March 29, 1966 P. R. LUERTZING 3,243,037

PACKAGE FOR GLASSWARE

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FIG. 1.

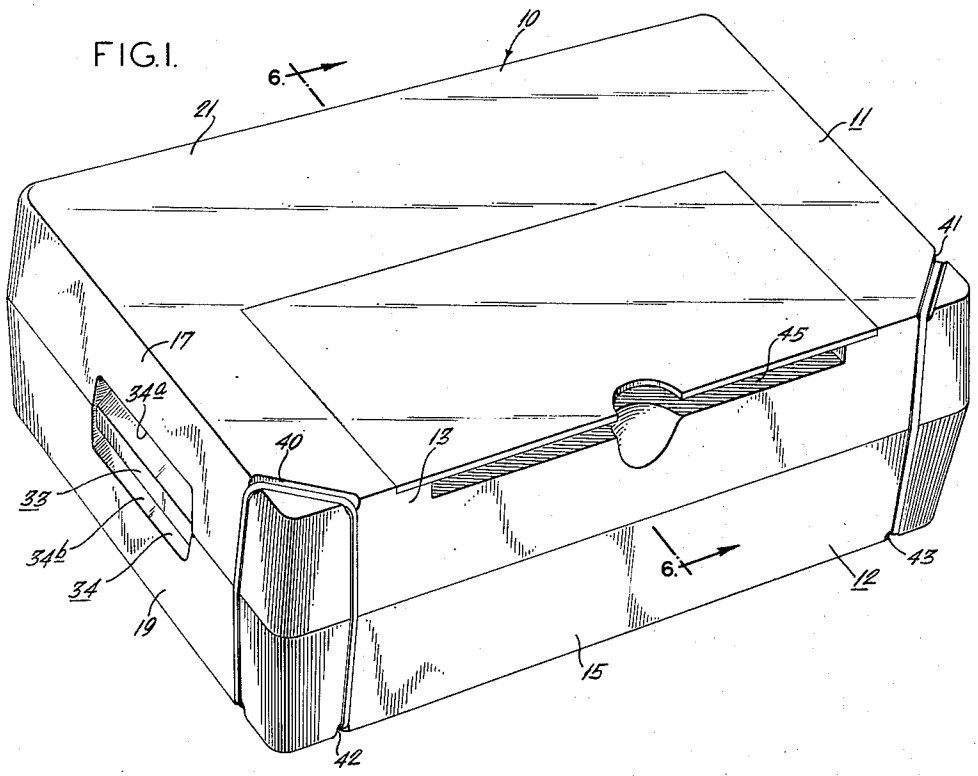
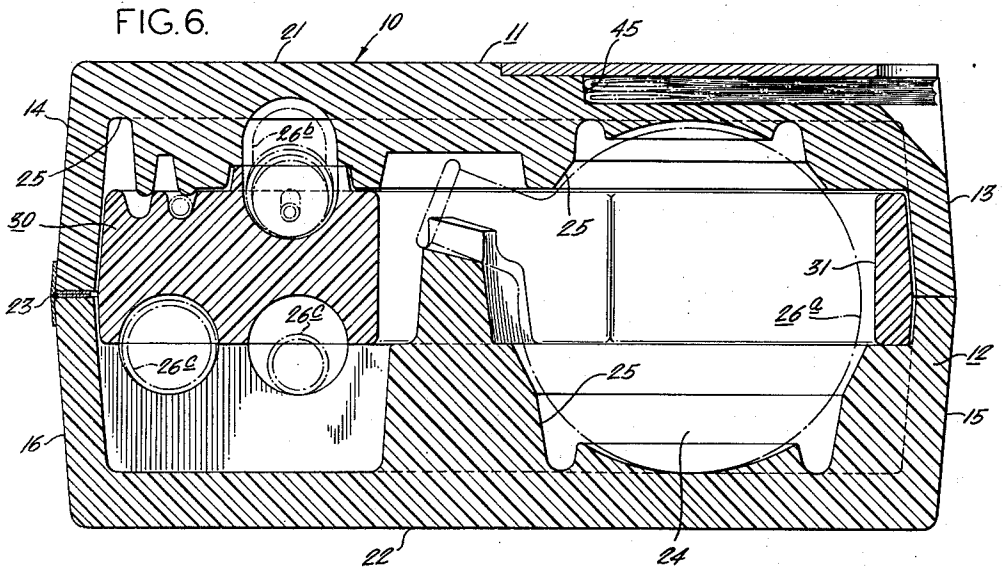


FIG. 6.



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FIG. 2.

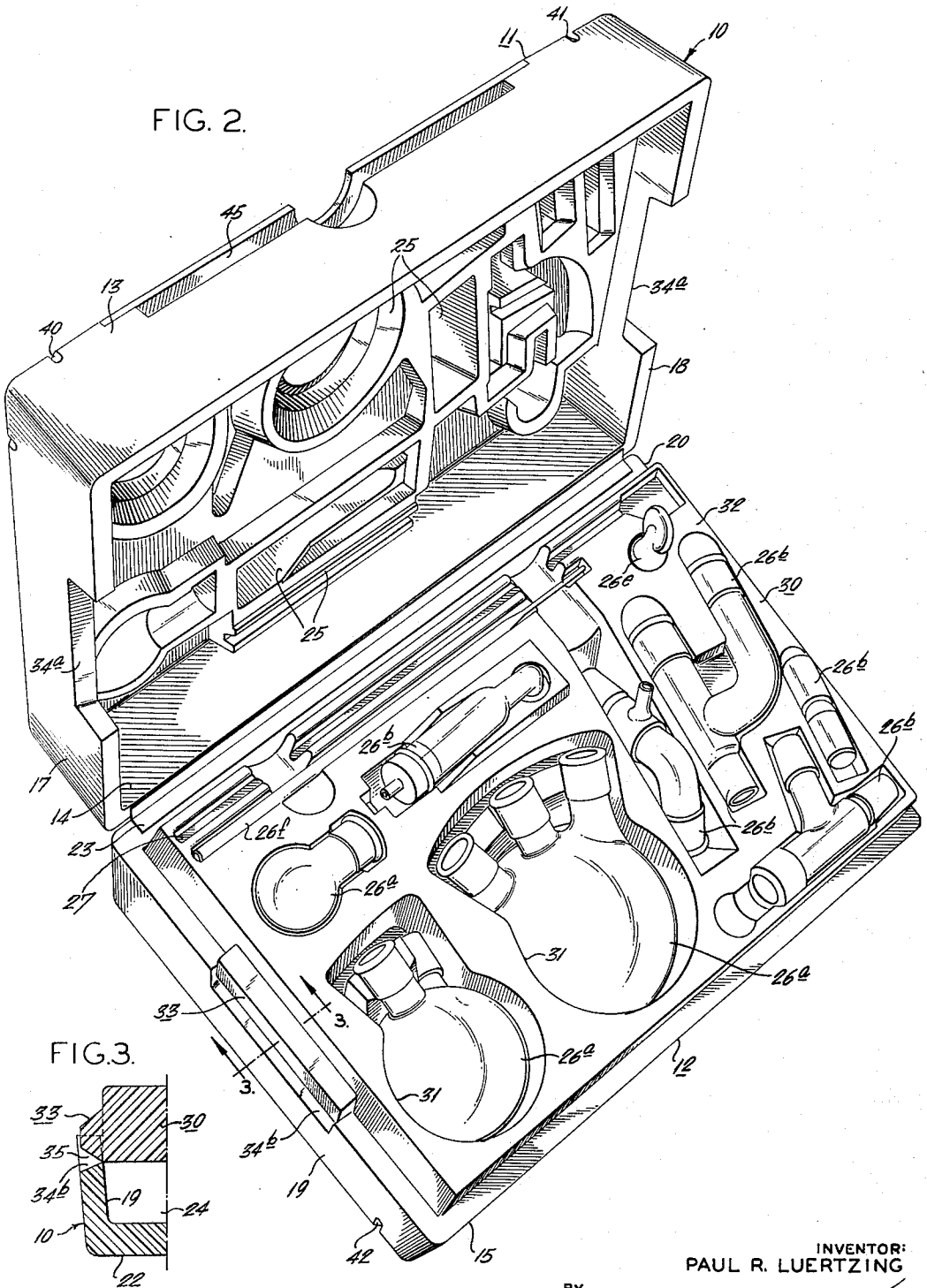


FIG. 3.

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FIG. 4.

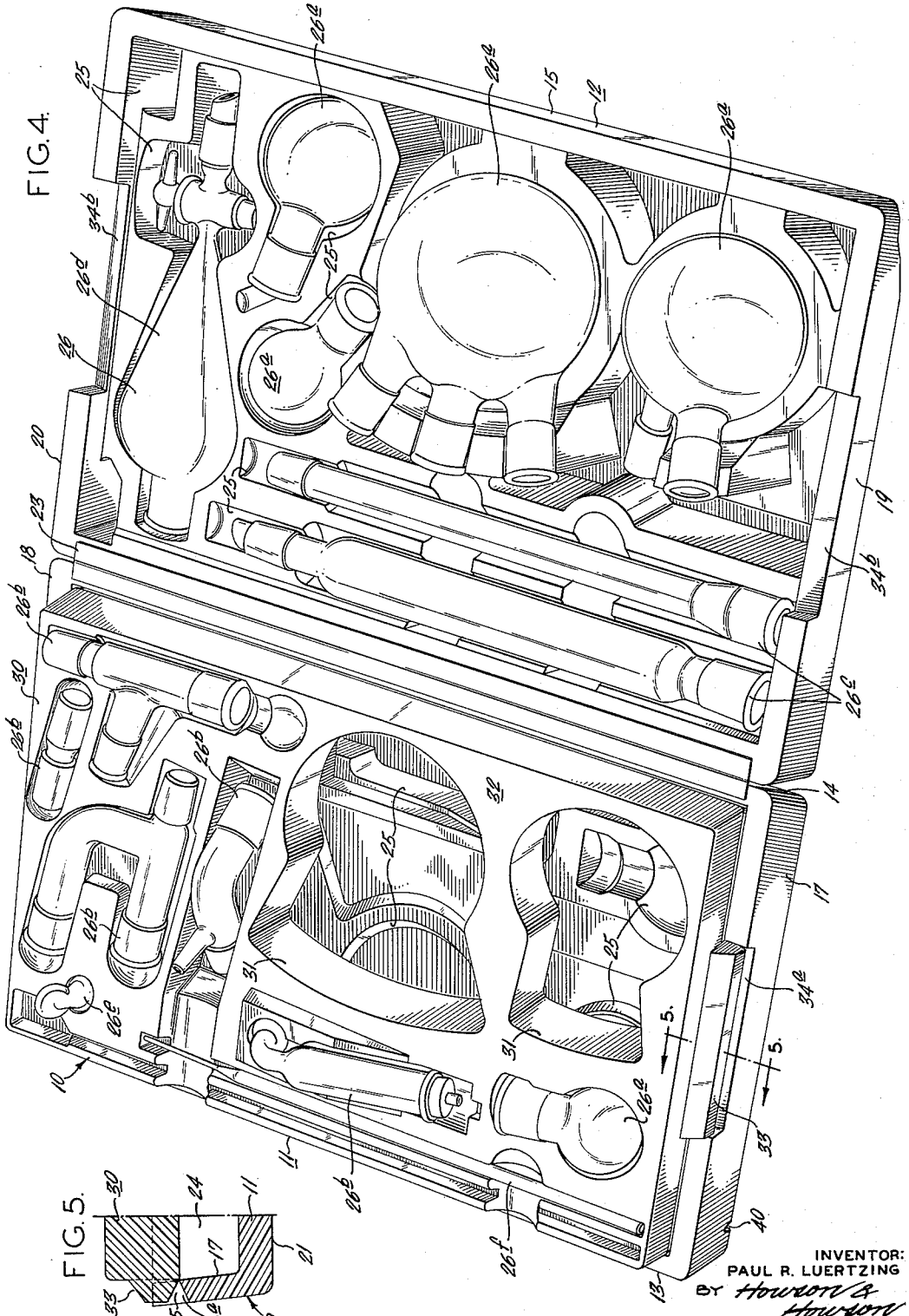


FIG. 5.

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PACKAGE FOR GLASSWARE

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1 Claim. (Cl. 206—1)

The present invention relates to glassware packaging and more particularly relates to a novel package of the type suitable for packing chemical glassware and the like.

Glassware utilized in chemical laboratories is subject to breakage because of the odd shapes of the various pieces, and the inability to store the glassware or set it in a position where it cannot be inadvertently broken.

Although packaging kits are presently available on the market for glassware, due to the odd shapes and sizes of chemical glassware the package is either overly large or skimpy in design and adds to the danger of the glassware being broken as well as the difficulty encountered in storage.

In view of the above, it is an object of the present invention to provide an inexpensive package for glassware, which package is strong and durable in construction and yet lightweight and easy to transport.

Another object of the present invention is to provide a package for glassware which consumes minimum space for ease of storage.

Still another object of the present invention is to provide a glassware package particularly suitable for storing chemical glassware of odd configurations in a minimum of space wherein the package is of lightweight and durable construction to reduce inadvertent breakage of the glassware.

Other objects and fuller understanding of the invention may be had by referring to the following description and claims taken in conjunction with the accompanying drawings in which:

FIG. 1 is a perspective view of a package constructed in accordance with the present invention;

FIG. 2 is a perspective view of the package illustrated in FIG. 1 in an open position;

FIG. 3 is a sectional view taken along line 3—3 of FIG. 2;

FIG. 4 is another perspective view of the interior of the package illustrated in FIGS. 1–3;

FIG. 5 is a sectional view taken along line 5—5 of FIG. 4; and

FIG. 6 is an enlarged sectional view taken along line 6—6 of FIG. 1.

Referring now to the drawings, and especially FIGS. 1, 2 and 6 thereof, a package **10** having an upper and lower portion **11** and **12**, respectively, is illustrated therein. Each of the portions has upstanding and outwardly angulated side walls **13, 14, 15, 16**; upstanding and outwardly angulated end walls **17, 18, 19, 20**; and substantially planar top and bottom walls **21** and **22**, respectively. As shown in the drawings, the upper portion **11** is hingedly connected to the lower portion **12** by a hinge **23** which connects the side wall **14** to the side wall **16**, each of the portions being adapted to mate and abut in wall to wall engagement so as to define a glass receiving compartment **24** therein.

As the package **10** is preferably made of a lightweight molded plastic such as molded expanded polystyrene, it is a simple matter, when molding the portions to provide indentations **25** in the interior of the walls **21** and **22**, which indentations conform to a portion of the outline of glassware items **26** thereby preventing displacement of the items **26** when the package is closed. As may be seen in the drawings, the glassware may comprise such items

as flasks **26*a***, adapters **26*b***, condensers **26*c***, funnels **26*d***, stoppers and/or plugs **26*e***, tubes **26*f*** and the like. A slot **27** may be provided to receive a thermometer (not shown).

In accordance with the invention, as only a few of the glassware items are particularly large, for example, the 250 and 500 milliliter flasks **26*a***, and as it is desirable to permit placement of the maximum number of glassware items in the smallest possible space, means are provided to permit the larger items to fit indentations in both the upper and lower portions **11** and **12** while serving the additional function of storage of smaller items. To this end, a removable tray **30** mounts within the glass receiving compartment **24** and permits large glassware items such as the flasks **26*a*** mounted in an indentation in the lower portion to seat in another indentation in the upper portion by providing suitable apertures **31** large enough to permit passage through the tray of large glassware items. In addition, as illustrated in FIGS. 2–4, the removable tray **30** has a portion **32** which permits storage of small glassware items and when in position, in the package, prevents these items from inadvertent movement by the indentations associated therewith in the upper portion **11**.

As previously stated, the tray is removable so as to permit easy access to other glassware items stored in the lower portion **12**. In order to provide easy removal of the tray **30** from the package upon opening thereof while simultaneously permitting easy storage of the entire package, and in accordance with another feature of the invention, means are provided on the tray for easy gripping of the tray from the exterior of the package which means are contained within the package and do not project therefrom so as to interfere with storage of the package.

To this end, the tray **30** is provided with handles **33** which, as illustrated in FIGS. 3 and 5, project from each end of the tray and register with slots **34** having outwardly diverging upper and lower edges **34*a*** and **34*b***, in the end walls of the upper and lower portions **11** and **12**, respectively. Although the handles project from the tray, they terminate interiorly of the end walls so as not to project from the package, thus permitting ease of storage of the package. As may be noted in the drawings, providing the slots **34** so that they diverge outwardly, while providing handles **33** which diverge inwardly, permits the user to place his fingers into the V-shaped slot **35** defined therebetween, for ease of lifting the tray **30** from the package **10**. In addition, as will become evident hereinafter, this novel feature also permits the entire package, when closed, to be easily carried by the handles.

In accordance with another novel feature of the present invention, the tray **30** may easily be fitted into the interior of the upper portion **11** of the package **10**. This feature, as illustrated in FIG. 4, permits full access to the glassware carried on the tray and the glassware carried in the lower portion **12**.

For ease of securing the package for carrying and for storage, grooves **40, 41** and **42, 43** are placed in the exterior of the upper and lower portions, respectively, adjacent the corners thereof opposite the hinge **23** to receive therein ties such as rubber bands for holding the upper and lower portions in wall-to-wall engagement. In addition, a pocket **45** is placed in the exterior of the upper portion **11** to receive therein brochures and the like.

Thus, the package constructed in accordance with the present invention provides the advantages of permitting a number of odd-shaped glassware items to be situated in less space while permitting ease of storage of large and small glassware simultaneously while preventing inadvertent lateral movement thereof within the package,

thereby reducing the chances of inadvertent breakage of the glassware items with the package. Further, a tray for a package of the present invention is provided which, while permitting easy access by the user is capable of storage in the package so as to expose all of the glassware for use. In addition, the overall design of the package permits easy storing of the package without any projections therefrom so as to cause interference or the like with other items that are being stored on the exterior surrounding the package.

Although the invention has been described with a certain degree of particularity, it is understood that the present disclosure has been made only by way of example and that numerous changes in the details of construction and the combination and arrangement of parts may be made without departing from the spirit and the scope of the invention as hereinafter claimed.

I claim:

A package for glassware having an upper and lower portion of molded lightweight plastic, each of said upper and lower portions having upstanding side walls, end walls and a substantially planar bottom wall, at least one of said planar walls having a pocket therein to receive printed matter, hinge means connecting one of said side walls of said lower portion to one of said side walls of said upper portion, said upper and lower portions adapted for mating in wall-to-wall engagement to define a glass-receiving compartment therein, a removably tray mounted in said glass-receiving compartment substantially midway between the bottom walls of said upper and lower portions and extending completely across said compartment, means defining at least one aperture in said tray, the bottom wall of said lower portion having an interior surface having indentations therein conforming at least in part to the profile of a portion of glassware to be received in said compartment, said removable tray having an upper surface having indentations therein conforming at least in part to the profile of a portion of glassware to be received in said compartment, and the bottom wall of said upper portion having an interior surface having indentations therein conforming at least

in part to the profile of a portion of glassware to be received in said compartment, the indentations in the interior surface of a bottom wall of said upper portion adapted to engage glassware carried by said tray and glassware carried by said lower portion and projecting upwardly through the aperture in said tray, said tray having a pair of projecting handles connected to opposite ends of said tray and projecting outwardly therefrom, means defining mating slots in the end walls of both said upper and lower portions adapted to receive said handles and support said tray in the closed position of said package, said upper portion adapted to receive and support the handles of said tray in the open position of said package to provide access to the glassware carried by the lower portion of said package and said tray when said package is in the open position, said handles being beveled so as to converge outwardly and an upper and lower edge of said registering slot in said end walls diverging outwardly, said arrangement providing V-shaped slots between said handles and slots in said end walls to facilitate removal of the tray from the package, and means defining grooves on the exterior of said bottom walls adjacent the corners of said package within which an expandable fastening member seats to secure said upper portion to said lower portion.

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