

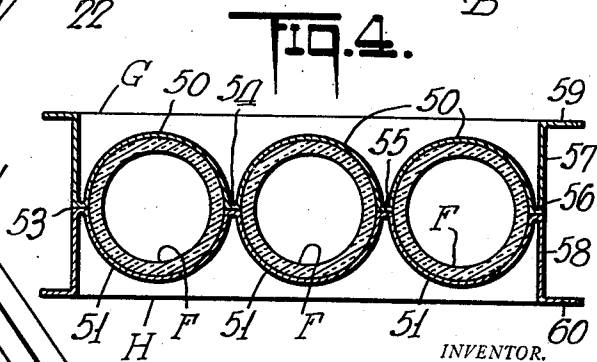
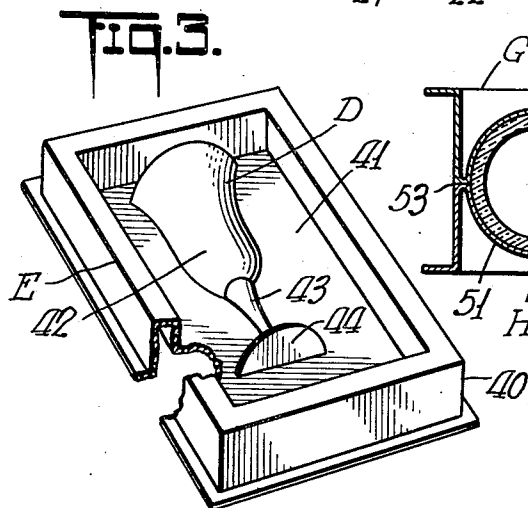
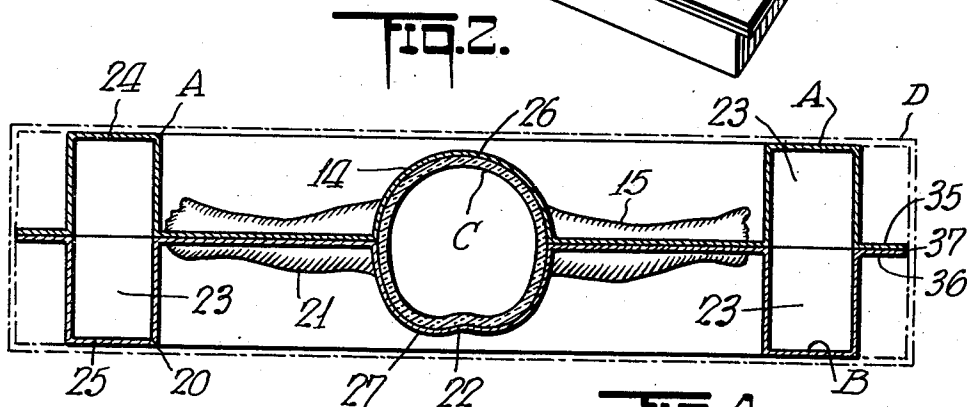
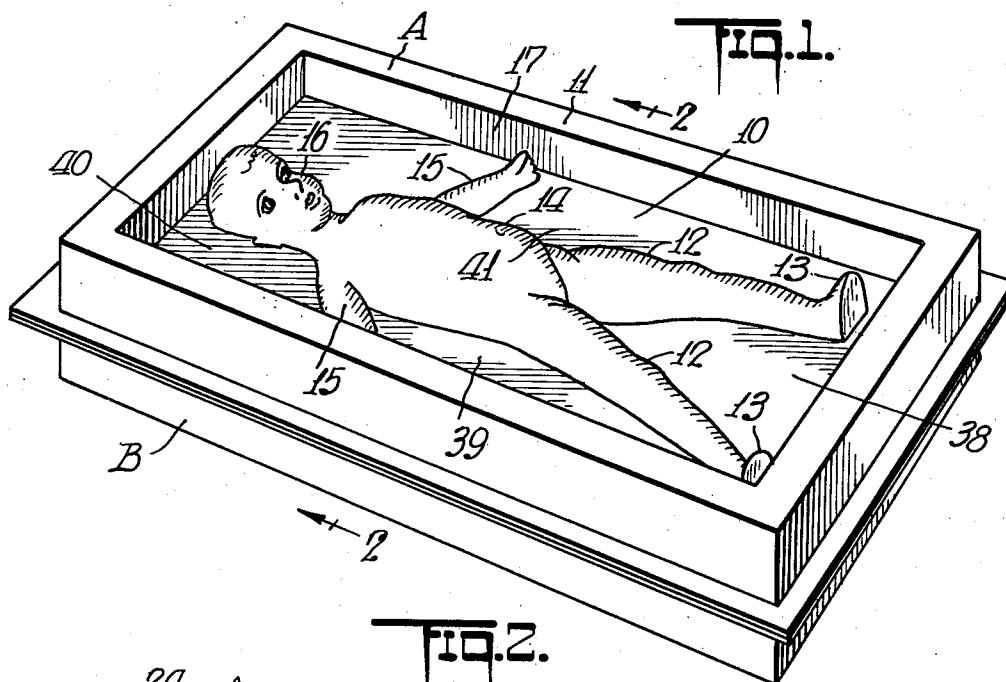
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PACKAGING AND DISPLAY SYSTEM FOR FRAGILE OBJECTS

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PACKAGING AND DISPLAY SYSTEM FOR FRAGILE OBJECTS

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1 Claim. (Cl. 206—46)

The present invention relates to a packaging system and particularly relates to a system which can also be used for display and merchandising of objects of irregular and rounded contours.

It is among the objects of the present invention to provide a novel and unique system for packaging of glassware, dolls, and other light weight or cast products of plastic, composition, glass, crystal, or the like.

A further object of the present invention is to provide a novel packaging system in which various light weight, fragile, readily damaged articles such as dolls, glass decanters, and the like, which may be easily damaged by handling. An article may be packaged in such a way that the package itself will serve not only as a means of shipment and storage but also will enable display, while providing a means for preventing handling damage or breakage of the material itself.

Another object is to provide a packaging system for irregularly shaped, rounded or spherical objects, which will save labor and enable economy and reduction in cost and time required for packaging, and which will also eliminate the waste disposal problem when the material is to be unpackaged.

Still further objects and advantages will appear in the more detailed description set forth below, it being understood, however, that this more detailed description is given by way of illustration and explanation only and not by way of limitation, since various changes therein may be made by those skilled in the art without departing from the scope and spirit of the present invention.

In accomplishing the above objects, it has been found most satisfactory according to one embodiment of the present invention to form plastic shells which conform to and will closely fit the surface and contour of the object to be packaged, whether it be a doll or a glass decanter, and which at the same time is provided with peripheral flanges and side members which will fix the position of the package within a box. The object packaged together with enclosing shells may be removed and handled as such, and displayed and sold as such without removal or discarding of the plastic shells.

For example, in the case of a doll, there will be an upper and lower shell or form which will be recessed to closely fit the body, legs, arm and head of the doll and which will hold the doll so that it may be closely inspected by the purchaser without being handled.

From the sides of the shells will extend flanges which may be sealed together to form the complete inner package. These laterally extended flanges may then have right angular edge flanges which will fix the position of the inner package within the box, and which will enable the inner package to be fixed into position in respect to the outer cardboard carton or container.

If desired, the flange system may be of such size and shape as to provide a stand or display mound, or even a hanger for the object packaged.

With the foregoing and other objects in view the invention consists of the novel construction, combination

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and arrangement of parts as hereinafter more specifically described, and illustrated in the accompanying drawings, wherein is shown an embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which fall within the scope of the claim hereunto appended.

In the drawings wherein like reference characters denote corresponding parts throughout the several views:

Fig. 1 is a top perspective view of a doll in a transparent packaging shell system according to the present invention.

Fig. 2 is a transverse sectional view upon the line 2—2 of Fig. 1, and upon an enlarged scale as compared to Fig. 1.

Fig. 3 is a top perspective view showing how the system may be applied to a glass decanter.

Fig. 4 is a diagrammatic sectional view showing how the system may be applied to glass bowls or tubes, or cylindrical or irregular shaped objects.

Referring to Fig. 1 there is shown an upper packaging shell A and a lower packaging shell B.

These shells are designed to conform to the doll to be packaged and to enclose it in an outer shipping or packaging box D.

It will be noted that the shell is essentially formed of central member 10 inside of marginal portion 11.

In the upper shell A are mounted recesses: 12 for the legs; 13 for the feet; 14 for the body; 15 for the arms; and 16 for the head. All of these conformations are inside of the vertical walls 17 of the marginal portion 11.

As is shown in Fig. 2, in the lower shell B, inside of the channels 23 there are formed recesses for the lower parts of the arms as indicated at 21 and the back of the body is indicated at 22.

The channel 23 in the marginal portion 11 will extend around the entire periphery of the package so that there will be a hollow space, thicker than the doll C being packaged, which will protect and insulate the packaged article against climatic changes as well as damage due to handling.

Since the top and bottom of the channels as indicated at 24 and 25 will be above the top and bottom of the recesses 26 and 27 for the doll body, they also will protect against the damage which may come from below or above as well as laterally sidewise crushing stresses.

Outwardly from the sides of the channels 23, there will extend the peripheral lateral flanges 35 and 36, which will contact the side of the box D at 37.

The flanges 35 and 36 will contact each other along a plane extending through the longitudinal axis of the article which is packaged whether it be a doll as shown in Fig. 1 or the devices indicated at D and F in Figs. 3 and 4 respectively, and the contacting portions as indicated at 38, 39, 40 and 41 will also contact each other in said same plane extending through the longitudinal axis of the article packaged.

These flanges may be sealed together by heat sealing as may also the contacting portions of the inner closure, as for example at the positions 38, 39, 40 and 41.

This sealing will conform a completed package, which may be enclosed in an outside box or carton and the inside package may be used as a display for sales purposes and an attractive gift wrapping.

Although it is preferred to use clear transparent relatively stiff light weight thin plastic material of vinyl resin or polyethylene resin, it is also possible to use resins carrying pigments or colors, or which will give unusual light refracting or reflecting effect. For example, there may also be used stiff transparent sheets of methyl methacrylate resins, which will have unusual light refracting properties.

In addition, the resin sheets may be moulded so that they will have irregularly or regularly spaced areas of

increased or decreased thickness where a series of spherical cylinder lenses will be formed, which in combination with light transparent pastel shades will clearly enhance the sales value and set forth the beauty of the object being merchandised.

The system is particularly valuable where it is desirable to display the objects of special lighting, as for example under ultra-violet light or where the object itself carries fluorescent pigments, or where the hair or dress may carry fluorescent pigments.

The edge flanges 35 and 36 may be provided with openings or extensions to form a stand or to enable hanging of the object upon a Christmas tree, or even upon a wall.

The system as shown may be used for framing objects for display purposes or even for pictures.

In the embodiment of Fig. 3 there is shown the same system as applied to a glass decanter D, in which the upper shell E has a marginal box 40, which will take substantially the entire depth, while the inner shell will fit inside of the outer shell E.

The shell E has a central flat position 41, which has recesses as indicated at 42, 43 and 44 to form a receptacle to closely contact the open portion of the glass, the stem of the glass and the base of the glass, respectively.

In the system shown in Fig. 4 there is indicated diagrammatically at F a series of irregularly shaped or fragile objects, whether they be spherical or tubular, such as glass bowls, silver objects, or even things such as sterling silver cutlery or other metallic materials, which might be tarnished or discolored upon exposure to air or by handling by prospective customers.

In the embodiment shown in Fig. 4 the objects F are fitted into closely conforming upper shell members G and lower shell members H.

The upper shell members have the recesses 50 for the tops of the objects F, while the lower shell members H have recesses 51 to receive the bottom portions of the objects.

These shells meet at 53, 54, 55 and 56 and they may be heat-sealed together at these points.

The edges of the shells have the outstanding flanges 57 and 58 with the right angular edge flanges 59 and 60.

This flange system 57 to 60 enables non-rattling or non-moving positions in an outside packaging box and it also enables the entire assemblage of units F, which have been packaged to be stood up on either edge for display purposes.

Where a number of objects are packaged together, as indicated in Fig. 4, there may be score lines or rip lines along the sealed contacting faces 54 and 55 to enable one object to be removed at a time.

The material used may be .003 to .05 thin gauge thermo-plastic, vinyl plastic, cellulose acetate or cellulose butyrate sheets, or even sheets of methyl methacrylate known in the trade as Lucite or Plexiglas. These materials are also sold under the varying names of Vinylite, Kodapac, Koro-seal or Polyplex.

It is desirably formed by molding to conform to the shape of the object in two or even three or four shells, to form a single package. Even sheet nylon may be employed.

It is also possible to use the top shell and either hold the article on the sheet by adhesive tape or a cardboard

or to draw the shell so deeply that the shell will project beyond the object and the lower part of the shell may be stuffed or filled with tissue paper or cardboard to hold the object in position.

In forming the shell, a flat sheet of material to be used is placed in a frame directly above a male or female mold of the item that it is desired to form. A heating element is brought above the sheet of plastic for a time, causing the plastic sheet to become soft and pliable. A vacuum is then formed securing the pliable plastic onto the male or female mold to give the desired shape. The formed sheet of thermo-plastic is ejected and cooled by air. This is all done in a vacuum-forming apparatus.

It is thus apparent that the applicant has provided a simple, inexpensive, widely useful packaging system which will not only enable packaging, shipment, storage and merchandising, but it will also contribute to better merchandising and protect the objects from damage due to handling.

As many changes could be made in the above combination packaging and display system for fragile objects and many widely different embodiments of this invention could be made without departing from the scope of the claim, it is intended that all matter contained in the above description shall be interpreted as illustrative and not in a limiting sense.

Having now particularly described and ascertained the nature of the invention, and in what manner the same is to be performed,

What is claimed is:

A package for an irregular shaped fragile article having a central longitudinal axis, such as a doll, composed of two contacting flat rectangular relatively rigid plastic sheets of the same size with concavo-cavities molded in the central portions thereof closely to conform to opposite sides of said article with the sheets contacting along a plane extending through the longitudinal axis of said article, and a rectangular box enclosing said rigid plastic sheets, the outer portions of said plastic sheets having flanges in face contacting relation extending to and contacting the interior side walls of said box and also having upwardly and downwardly extending peripheral channels formed in said sheets adjacent and inwardly of the flanges and extending upwardly and downwardly from the planes of the contacting portions of said sheets with the outer faces of the channels contacting the top and bottom interior faces of the top wall and bottom wall of the box respectively, said peripheral channels encircling and surrounding the fragile article.

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