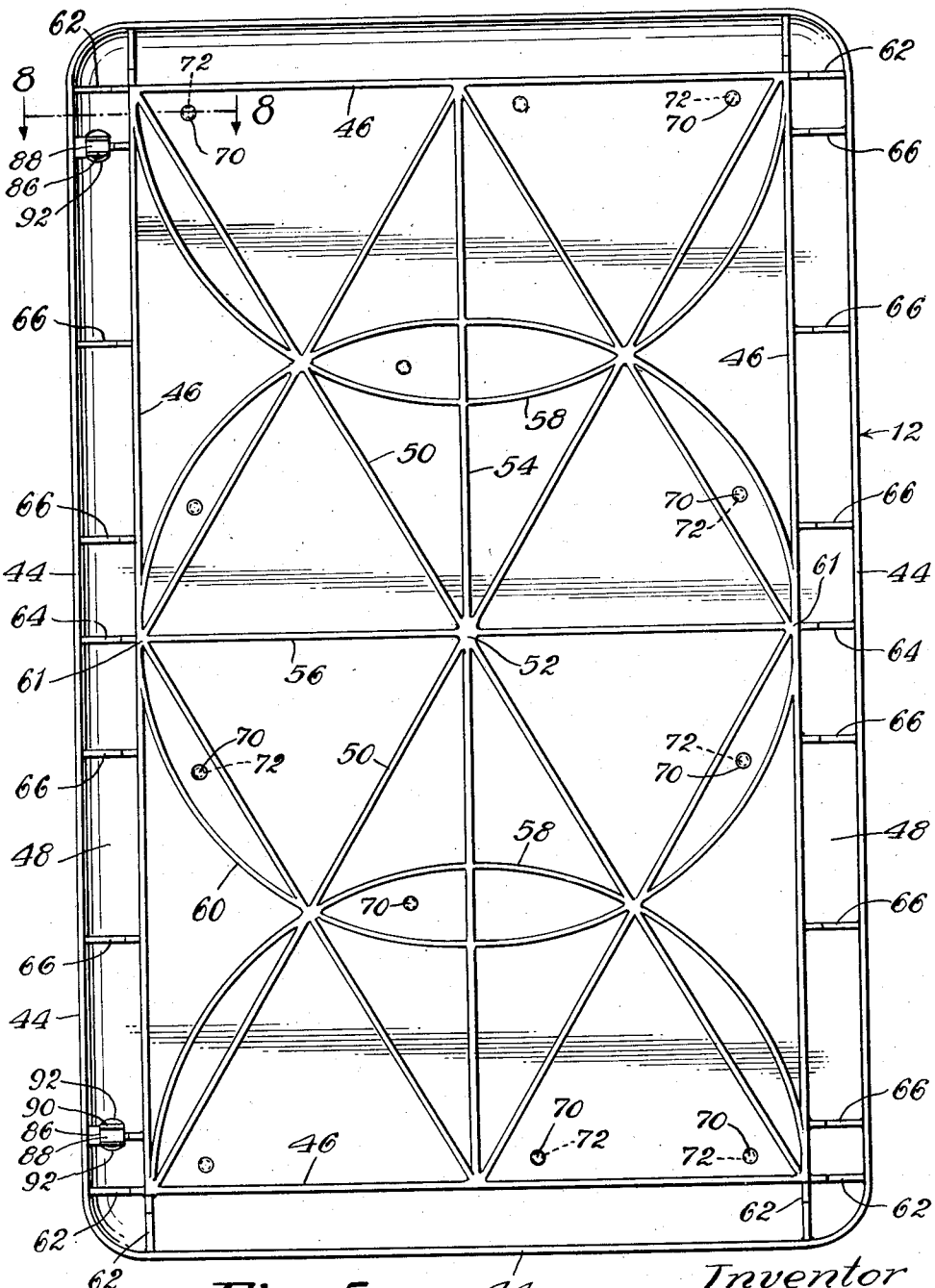


Fig. 5

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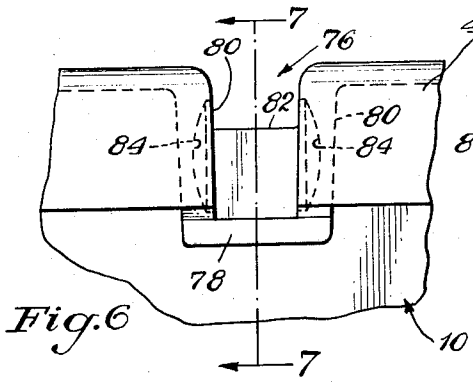


Fig. 6

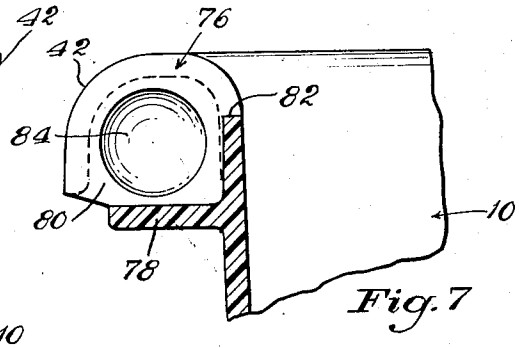


Fig. 7

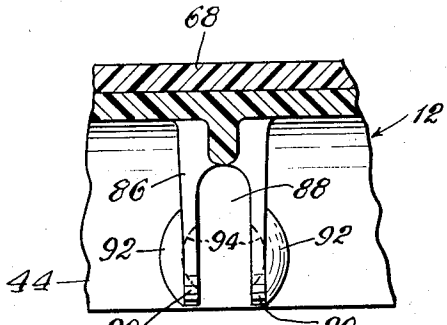


Fig. 9

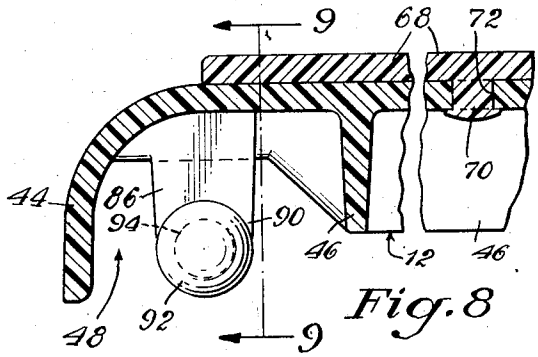


Fig. 8

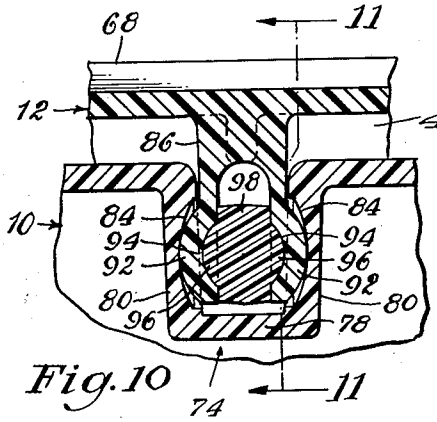


Fig. 10

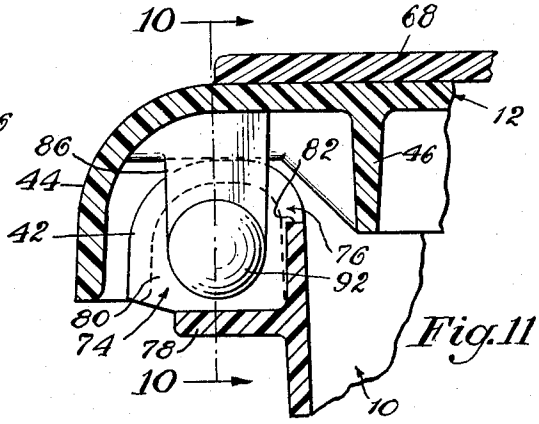


Fig. 11

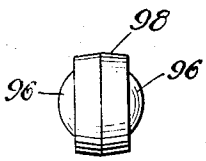


Fig. 13

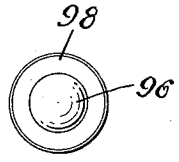


Fig. 12

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2,873,782

CLOTHES HAMPER

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Application November 26, 1956, Serial No. 624,287

12 Claims. (Cl. 150—48)

This invention is in the field of containers such as clothes hampers or the like, preferably made entirely out of plastic by injection molding, although it is by no means limited in this respect.

A primary object of my invention is a plastic container, such as a clothes hamper or the like, having good air circulation to prevent clothes from mildewing.

Another object is a plastic clothes hamper having a hinged top with a simplified but effective hinge.

Another object is a clothes hamper, preferably all-plastic, with a pivoted top constructed to withstand large compressive loads.

Another object is a rectangular all-plastic clothes hamper with integral reinforcing offset portions.

Another object is a rectangular clothes hamper which may be injection molded.

Another object is a rib structure for the top of an all-plastic clothes hamper or the like providing substantial air circulation.

Another object is a new and improved hinge structure for a container.

Other objects will appear from time to time in the ensuing specification and drawings in which:

Figure 1 is a front view of my clothes hamper partly in section;

Figure 2 is a side view;

Figure 3 is a side view, partly in section, on an enlarged scale with the top removed;

Figure 4 is a top view with the top or cover removed;

Figure 5 is a bottom view of the top or cover, removed from the container;

Figure 6 is a side view, on an enlarged scale, of one of the hinges on the body or container;

Figure 7 is a section along line 7—7 of Figure 6;

Figure 8 is a section on an enlarged scale along line 8—8 of Figure 5;

Figure 9 is a section along line 9—9 of Figure 8;

Figure 10 is a section along line 10—10 of Figure 11;

Figure 11 is a section along line 11—11 of Figure 10;

Figure 12 is a side view of a detail, and,

Figure 13 is an end view of Figure 12.

In the drawings, the container is shown in the form of a clothes hamper but there are certain features and characteristics that might be used in other structures. In any event, the hamper has a body **10** and a cover or top **12**. The body or main container is closed at its lower end by an integral wall **14** and is open at its upper end as at **16**. As shown, the body has a polygonal cross section with four sides in the form of a rectangle truncated upwardly or tapered so that the base is smaller than the top. The longer or major side walls **18** join the shorter or minor walls **20** at corner sections or portions **22** which are offset outwardly. The corner portions are integral with the side walls and tapered upwardly. As shown, each corner portion has generally perpendicular sections **24** and **26** joined by a smooth, well-rounded, integral turn **28**, with offset walls **30** and **32** joining the adjacent side walls. Each section **24** and **26** tapers upwardly increasing in width so that the side wall between adjacent corner portions, such as the short wall **20**, decreases in lateral width upwardly as shown in Figure 4.

The major or longer walls **18** are each provided with an intermediate somewhat centrally located offset portion or wall **34** which is tapered upwardly increasing in width so that the major walls are divided into generally equal wall sections **36** that are also generally equal to and approximately the same size as the minor walls **20**.

At each of the offset corner portions and also at the intermediate offset portion **34**, I provide depressions **38** which are integral with the bottom wall **14** and offset portions. These depressions are shown as somewhat square and projecting below the bottom wall **14** to function as feet or supports for the hamper. It should also be noticed that the offset walls **30** and **32** and the well rounded corner **28**, joining the sections **24** and **26**, flow into these depressions and, in effect, the walls of the depressions constitute a unitary extension of the offset corner portions.

As shown, the hamper has such a depression or projection at each corner to function as legs or supports and also a supporting leg generally in the middle of the major or longer walls **18**.

Both the inner and outer surfaces of the offset portions at the corners and intermediate the major walls taper upwardly increasing in width as shown in Figures 1 and 2, for example.

I provide an offset or flange **40** toward the top of the hamper. Above the flange the top edge of the hamper is rolled over outwardly at **42** providing, as shown in Figure 4, a smooth upper surface or rolled edge to support the top.

The top **12** has a turned over flange or skirt **44** which is constructed to closely oppose and fully overlie the rolled edge **42** on the hamper. The lower or inner surface of the top is provided with an integral rib construction as in Figure 5. As shown, this bracing or ribbing includes a marginal rib **46** which is somewhat parallel to the skirt **44**, but uniformly spaced from it, thereby providing a continuous downwardly opening channel or groove **48**, which receives and conforms to the turned over edge of the hamper. Within the rectangle or area defined by the marginal rib **46**, I may provide any suitable ribbing. I have shown diagonal ribs **50** which extend from one corner to the other crossing generally at the center **52** and longitudinal and lateral ribs **54** and **56**. I may provide arcuate ribs **58** at each end and a circular rib **60** around the center merging with the marginal ribs **46** on each side **61**.

The downwardly opening channel **48** extending around the side is spanned by a suitable number of lateral ribs which may be formed as extensions of the marginal ribs at the corners as at **62**, as extensions of the main lateral rib in the center, as at **64**, and with additional spanning ribs **66** at intermediate locations, as desired. In any event, these spanning ribs rest against the rolled over upper edge of the body or container to hold the channel in spaced relation to all points to the rolled over edge. Thus, the skirt of the top and the rolled over edge on all sides provide an air vent or open slot for the circulation of air to prevent the clothes in the hamper, which are normally moist, from spoiling and mildewing.

Additionally, on the top I provide a cover or plate **68** which may be buttoned to the top by a plurality of downwardly projecting buttons **70** through suitable apertures **72**.

The top and body are hinged together, for example, by two hinges **74**. Each hinge includes a socket and ball which have been shown in detail in Figures 6 through 13. In Figures 6 and 7, the upper outwardly rolled over edge of the container or body is countersunk at **76** and pro-

vided with an outstanding wall 78 below the countersink. Side walls 80 on each side complete the socket with the wall of the body terminating at 82. The inner surfaces of the walls 80 are provided with concave, somewhat spherical portions 84 opposing each other.

A ball element 86 depends from the top and is disposed in the channel 48. As shown, the ball is slotted at 88 to provide two somewhat spaced, flexible lobes 90, each of which has a somewhat spherical portion 92, back to back. The opposed or inner surfaces of the lobes have concave recesses 94 adapted to receive spherical projections 96 on a circular wedge element 98. The lobes are otherwise flexible and to insert the ball, the wedge is removed and the lobes compressed together and inserted in the socket. Thereafter, the wedge is forced between the lobes until the spherical projections 96 pop into the slots or recesses 94 providing a solid hinge.

The top may be mounted on the body by having the top in its raised position. The lobes are compressed and popped into the sockets. Thereafter, from the inside the wedges may be slipped into the slot 88 between the lobes.

The use, operation and function of my invention are as follows:

I provide a preferably all-plastic clothes hamper, although many of the features are applicable to other devices. Irrespective, the clothes hamper has a top which is hinged preferably at two places. The lower surface of the top has a rib structure which in addition to reinforcing the top providing a structurally strong member, and additionally spaces the top at all points from the rolled over upper edge of the container, thereby providing a continuous peripheral air gap giving good air circulation. I connect the top and bottom together by a hinge structure which includes a ball and socket. The rolled over edge of the body is preferably countersunk into a socket. The ribbing and skirt on the top provides a continuous downwardly opening channel and the ball elements depend from but are confined in the channel. When the top is mounted, the channel conforms to and somewhat surrounds the rolled over upper edge of the body.

The ball element is slotted and divided into two lobes which are somewhat flexible and may be compressed and popped into the socket. The wedge element can be inserted into the slot thereby providing a solid ball.

The top is provided with a plate which is buttoned into a suitable number of apertures for additional strength and decorative purposes.

The body has offset corner portions and intermediate offset portions in the major walls. Depressions in the form of supports or legs are formed as continuations of the offset portions, and the bottom wall is shown as separate planes rising to a common central platform 100.

Additionally, the hamper is well ventilated, structurally strong, but inexpensive to make. The top is reinforced and will withstand bending loads. The side walls of the container are reinforced by the offset portions to carry compressive loads caused by articles being placed on the top. The ball and socket elements of the hinge are aligned so that compressive loads merely tend to drive the ball element into the socket, rather than separating them. The hamper can be easily cleaned, will not rust or break and can be easily handled due to its light weight.

While I have shown and described the preferred form and suggested various modifications of my invention, it should be understood that suitable additional modifications exist which will be obvious. For example, while I have stated that the device is preferably all-plastic, it might be otherwise. Additionally, I have referred to the invention as a clothes hamper, but many important features could be used in other devices. The tapers of the body or container are important in injection molding so that the device can be gotten out of the mold. The top and body are, of course, molded separately. It is important that the ribbing in the top be integral. The wedge

98 might be metal or plastic. With these and other changes in mind, I, therefore, wish that the invention be unrestricted except as by the appended claims.

I claim:

1. In a container, such as a clothes hamper or the like, a body with side walls, an open upper end, and a bottom wall closing the lower end, a top connected to the body by hinges, each hinge including two elements, one on the body and the other on the top, one element being a partially open socket with concave spherical portions and the other element being a ball with convex spherical portions matching the concave spherical portions of the socket, the ball being split and including spaced, relatively flexible lobes, and an insertable wedge element in the ball split holding the convex spherical portions of the ball in the concave spherical portions of the socket.

2. The structure of claim 1 further characterized in that the inner surfaces of the lobes of each ball include concave opposed spherical portions, and the wedge elements include matching convex spherical portions.

3. The structure of claim 1 further characterized in that the sockets open both upwardly and outwardly.

4. In a plastic container, such as a clothes hamper or the like, a body closed at its lower end by an integral bottom wall and at its upper end by a top, a hinge connecting the top and body, the upper end of the body being rolled over outwardly thereby presenting a smooth upper edge to the top, the outer edges of the top having an arcuate skirt conforming generally to but spaced from the rolled over upper end of the body, the lower surface of the top having an integral rib network joined to the skirt at a plurality of points so that the rib network rests on and separates the top from the smooth upper edge of the body thereby providing a peripheral gap for air circulation.

5. The structure of claim 4 further characterized in that the integral rib structure includes an integral marginal rib conforming to but generally uniformly spaced from the depending skirt thereby providing a downwardly opening channel to receive the rolled over upper end of the body when the top is closed, and a plurality of integral ribs spanning the downwardly opening channel to engage the rolled over upper edge of the body and to support the top thereon, when closed.

6. The structure of claim 5 further characterized in that the body, in cross section, and the top are rectangular, and the hinge is disposed, in part, in the downwardly opening channel and, in part, is countersunk in the rolled over upper end of the body.

7. The structure of claim 5 further characterized in that the hinge includes a socket element countersunk in the rolled over upper end of the body and a ball element projecting down from but confined in the downwardly opening channel of the top.

8. The structure of claim 1 further characterized in that each partially open socket is on the body and each ball is on the top.

9. The structure of claim 1 further characterized in that the upper end of the body is rolled over outwardly, the outer edge of the top having a skirt which conforms generally to but is spaced from the rolled over upper end of the body, a rib structure on the top defining a peripheral downwardly opening channel with the skirt which conforms generally to and overlies the rolled over upper end of the body.

10. The structure of claim 9 further characterized in that the socket of each hinge is countersunk in the rolled over upper end of the body, and each ball is disposed in the peripheral channel and projects down from the top.

11. The structure of claim 4 further characterized in that the hinge includes two elements, one on the top and the other on the body, one element being a partially open socket with concave spherical portions and the other element being a ball with convex spherical portions matching the concave spherical portions of the socket, the ball

being split and including spaced, relatively flexible lobes, and an insertable wedge element in the ball split holding the convex spherical portions of the ball in the concave spherical portions of the socket, the inner surfaces of the lobes of the ball including concave opposed spherical portions, the wedge element having matching convex spherical portions.

12. In a plastic container, such as a clothes hamper or the like, a body closed at its lower end by an end wall and at its upper end by a top which is connected thereto by hinges, the upper end of the body being rolled over outwardly, thereby presenting a smooth upper edge to the top, the outer edges of the top having a depending skirt conforming generally to but spaced from the rolled over upper end of the body, elements spaced peripherally around the edges of the top and bottom but separating the outer edges of the top from the smooth upper edge

of the body to provide a peripheral gap for air circulation, and a downwardly opening channel in the top opposite the rolled over edge of the body and conforming generally thereto when the top is closed, each hinge being disposed, in part, in the downwardly open channel and, in part, countersunk in the rolled over upper end of the body.

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