

[54] COLLAPSIBLE FOOT LOCKER OR TRUNK

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FOREIGN PATENTS OR APPLICATIONS

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[57] ABSTRACT

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[58] Field of Search 190/19, 24, 37; 220/6

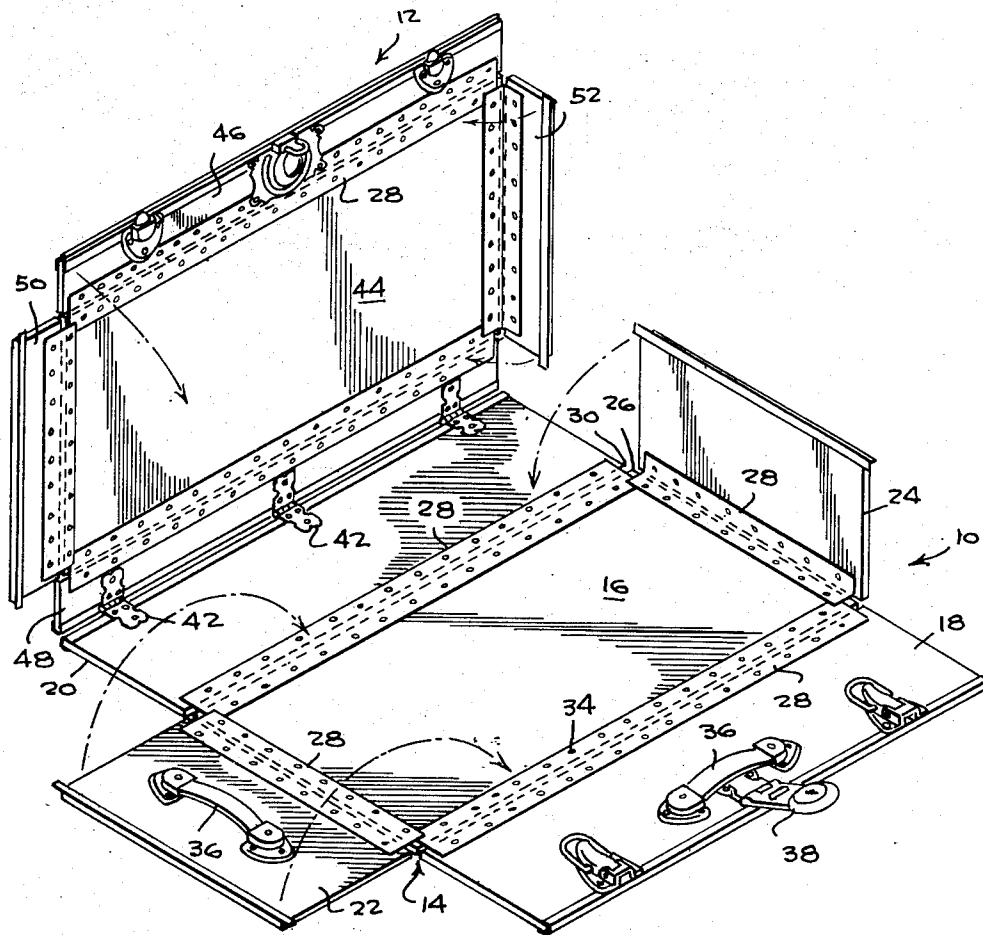
A collapsible trunk in which the walls of the lid and body are pivotally secured to the top and bottom panels respectively by a continuous flexible strip. The walls are secured to each other by rigid edge securing means in the form of angle irons. The trunk is knocked down by removing the corner angles and the angle irons that are held by the few bolts. The walls then pivot about the flexible strip to a planar position with their respective top or bottom panel.

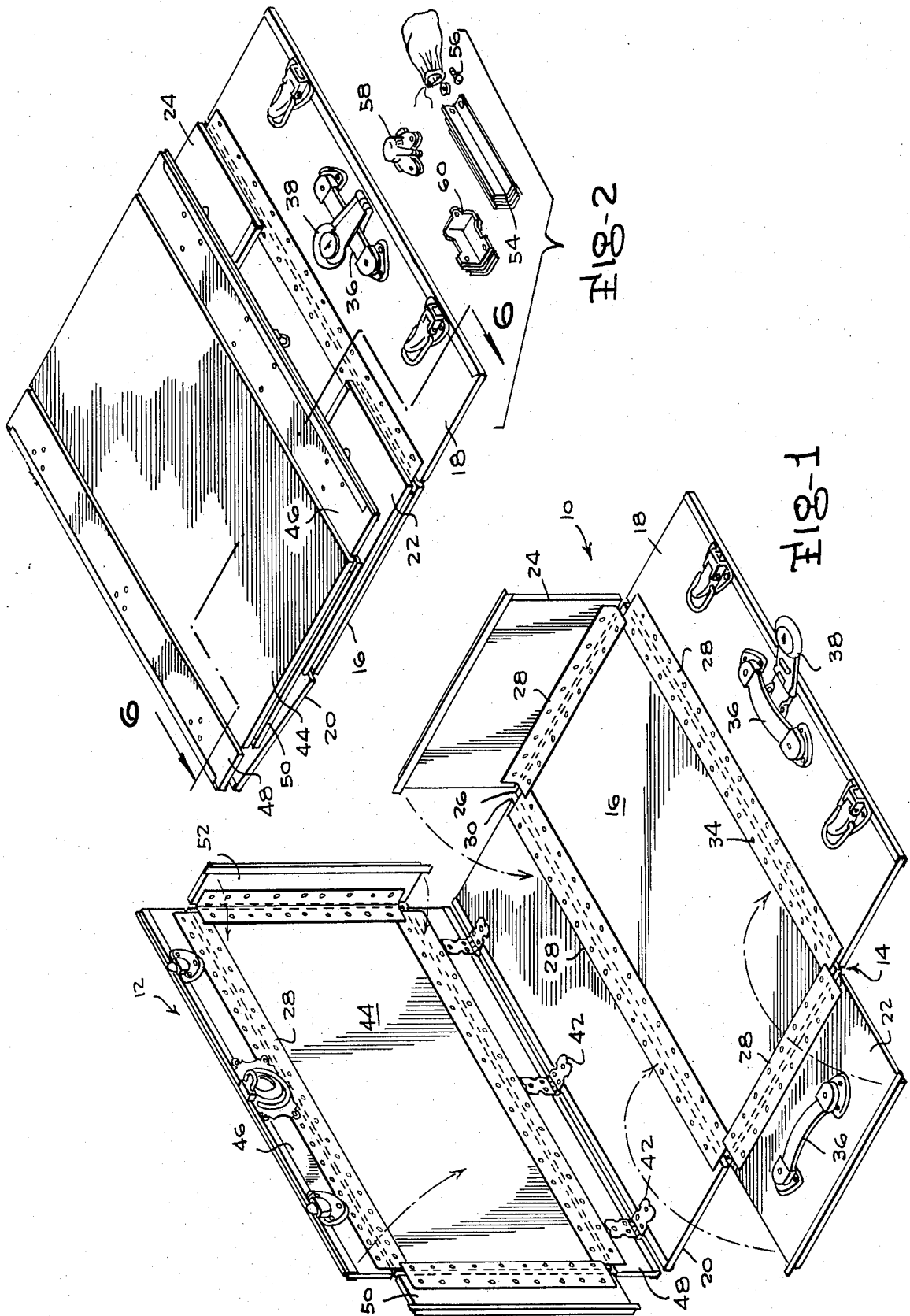
[56] References Cited

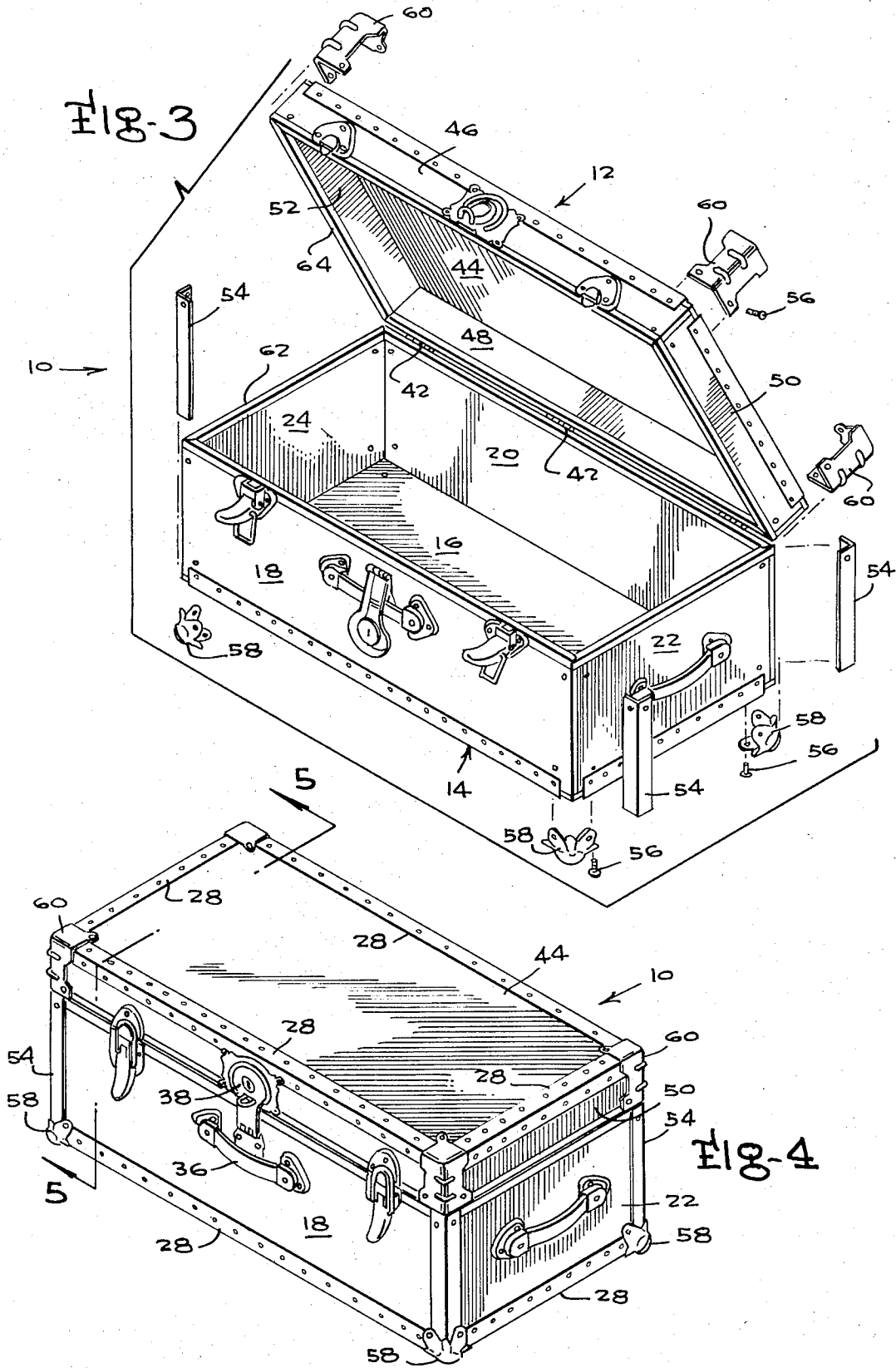
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10 Claims, 7 Drawing Figures







COLLAPSIBLE FOOT LOCKER OR TRUNK

BACKGROUND OF THE INVENTION

This invention relates generally to a collapsible trunk. More particularly, the present invention is concerned with a collapsible trunk which has unique and effective means for maintaining the collapsible sides in collapsed form ready for being rapidly and easily set up. Attempts have been made in the past to produce a collapsible trunk in a simple and economical manner but possess inherent undesirable characteristics. For instance, Arlitt — U.S. Pat. No. 2,752,018 discloses one approach that for many purposes is unsatisfactory. One of the drawbacks is the lack of adequate sealing between the juncture of collapsible panels, thus facilitating the entry of dust, insects and moisture. To simply add additional flanges to avoid these problems would substantially contribute to the work in setting up the trunk and defeat the purpose of achieving rapid set up.

OBJECTS OF THE INVENTION

It is the principal object of this invention to provide a collapsible trunk or foot locker that may be easily and quickly knocked down and set up.

Another object of the present invention is the provision of a flexible means to permit all panels to be pivotally connected to corresponding top and bottom panels.

A further object of the present invention is the provision of a collapsible foot locker having flexible means between pivoting flexible members forming the trunk and which flexible means is continuous to provide a substantial sealing effect at the edges.

Another object of the present invention is the provision of a collapsible trunk having removable vertical edge securing means which is rigid to secure adjacent vertical edges on respective front, back and sides to the corresponding edges of the top and bottom panels.

Yet a further object of the present is the bracing of corner angles to overlap and protect the corners of the collapsible trunk.

These and other objects of present invention shall become readily apparent upon careful consideration of the accompanying drawing, wherein,

THE DRAWINGS

FIG. 1 is a perspective view of the collapsed trunk of present invention partly knocked down.

FIG. 2 is a perspective view of the collapsible trunk of the present invention in completely knocked down or collapsible position and includes showing of the edge securing means for the top and bottom panels as well as the corner angles.

FIG. 3 is a composite drawing partially exploded illustrating the collapsible trunk of the present invention in nearly set up position illustrating the position of the edge securing means and the corner angles.

FIG. 4 is a perspective view of the collapsible trunk of present invention in completely set up condition.

FIG. 5 is a cross-sectional view taken along lines 5—5 of FIG. 4 and illustrating the position of the collapsible trunk of the present invention in set up condition and in phantom lines, the position of the front and back wall panels with the lid folded underneath.

FIG. 6 is a cross-sectional view of the collapsible trunk of present invention in completely knocked down condition and shown for convenience in outer container.

FIG. 7 is a cross-sectional view taken along line 7—7 of FIG. 5 illustrating the corner construction.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring particularly to FIGS. 1 and 4 of the drawings, the collapsible trunk of the present invention is generally depicted by the numeral 10 as being composed primarily of a lid 12 and a body 14.

The body 14 is formed with a bottom panel 16, front, back and side walls. The walls are secured to corresponding edges 26 of the bottom panel 16 by means of a flexible, elongated and continuous strip 28 that may be secured to the edges 26 of the bottom panel and a corresponding adjacent edge 30 of each of the front, back and side walls 18, 20, 22 and 24. As may best be seen in FIG. 6, a space 32 is provided in knocked down condition between edges 26 and 30 in order to permit the pivoting of the walls about the bottom panel and along the longitudinal axis of the flexible strip. The space, as particularly shown in FIG. 6, should be of a dimension of at least the thickness of the bottom panel. It is important that the flexible strip 28 be continuous to maintain the trunk secure and tight against moisture, dust and insects, and as such, is desirably formed from well known materials such as flexible fiberboard which may be suitably impregnated for waterproofness, or plastics such as polyvinyl chloride to provide toughness and waterproofness, or metal that is resilient and bendable. The strip is secured to the bottom and the walls by means of rivets or tacks 34 which are suitably located along the longitudinal length of the flexible strip. The flexibility of the strip is important in the present invention since it provides the means for permitting the trunk to collapse flat and at the same time when positioned in set up condition will maintain the integrity of the inside of the trunk. Depending upon the selection of the material for the flexible and resilient strip, the toughness and scuff resistance and lasting qualities can be such as to permit the trunk to be used and even abused without any damage.

The side panels may be provided with one or more handles 36 suitably secured to the side. The front panel is also provided with the handle 36 and a latch and locking mechanism 38 cooperating with corresponding member on the lid 12. On each side thereof, there is also provided a swinging latch member 40 which is secured to complementary latch member on the lid. At the top of the rear wall 20 are hinges 42 which are also secured to a lid 12.

The lid is constructed in the same manner as the body 14 of the trunk in that it is provided with a top panel 44, front, back and side walls 46, 48, 50 and 52. Flexible strips 28 are identical to those previously described and secured in the same manner. The space 32 between the top panel and the front wall as may be seen in FIG. 6 is of the same dimensions as that between the bottom panel and front wall.

The hinges 42 are such as will permit a complete folding back of the top rear wall 48 as shown in FIG. 6 in order to completely collapse the trunk for knocked down condition.

When in substantially set up position as shown in FIG. 3, rigid edge securing means in the form of angle irons 54 are provided. These angle irons are secured to adjacent edges of the walls by suitable means such as bolts 56. Corner angles 58 are positioned in each of the bottom corners to overlap a portion of the flexible strip 28 and the angle 54 as best shown in FIGS. 3, 4 and 5. The angles 54 and the corner angles 58 are preferably of rigid materials such as metal or hard, tough plastic such as polyvinyl chloride, nylon, etc. to provide suitable protection for the trunk.

A combination angle for both the corner and the sides is provided for the lid 12 and is shown at 60.

The confronting edges of the lid 12 and the body 14 of the trunk are preferably provided with complementary metal channels 62 on the upper edges of the body and 64 on the lower edges of the lid. As best seen in FIG. 6, channel 64 is provided with a protrusion 66 which is to be received in complementary groove 68 in the channel 62. When closed, the protrusion 64 fits into the complementary groove 68 to provide a tight seal against moisture, insects and dust.

In order to knock down the collapsible trunk, it is a simple matter to remove the corner angles 58 and the angles 54 by means of the few bolts 56 that are used to secure them and then perform the same operation on the lid 12 to remove the combination corner angle 60. The walls 18, 20, 22 and 24 of the body 14 fall down of their own weight planar to the bottom and if the trunk is turned over, as shown in FIG. 1, so that the inside of the trunk faces toward the ground, the lid may be folded back on hinges 42 as shown in FIG. 6 to form the compact, knocked down condition as shown in FIG. 2 and 6. In this knocked down condition, the collapsed trunk may be transported simply and easily or else put away during periods of nonuse and may be stored or shipped in a suitable flat container, as shown in phantom lines of FIG. 6, with substantial savings in cargo space. For light, inexpensive trunks the savings achieved in transporting a knocked down trunk as compared to a set up bulky trunk is substantial.

I claim:

1. A collapsible trunk comprising a body including front, side and rear walls and a bottom panel, flexible means securing an edge of each said wall to an adjacent edge of said bottom, said flexible means being continuous and overlapping said adjacent edges along substantially the entire length of said adjacent edges to seal said edges and permit pivotal movement of said walls about the longitudinal axis of said flexible means, adjacent walls having contiguous edges in set up position, edge securing means adapted to removably secure said contiguous edges, a lid hinged to the top of said rear wall and contacting the upper edges of each said wall upon closing, and said trunk being collapsible upon removal of said edge securing means and pivoting each said wall down planar with said bottom.

2. The collapsible trunk of claim 1 including said lid

having a top panel and surrounding front, side and rear lid walls,

flexible means securing an edge of each lid wall to an adjacent edge of said top panel,

said flexible means being continuous and overlapping said adjacent edges to seal said edges and permit pivotal movement of said lid walls about the longitudinal axis of said flexible means,

adjacent lid walls having contiguous edges in set up position,

edge securing means adapted to removably secure said contiguous edges, and

said lid being collapsible with said trunk.

3. The collapsible trunk of claim 1 including said flexible means being an elongated strip of flexible paperboard, metal or plastic.

4. The collapsible trunk of claim 1 including said flexible means having a plurality of rivets spaced along the length of said flexible means.

5. The collapsible trunk of claim 1 including said edge securing means being rigid.

6. The collapsible trunk of claim 5 including a corner angle positioned on each bottom corner and overlapping said flexible means and said rigid edge securing means.

7. The collapsible trunk of claim 1 including a space formed between each wall and said bottom panel in collapsed position.

8. The collapsible trunk of claim 1 including said flexible means being positioned on the outside of said trunk to provide a substantial seal between said edges.

9. The collapsible trunk of claim 1 including said lid having a top panel and surrounding front, side and rear lid walls,

flexible means securing an edge of each lid wall to an adjacent edge of said top panel,

said flexible means being continuous and overlapping said adjacent edges to seal said edges and permit pivotal movement of said lid walls about the longitudinal axis of said flexible means,

adjacent lid walls having contiguous edges in set up position,

edge securing means adapted to removably secure said contiguous edges,

said lid being collapsible with said trunk,

said flexible means being an elongated strip of flexible paperboard, metal or plastic,

said flexible means having a plurality of rivets spaced along the length of said flexible means, and

said edge securing means being rigid.

10. The collapsible trunk of claim 9 including a corner angle positioned on each bottom corner and overlapping said flexible means and said rigid edge securing means,

a space formed between each wall and said bottom panel in collapsed position, and

said flexible means being positioned on the outside of said trunk to provide a substantial seal between said edges.

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