

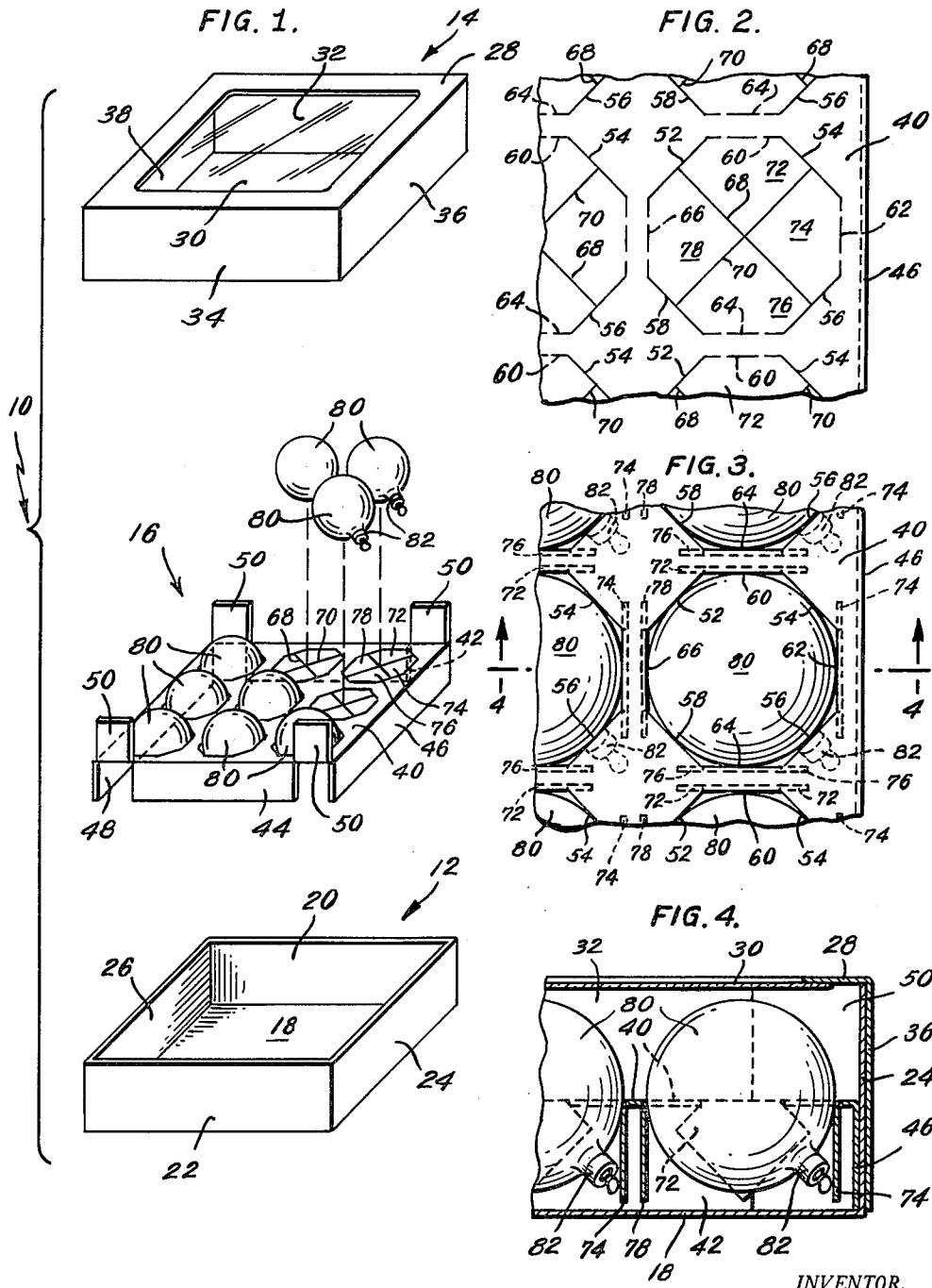
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PACKING FOR FRANGIBLE ARTICLES

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**PACKAGE FOR FRANGIBLE ARTICLES**

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The present invention relates to a package for frangible articles. More particularly, the present invention relates to a box for the packaging of fragile articles such as Christmas tree ornaments, the ornaments being maintained in the box in suspended and fixed position, so as to be prevented from movement during shipping and handling thereof, wherein breakage of the ornaments is prevented.

The packaging of frangible articles, such as Christmas tree ornaments, has normally been accomplished by constructing a box with dividers or partitions that define a plurality of individual pockets. The ornaments as placed in the pockets were separated from adjacent ornaments by the partitions that defined the pockets. However, there was no consideration given to the movement of the ornaments within the pockets during handling and shipping of the boxes, and it has been found that in the handling and/or shipping of these prior known packages, the ornaments had a tendency to move or rotate within the compartments, the movement producing a scuff mark on the surface of the ornament which detracted considerably from the appearance thereof. Furthermore, since the divider or partitions of the prior packages were relatively flimsy in construction a sufficient cushioning effect was not provided, which resulted in the breaking of many ornaments during shipping or handling of the packages.

The present invention represents an innovation in the field of ornament packaging and not only provides a package that is designed to retain ornaments therein in fixed relation so as to prevent scuffing and breakage thereof, but further provides a package that is adapted to display the ornaments therein in such a manner as to most favorably bring out the ornamental aspects thereof. For this purpose, the package embodied in the present invention is formed with a base section, a cover section and an intermediate section that is disposed within the base section. The intermediate section includes a horizontal panel that is formed with a plurality of spaced openings that are defined by pivotally mounted flaps, the flaps being responsive to movement of an ornament thereagainst to pivot downwardly to form an opening for receiving an ornament therein. Each of the openings is shaped and proportioned for frictionally receiving an ornament therein so that the ornament is maintained in relatively tight fitting but exposed relation within the opening. The horizontally disposed panel of the intermediate section in which the openings are formed, is spaced from the bottom wall of the base section a sufficient distance to enable the ornaments to be suspended from the base section bottom wall so as to effectively mount the ornaments in cushioned relation. The intermediate section and the ornaments fixed therein are prevented from movement with respect to the cover and base sections by the use of a plurality of tabs that are formed integral with the intermediate section and extend upwardly with respect to the panel thereof. The tabs are coextensive with the top edge of the base section and are adapted to engage the underside of the top wall of the cover section. The tabs thus prevent movement of the intermediate section in a direction toward the cover section and thereby cooperate to locate the intermediate section in fixed relation between the base and cover sections. The horizontal panel is thus located between the bottom wall of the base section and

the top wall of the cover section and retains the ornaments therein in suspended relation so as to provide a cushioning effect therefor. Furthermore, by the elimination of the usual partition associated with Christmas tree ornaments, each of the ornaments is individually located in spaced relation with respect to adjacent ornaments, the complete package presenting an attractive and interesting ornamental display.

Accordingly, it is an object of the present invention to provide a package for frangible articles that locates the articles in separated, suspended position for the protection thereof during shipping and handling.

Another object of the present invention is to provide a package for Christmas tree ornaments which includes an intermediate section that is formed with a plurality of openings for receiving ornaments therein in frictional relation for the ornamental display thereof.

Still another object is to provide a package for ornaments that includes a base section, a cover section and an intermediate section, the intermediate section including a panel that is suspended between the base and cover sections and is formed with spaced openings for receiving ornaments therein in frictional relation.

Another object is to provide a box for use in the packaging of frangible articles that includes an intermediate section that is spaced from the top wall of the box top section and from the bottom wall of the box bottom section, the spacing of the intermediate section being accomplished by the use of upwardly extending tabs and downwardly extending walls.

Still another object is to provide an intermediate section for use in the packaging of frangible articles in a box, the intermediate section being formed with a plurality of upwardly extending tabs that are adapted to locate the intermediate section in fixed position with respect to a cover section of the box.

Another object is to provide a box for the packaging of frangible ornaments that includes an intermediate section formed with a plurality of openings, the openings being defined by pivotally mounted flaps that are responsive to the movement of the ornaments thereagainst to accommodate the ornaments and to move downwardly for location adjacent the bottom wall of the bottom section of the box so as to substantially suspend the ornaments within the openings.

Still another object is to provide an intermediate section that is formed with a horizontal panel that is provided with means for preventing the collapsing of the panel when the ornaments are located in openings formed therein.

Other objects, features and advantages of the invention will become apparent as the description thereof proceeds when considered in connection with the accompanying illustrative drawings.

In the drawings which illustrate the best mode presently contemplated for carrying out the present invention:

FIG. 1 is an exploded perspective view of the package embodied in the present invention showing the relative positions of the component parts of the package;

FIG. 2 is a fragmentary top plan view of a portion of the intermediate section of the package embodied herein showing the scoring of the intermediate section panel for defining flaps pivotally joined thereto;

FIG. 3 is a fragmentary top plan view similar to FIG. 2 showing the openings defined by the pivoted flaps and further illustrating the location of the flaps when the ornaments are disposed therein; and

FIG. 4 is a sectional view taken along lines 4-4 in FIG. 3.

Referring now to the drawing and particularly to FIG. 1, the box or package embodied in the present inven-

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tion is generally indicated at 10 and includes a bottom or base section generally indicated at 12, a top or cover section generally indicated at 14, and an intermediate section or insert generally indicated at 16. The sections 12, 14 and 16 of the package 10 are preferably formed of cardboard material and are cut from blank form and set up in the manner, as illustrated, by automatic machinery.

As shown in FIG. 1, the base section 12 is formed with a bottom wall 18 to which are joined upstanding side walls 20 and 22 and end walls 24 and 26. The side walls 20, 22 and end walls 24 and 26 are generally vertical with respect to the normal position of the box and are perpendicular to the horizontally disposed bottom wall 18. The cover section 14 is adapted to be inter-fitted with the base section 12 and has a configuration generally corresponding thereto. The cover section 14 includes a top wall 28 that is provided with a transparent window 30 for viewing the interior of the package 10. Joined to the top wall 28 and depending therefrom are side walls 32, 34, and end walls 36, 38. The vertical dimension of the side and end walls of the cover section 14 are generally similar to the corresponding walls of the bottom section 12, whereby the cover section 14 is adapted to envelop the bottom section 12 when the sections are located in interfitting relation.

Located within the base section 12 is the intermediate section 16, which as seen in FIG. 1, includes a horizontally extending panel 40 to which are joined downwardly extending side walls 42 and 44 and end walls 46, 48. The side walls 42, 44 and the end walls 46, 48 of the intermediate section 16 are adapted to engage the bottom wall 18 of the bottom section 12 and are located in parallel engaging relation with the corresponding side and end walls of the bottom section. The side and end walls of the intermediate section 16 are somewhat less in vertical dimension than the height of the corresponding side and end walls of the base section 12. The panel 40 is thus located in horizontal relation at a level between the top and bottom edges of the base section and in spaced parallel relation with respect to the bottom wall 18 of the base section 12.

In order to maintain the intermediate section 16 in fixed relation with respect to the cover section 14 when the base and cover sections are in assembled relation, a plurality of tabs 50 are provided and are formed as part of the side or end walls of the intermediate section. As shown in FIG. 1, the tabs 50 are cut out from the side walls 42 and 44 and are bent upwardly with respect to the panel 40 so as to be perpendicularly disposed with respect thereto. If the package or box 10 were formed in a rectangular configuration so that the end walls were longer than the side walls, the tabs 50 would be cut out from the longer of the walls so as not to remove too much material from the shorter walls. Thus, the longer of the downwardly depending walls would have sufficient material to support the panel 40. It is understood that if the tabs were removed from the shorter of the walls, the remaining portions of these shorter walls would not be sufficient to properly support the panel 40 above the bottom wall 18. As shown in FIG. 1, the dimensions of the side and end walls of the intermediate section 16 are substantially equal. Therefore, in the box as illustrated, it is not material from which of the downwardly depending walls the tabs 50 are cut.

Since the tabs 50 are designed to engage the under surface of the top wall 28 but still permit the cover section to completely envelope the base section, the tabs terminate substantially at the uppermost edges of the adjacent side walls of the base section 24. Thus as seen in FIG. 4, the upper edges of the tabs 50 are generally coextensive with respect to the upper edges of the adjacent side walls. Accordingly, when the cover section 14 is placed in enveloping relation on the base

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section 12, the uppermost edges of the tabs 50 will engage the undersurface of the top wall 28. The intermediate section 16 will thereby be limited with respect to upper movement thereof, and since the downwardly depending side walls 42, 44 and end walls 46, 48 engage the bottom wall 18 of the base section 12, the intermediate section 14 will be disposed in fixed relation with respect to the base and cover sections. The panel 40 of the intermediate section 16 will thus be located in relatively fixed spaced relation with respect to the bottom wall 18 and top wall 28.

In order to locate the ornaments to be packaged in the box 10 in fixed relation, a plurality of openings are formed in the panel 40. The openings are located in spaced relation with respect to each other and are formed by cutting and scoring the panel 40 as will be described. Although only nine openings are shown formed in the panel 40, more or less may be formed therein as required by the configuration of the box sections. Referring now to FIGS. 2 and 3, one of the openings as formed in the panel 40 is illustrated and will be described. It is understood that the other openings for receiving the ornaments therein are similarly formed. In order to form an opening in the panel 40, a plurality of cuts indicated at 52, 54, 56 and 58 are cut into the panel. Score lines indicated at 60, 62, 64 and 66 are formed in alternate relation with respect to the cuts 52, 54, 56 and 58 and define an octagon-shaped opening therewith. Perpendicularly extending cuts 68 and 70 intersect the cuts 52, 54, 56 and 58 to define flaps 72, 74, 76 and 78. Flap 72 hinges along the score line 60, while the corresponding flaps 74, 76 and 78 hinge along their respective score lines 62, 64 and 66. It is understood that the flaps are downwardly yieldable as an ornament indicated at 80 is pushed down through the opening defined by the flaps, the flaps thereby forming resilient frictional members for engagement with the surface of the ornament.

Since the ornaments 80 are fragile and subject to easy breakage, it is desirable to insert the ornaments in position within the openings defined by the flaps without the flaps exerting resistance to the insertion thereof. Accordingly, in order to reduce the resistance of the flaps to the entry of the ornaments 80 into the openings, score lines 62, 66 of the flaps 74, 78, respectively are scored more deeply than the lines 60, 64 of the flaps 72, 76 to define weak connections. Thus, as the ornaments 80 are inserted into the openings defined by the flaps, the flaps 74, 78 which are relatively loose will readily yield to a slight pressure, thereby providing for easy entry of the ornament into the opening. However, since the flaps 72, 76 are relatively firm and present some resistance to the entry of the ornament, sufficient friction is provided thereby so as to frictionally engage the ornament when it is inserted into the opening. The configuration of the opening, that is, the octagon shape thereof, further lends itself to frictionally holding the spherical ornament 80 in position. Thus the ornament, when located within the octagon shaped opening, is frictionally held by the sides of the opening and is further engaged by the flaps 72 and 76.

The relatively firm flaps 72 and 76 have an additional function since they are normally moved to a position whereby the lowermost edge thereof is located closely adjacent the bottom wall 18 of the base section 12. This is particularly important for the centermost openings since the portions of the panel 40 surrounding these openings is relatively unsupported. Thus, the weight of the ornaments within the openings located in the central portion of the panel has a tendency to cause the center part of the panel 40 to bow inwardly. By locating the flaps in the downwardly projecting position thereof as seen in FIG. 4, the lower edge of the relatively firm flaps 72 and 76, in particular, will tend to engage the upper sur-

face of the bottom wall 18 and thus locate the panel 40 in the spaced position thereof with respect to the bottom wall 18. The ornaments 80 are thus suspended within the openings defined by the flaps and are prevented from striking the bottom wall 18. If desired, when an ornament is moved to its inserted position thereof, the neck indicated at 82 may be located closely adjacent the bottom wall 18 so that a hook secured to the neck will tend to strike the bottom wall if the panel 40 is pushed inwardly. This will serve to further protect the frangible surface of the ornament.

When the ornaments 80 are mounted in the openings defined by the flaps and the package is fully assembled with the cover section 14 enveloping the base section 12, the ornaments 80 are suspended between the cover and base sections. The tabs 50 cooperate with the side and end walls of the intermediate section 16 to properly position the panel 40 so as to locate the ornaments 80 in their suspended position. The cooperating tabs and downwardly projecting side and end walls of the intermediate section 16, as indicated, retain the panel 40 in relatively fixed position. The ornaments 80 are thus retained in substantially a fixed position, and sliding of the ornaments in and out of the openings defined by the flaps is substantially prevented. The upstanding tabs 50 prevent the panel 40 from rising, and the downwardly projecting side and end walls and the lower ends of the flaps 72 and 76 prevent the panel 40 from falling inwardly. The firm flaps 72 and 76 further cooperate with the edges of the openings to frictionally retain the ornaments in position. Since there are no partitions separating the ornaments 80 in the packaged position thereof, a unique display is presented that is both ornamental and artistic in appearance. Thus, the box embodied in the present invention not only defines a package that provides for the cushioning of the ornaments located therein, but further provides for an unusual ornamental array that lends to the commercial appeal of the ornaments. As hereinabove described, it is significant to note that two of the flaps 72 and 76 are relatively firm, while the flaps 74, 78 are relatively loose so that the ornaments may be easily inserted in position in the opening defined by the flaps.

While there is shown and described herein certain specific structure embodying the invention, it will be manifest to those skilled in the art that various modifications and rearrangements of the parts may be made without departing from the spirit and scope of the underlying inventive concept and that the same is not limited to the particular forms herein shown and described except insofar as indicated by the scope of the appended claims.

What is claimed is:

1. In a package for frangible ornaments, a base section, a cover section interfitted on said base section in enveloping relation therewith, an intermediate section located in said base section for receiving said ornaments therein and including a panel to which are joined a pair of parallel side walls and a pair of parallel end walls, said pairs of parallel walls depending from said panel for engagement with said base section, wherein said panel is elevated from said base section and is spaced from said cover section, one opposing pair of depending parallel walls of said intermediate section having portions struck out adjacent to the corners thereof to define pairs of opposing tabs, said tabs being bent upwardly with respect to the walls from which they are struck out and being located in parallel relation therewith, said tabs being located at right angles to said panel and the uppermost edges of said tabs being generally coincident with the uppermost edges of said base section and engaging

the underside of said cover section, wherein said intermediate section is retained in fixed relation within said base section, the remaining portions of the depending walls from which the tabs are struck out defining the major portion of said struck-out walls, said remaining portions engaging the bottom wall of said base section to prevent deflection of said panel when said panel contains said ornaments therein, and a plurality of openings formed in said intermediate section receiving said ornaments in frictional engagement therein.

2. In a package for frangible articles, a base section, a cover section interfitted on said base section, an intermediate section located in said base section and including a horizontal panel to which a plurality of depending walls are joined that engage said base section, a plurality of openings being formed in said panel receiving said articles in frictional engagement therewith, and a plurality of tabs joined to a pair of opposing depending walls of said intermediate section and projecting upwardly with respect thereto, said tabs being struck out from said pair of the depending walls and defining substantially less than the full length of the walls from which they are struck out, wherein the remaining portions of the walls from which the tabs are struck out engage the base section to prevent deflection of said panel when said articles are contained therein, said tabs being generally coincident with the upper edges of said base section and engaging said cover section, wherein said intermediate section is positively located between said base and cover sections.

3. In a package for frangible articles, a base section, a cover section interfitted on said base section, an intermediate section located in said base section and including a horizontal panel to which a plurality of depending walls are joined that engage said base section, a plurality of openings being formed in said panel receiving said articles therein, and a plurality of tabs joined to a pair of said depending walls of said intermediate section and projecting upwardly with respect thereto, said tabs being located at the corners of said intermediate section and being generally coincident with the upper edges of said base section and engaging the underside of said cover section, wherein said intermediate section is positively located between said base and cover sections, said tabs being struck out of the depending walls of said intermediate section that are located in opposed and parallel relation, the remaining portions of the depending walls from which said tabs are struck out defining the major portion of the struck-out walls, said remaining portions engaging the base section to prevent deflection of said panel when said ornaments are contained therein.

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