CUSHIONED CONTAINER FOR FRAGILE ARTICLES

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This invention relates to shipping containers and more particularly to a container having an outer box and an inner liner for cushioning the contents.

The invention comprehends a cushioning arrangement including an inner liner particularly suited for the packaging of a fragile hollow cylindrical article such as a tapered glass bowl.

It is an object of this invention to provide, in a packaging arrangement of the type described, an inner liner adapted to retain the packaged article in a predetermined position free from contact with the outer container and also to cushion the packaged article from the normal shocks incident to handling and transportation of packages.

A more specific object of the invention is to provide, in a package of the type described, a one-piece inner liner having a bottom wall panel and a plurality of side wall panels extending upwardly and outwardly therefrom and interconnected by novel corner members which incline upwardly and inwardly from the bottom panels to create a wedging action and thereby retain the packaged article in firm contact with the bottom panel of the liner and away from the side walls of the outer container.

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

FIGURE 1 is a perspective view of a liner embodying features of the invention, with the liner shown in erected condition;

FIGURE 2 is a top plan view of the structure illustrated in FIGURE 1;

FIGURE 3 is a vertical section taken on line 3—3 of FIGURE 2; and

FIGURE 4 is a plan view of the blank from which the liner illustrated in FIGURE 1 may be formed.

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

Referring now to the drawing for a better understanding of the invention, and particularly to FIGURES 2 and 3, it will be seen that the complete package for the fragile article such as a tapered glass bowl A includes an outer box or shipping container C having an inner packing or liner L connected generally at L.

The details of the outer container C are not shown in detail as the construction of this outer box may be conventional having a pair of top and bottom walls which are preferably square and interconnected by four side walls.

The essential feature of the invention resides in the liner L which is shown to best advantage in FIGURE 1 and which may be formed from an unitary blank of suitable sheet material, such as corrugated paperboard, as illustrated at B in FIGURE 4 of the drawing.

The liner includes an octagonal bottom panel 10 which is preferably symmetric in shape to which opposed pairs of upstanding side wall panels 12 are hinged to the bottom panel 10 along hinge lines 14 at the alternately spaced side edges of the panel 10.

It will be seen that side wall panels 12 are preferably trapezoid shaped with their upper edges being longer than their lower edges and being of substantially the same length as the related side walls of outer container C. As best seen in FIGURE 2 side panel walls 12 of the liners slope upwardly and outwardly from the bottom panel 10 to the upper extremity of the outer container C and are snugly disposed in the corners formed by the junctures of the box top wall and respective side walls. Because the upper edges of the side panels of the liner are of the same dimension as the outside container when the liner is placed in the outer container the ends of adjacent side panels meet to form a square upper periphery which serves to maintain the liner rigid in its erected condition as shown in FIGURE 1.

Still referring to FIGURE 1 it will be seen that each pair of adjacent liner side panels is interconnected at the related corner of the liner by a corner support member 16 which includes a pair of preferably triangular outer sections 20 and a preferably triangular center section 22. The center section 22 is disposed in an upright position with its base edge hinged to the related edge of the bottom panel 10, along hinge line 24, and is disposed to slope upwardly and inwardly toward the longitudinal axis of the liner with its point or apex at the top of the liner.

Each section 22 presents an uninterrupted, triangular, inwardly and downwardly facing, flat, wedge surface engageable with an upper portion of the packaged article. The side sections 20 of the liner are each disposed in an inverted position with their base at the top of the liner and with their outer and inner side edges hingedly attached along hinge lines 26 and 28 to the related liner side panels 12 and the corner support center section 22, respectively.

Thus, when the packaged article is placed within the liner, as shown in FIGURE 3, in an inverted position with the lip or rim of the bowl resting on the upper surface of the liner bottom panel 10 at the base of the corners support member center sections 22 it will be maintained in position by the wedging action of the corner support center section 22. This wedging action will prevent the vertical movement of the packaged article relative to the liner bottom panel, and, because the liner bottom panel is of lesser dimension then the bottom wall of the outer box, the packaged article will be maintained in a position free from contact with the top and side walls of the outer container.

I claim:

1. In a container, for packaging a tapered round fragile article such as a glass bowl, having an outer paperboard box with a pair of square top and bottom walls interconnected by four similar side walls, an inner cushioning liner formed from a unitary blank of foldable paperboard comprising:

(a) an octagonal bottom panel disposed within the container on said bottom wall and having opposed pairs of alternately spaced side edges extending parallel to and positioned inwardly a relatively short distance from the respective box side walls; and

(b) two pairs of opposed upstanding, trapezoid-shaped side panels hinged to said alternately spaced bottom panel side edges and sloping upwardly and outwardly therefrom to said box side walls;

(c) the upper edges of said liner side panels being of substantially the same dimension as the box side walls and being snugly disposed in the corners formed by the junctures of the box top and respective side walls;

(d) each pair of adjacent liner side panels being interconnected by a corner support member including a center and a pair of outer sections of triangular shape and of substantially similar dimensions;

(e) the center section of each corner support member being hinged at its base to a side edge of said liner bottom panel between a pair of adjacent side pan-
els and sloping upwardly and inwardly therefrom to form with said liner bottom panel an article receiving pocket which is smaller at the top;

(f) the side sections of each corner support member extending inwardly from the ends of adjacent side panels in spaced relation with their side edges disposed between the center section and related side panels and hinged thereto.

4. In a container, for packaging a fragile article such as a glass bowl, having an outer paperboard box with a pair of top and bottom walls interconnected by side walls, an inner cushioning liner formed from a unitary blank of foldable paperboard comprising:

(a) a polygonal bottom panel disposed within the container on said bottom wall and having opposed pairs of alternately spaced side edges extending parallel to and positioned inwardly a relatively short distance from the respective box side walls; and

(b) a plurality of upstanding side panels hinged to said alternately spaced bottom panel side edges and sloping upwardly and outwardly therefrom to said box side walls;

(c) the upper edges of said liner side panels being of substantially the same length as the related box side walls and being snugly disposed in the corners formed by the junctures of the box top and respective side walls;

(d) each pair of adjacent side panels being interconnected by a corner support member including a center and a pair of side sections;

(e) the center section of each corner support member being hinged at its base to a side edge of said liner bottom panel between a pair of adjacent side panels and sloping upwardly and inwardly therefrom to form with said liner bottom panel an article receiving pocket which is smaller at the top;

(f) the side sections of each corner support member extending inwardly from the ends of adjacent side panels in spaced relation with their side edges disposed between the center section and related side panels and hinged thereto.

5. In a container, for packaging a fragile article such as a glass bowl, an inner cushioning liner formed from a unitary blank of foldable paperboard comprising:

(a) a polygonal bottom panel; and

(b) a plurality of upstanding side panels hinged to alternately spaced bottom panel side edges and sloping upwardly and outwardly therefrom;

(c) each pair of adjacent side panels being interconnected by a corner support member including a center and a pair of side sections;

(d) the center section of each corner support member being hinged at its base to a side edge of said liner bottom panel between a pair of adjacent side panels and sloping upwardly and inwardly therefrom at an angle of less than ninety degrees to form with said liner bottom panel an article receiving pocket which is smaller at the top;

(e) the side sections of each corner support member extending inwardly from the ends of adjacent side panels in spaced relation with their side edges disposed between the center section and related side panels and hinged thereto.

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