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PACKAGING AND DISPLAY TRAY

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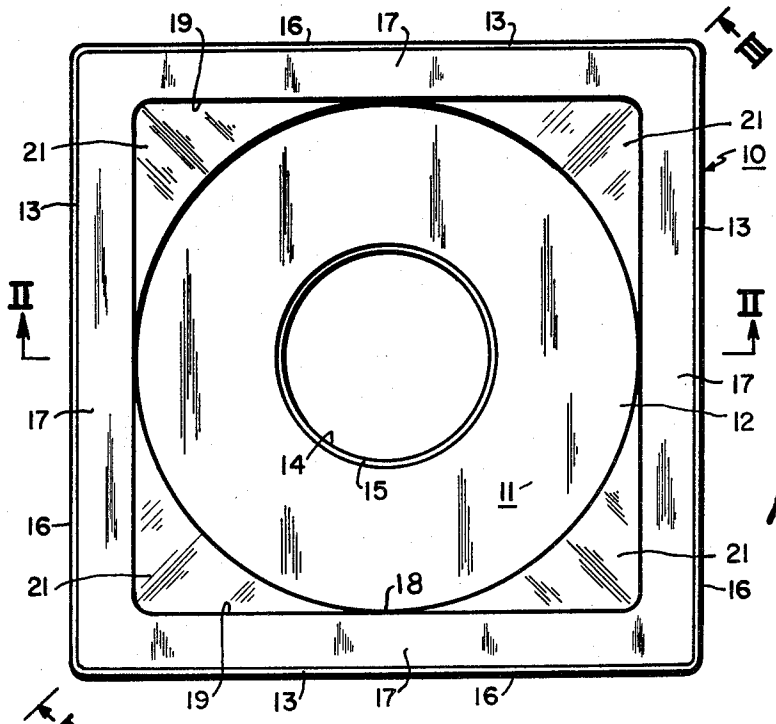


Fig. 1

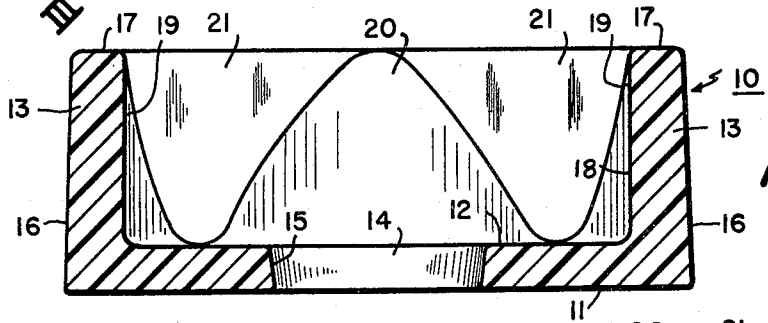


Fig. 2

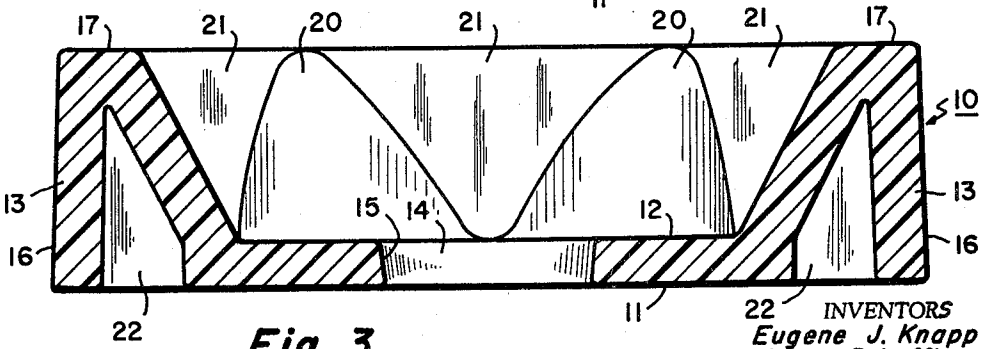


Fig. 3

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PACKAGING AND DISPLAY TRAY

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This invention relates to a unitary device for facilitating the packaging of a plurality of frangible articles in a snigle carton, and more particularly to a light-weight one piece tray for positioning and maintaining a plurality of frangible dish-shaped articles in a protected impact-resistant orientation within a package and for aesthetically displaying such articles.

In the past, it has been customary to package dish-shaped articles such as plates, bowls, and the like with numerous corrugated parts, excelsior, and various types of separators. The use of excelsior has always been objectionable to both the ultimate consumer and the retail merchant due to the inherent mess produced when unpacking the items. The use of multiple corrugated parts has also been objectionable to the retail merchant due to the difficulty encountered in re-inserting such parts when repackaging the item after display or examination by the consumer. Likewise, due to the number of corrugated pieces utilized and the numerous folds required with such packing, manufacturers found that not only did the excessive time involved in packaging subject them to substantial labor costs, but also the additional weight increased their shipping costs.

Further, due to the conglomeration of packing materials heretofore required in packaging such items, it was necessary to completely remove the ware from the carton and its associated packaging material in order to adequately display the goods As a result, it was necessary for the retail merchant to loosely display the ware on his shelves, usually stacked in direct ware-to-ware contact. Not only was this type of display unattractive, but also due to the fact that the pieces of ware were openly displayed in contact with each other, they were readily subjected to chipping and breakage through constant handling and examination by customers. In addition, such loosely displayed items were easily inadvertently knocked from the shelves by hurrying customers. Also, the merchant was eventually confronted with the almost impossible problem of repackaging the items in their proper position within the numerous packaging components and reinserting them into the original container.

Our invention includes a novel light-weight unitary tray for packaging a plurality of dish-shaped ware in impact-resistant orientation within a single carton. The tray is formed with a cylindrical cavity which retains a plurality of dish-shaped ware in a nested relationship therein. Wall portions of the cylindrical cavity cushionably engage side edge portions of the ware and prevent relative lateral movement therebetween. Also, the entire contents of the package may be easily removed from or repackaged within the outer carton by merely removing the ware-retaining tray from or reinserting it within the outer carton. Recessed corner portions exposing portions of the ware are formed in the tray so that the ware may be conveniently displayed on the retail shelves in an aesthetic manner, while being retained in a protective tray-like device. In addition, since the tray is formed of a light-weight material such as a foamed plastic, preferably foamed polystyrene, and since only one is required per package, not only are labor costs materially reduced due to the minimum time required to assemble the package, but also shipping costs are materially reduced due to the reduction in weight over the previously required corrugated parts.

It thus has been an object of our invention to provide an improved packaging media for simplifying and expediting the packaging of a plurality of frangible articles in a single carton.

A further object of our invention has been to provide a unitary light-weight tray for retaining a plurality of frangible dish-shaped articles in a protective impact-resistant orientation within a package.

A still further object of our invention has been to provide a foamed plastic tray for protectively retaining a plurality of dish-shaped articles within a package in such a manner so that the tray and articles may be easily removed from and reinserted into the package as a unit.

Another object of our invention has been to provide a foamed plastic tray for retaining a plurality of frangible dish-shaped articles in an impact resistant protective orientation within a package and for aesthetically displaying such articles when removed from the package.

These and other objects of our invention will be more apparent to those skilled in the art from the following disclosure and accompanying drawings in which:

FIGURE 1 is a top plan view of a packaging and display tray embodying our invention;

FIGURE 2 is an elevational view in section taken along line II—II of FIGURE 1; and

FIGURE 3 is an elevational view in section taken along line III—III of FIGURE 1.

Referring now to the drawing, a tray-like member **10** of substantially square configuration and having a unitary body construction, is shown comprising a substantially planar bottom portion **11** having a circular upper surface **12** surrounded by upright wall portions **13**. A circular open portion **14** is formed through the bottom portion **11** and is bounded by a tapered wall portion **15**. The upright walls **13** are provided with substantially planar outer surfaces **16** and a flat top surface **17**.

An upwardly open cylindrical cavity **18**, having arcuate surface portions **20** of the configuration of the periphery of surface **12**, is formed in the tray-like member **10** for retaining a plurality of dish-like articles. A plurality of recessed corner portions **21** communicate with the cylindrical cavity **18**. The recessed corner portions have downwardly-inwardly tapered surface portions which communicate between the top surfaces **17** and arcuate portions **20**, and at their lowermost point extend downwardly to a periphery of circular surface **12** along a diagonal axis of the tray **10**. Accordingly, the inner surface **19** of the bounding walls **13** is composed of a plurality of arcuate portions **20** extending upwardly from and having the general configuration of the periphery of surface **12**, with a plurality of recessed corner portions **21** therebetween having tapered surfaces. An undercut or relieved portion **22**, communicating with the lower surface of bottom **11**, extends upwardly within walls **13** adjacent each of the recessed corner portions **21**.

In operation, a plurality of frangible dish-shaped articles such as saucers, dishes or bowls are initially positioned within the tray **10** in a nested stacked relationship with paper separators therebetween. The central portion of the bottom of the lowermost article may be nestably received by open portion **14** and bounding wall portion **15**. The outermost edges of the dish-shaped articles cushionably engage arcuate portions **20** of the inner wall surfaces **19**. The bounding walls **13**, being made of a foamed plastic such as foamed polystyrene, protect the edges of the dish-shaped articles from impact, whereas the arcuate portions **20** prevent relative lateral movement of the articles.

The recessed corner portions **21** provide a ready access to the dish-shaped articles so that they may be easily grasped and removed from the tray. Further, since the tray containing the dish-shaped articles is removable from the packaging carton as a unit, the articles may be con-

veniently displayed within the tray without separately unpacking each article. Accordingly, the recessed portions **21** also provide a sight access to the stacked, dish-shaped articles retained within the tray for visual examination, so that the consumer may see the number of articles in each set and the design thereon. The relieved portions extending upwardly into the body of the tray adjacent the recessed corner portions **21** reduce the overall weight of the tray so as to retain shipping costs at a minimum.

Although we have disclosed the now preferred embodiment of our invention, it will be apparent to those skilled in the art that various changes and modifications may be made thereto without departing from the spirit and scope thereof as defined in the following claims.

We claim:

1. An improved light-weight tray for packaging and displaying a plurality of frangible dish-shaped articles which comprises, a unitary body having a bottom portion and upwardly extending side wall portions, said bottom portion having a circular upper surface, said side wall portions having substantially planar outer surfaces and inner surfaces communicating between the periphery of said circular upper surface and the top of said side wall portions, said inner surfaces having a plurality of arcuate portions extending vertically upwardly from and having the general configuration of a periphery of said circular upper surface, and a plurality of recessed corner portions intermediate said arcuate portions having downwardly-inwardly tapered surface portions communicating with said arcuate portions and extending downwardly to portions of the periphery of said circular upper surface.

2. A tray as defined in claim 1 wherein a circular open portion bounded by a tapered wall portion is formed through the bottom portion of said unitary body.

3. A tray as defined in claim 1 wherein said body portion is formed of foamed polystyrene.

4. A tray as defined in claim 1 wherein relieved portions communicating with the lower surface of said bottom portion are formed in said unitary body adjacent each of said recessed corner portions.

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