July 21, 1953 E. B. WHITEHEAD 2,646,165

PACKAGING MEANS

Filed Nov. 30, 1951

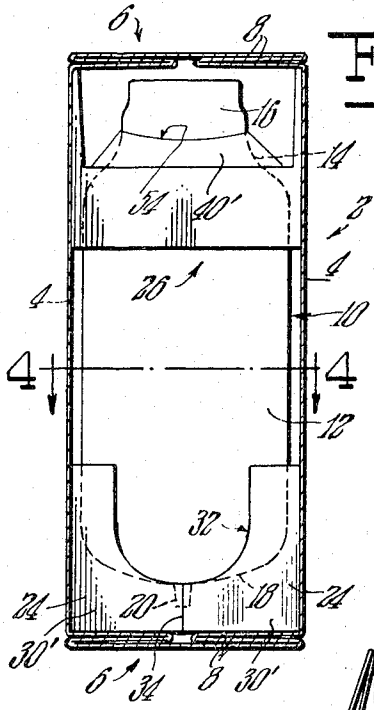


Fig. 1.

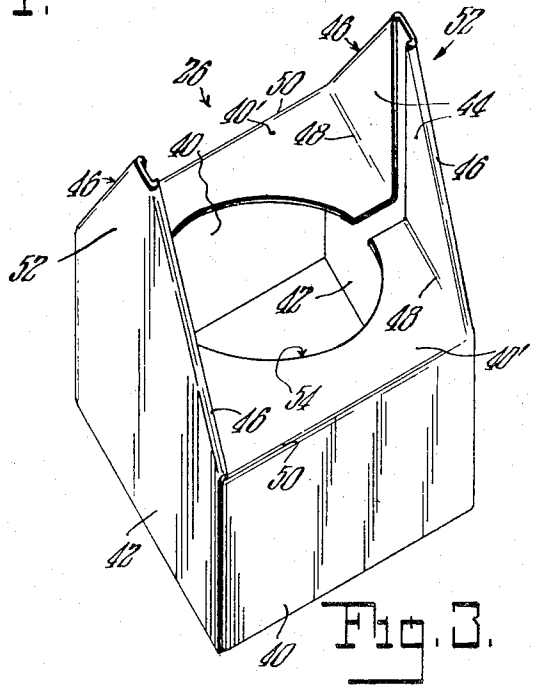


Fig. 3.

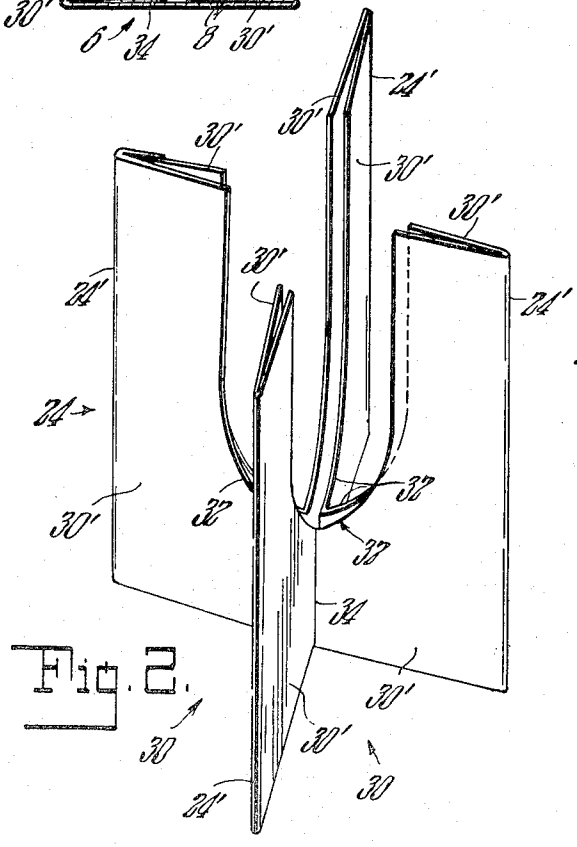


Fig. 2.

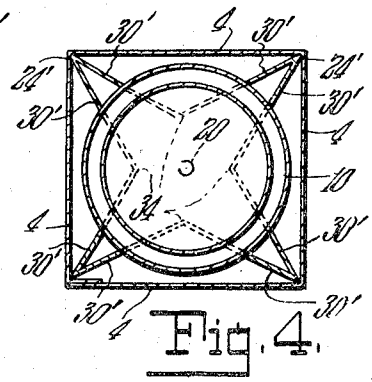


Fig. 4.

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PACKAGING MEANS

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1 Claim. (Cl. 206—46)

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This invention relates to improvements in packaging means for protecting fragile objects.

The principal object of the invention is directed to the provision of a means for protecting fragile objects of all kinds and, while particularly adapted for the protection of thermos bottles, the novel features of the invention are adapted for other uses as well.

Great difficulty has been experienced in connection with the shipment and storage of Thermos bottles due to the failure of the packaging thereof, which failure is overcome by the provision of the novel means of this invention.

According to the invention, a collar and support are provided which are arranged to support an object, such as a Thermos bottle, in such a manner that it is suspended or held out of contact with the container therefor, such as a carton.

By holding the object away from the container, the object is protected against injury as shocks imparted to the container are not imparted to the object.

All of the above objects I accomplish by means of such structure and relative arrangements of parts thereof, as will fully appear by a perusal of the description below and by various specific features which will be hereinafter set forth.

To the above cited and other ends and with the foregoing and various other novel features and advantages and other objects of my invention as will become more readily apparent as the description proceeds, my invention consists in certain novel features of construction and in the combination and arrangement of parts as will be hereinafter more particularly pointed out in the claims hereunto annexed and more fully described and referred to in connection with the accompanying drawings wherein:

Fig. 1 is a longitudinal sectional elevational view through a container having a Thermos bottle supported therein by the means of the invention;

Fig. 2 is a perspective view of the lower support of the protecting means;

Fig. 3 is a perspective view of the upper collar of the protecting means; and

Fig. 4 is a sectional plan view on the line 4—4 of Fig. 1.

Referring now to the drawings more in detail, the invention will be fully described.

A container is represented by 2 which in the present preferred form of the invention is a carton having opposite and adjacent longitudinal side walls 4 and end closure 6 consisting of overlapping relatively hinged members 8.

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A Thermos bottle 10 has a main body 12 and an upper shoulder 14 terminating in a hollow neck 16. A bottom portion 18 of the bottle is provided with a projection 20 which is readily ruptured. According to the novel features of the invention, this projection as well as the bottle is protected against breakage by being supported and held out of contact with the walls and closures of the carton by a lower support 24 (shown in Fig. 2) and an upper collar 26 (shown in Fig. 3).

The lower support 24 may be formed from any suitable material such as cardboard or the like having the desired stiffness and adaptability for relative movement of its parts.

This support has opposite and adjacent vertically extending side walls 30 which are provided with recesses or cut-outs 32 to receive and fit the bottom 18 of the bottle 10.

The said side walls are arranged for bending on lines such as 34 intermediate their side edges thereby providing sections 30'.

The transverse width of the side walls with the sections thereof in coplanar relation is greater than the transverse walls 4 of the container.

The support 24 is inserted in an end of the container 2 by pressing the corners 24' thereof relatively inwardly so that the dimension across the corners thereof is less than the transverse dimension between the walls of the carton.

This causes the sections 30' of the side walls to converge inwardly from the corners of the container as indicated in Fig. 4. In this relation of the walls and sections, the cut-outs 32 of the walls cooperate to form a socket which receives the lower end of the bottle for supporting same and holding it inwardly of and away from the side walls and closure of the carton. In this relation, projection 20 at the bottom of the bottle is between the inner ends of the wall sections.

The collar 26 includes opposite and adjacent side and end walls 40 and 42 arranged to engage the side walls of the container.

Corner portions 44 of the end walls 42 are foldable inwardly at 46 onto intermediate portions thereof. Upper portions of the side walls 40 are foldable inwardly at 48 relative to the corner portions 44 and at 50 relative to the lower portions of the side walls 40 so as to provide transverse shelf portions 40'. Upwardly extending ears 52 of double thickness in the form of inverted V's are thereby provided.

The shelf portions are cut out so as to provide an opening 54 for the neck 16 of the bottle and said shelves are adapted to rest on and overlie the upper shoulder of the bottle.

The collar will preferably be made from cardboard or the like having the desired bendability and strength.

With the lower end of the carton closed and the support therein, the lower end of the bottle is inserted in the socket provided in the wall sections of the support as aforesaid.

The collar is then inserted in the upper end of the carton with the opening thereof receiving the upper neck of the bottle.

The parts are so formed with relation to the carton and bottle that the upper closure of the container bears on the ears of the collar to urge it downwardly whereby the shelf portion of the collar around the neck of the bottle rests on the upper curved part of the bottle and conforms thereto more or less.

Thus with the bottle supported in the socket of the lower support, it is also held by the collar against axial movement in the container and is held out of contact with surrounding walls and closures thereof.

It is an easy matter to insert the bottle and the support and collar in the container and to close the ends thereof. As will be seen, the bottle is held against axial movement in the container and inwardly of the walls thereof.

As has been stated, the support and collar will preferably be formed from cardboard or the like so as to be adapted for setting up in the forms shown and at the same time have sufficient stiffness for the positioning function and yieldability for cushioning and protecting the bottle.

The invention may be embodied in other specific forms without departing from the essential characteristics thereof. Hence, the present embodiments are therefore to be considered in all respects merely as being illustrative and not as being restrictive, the scope of the invention being indicated by the appended claims rather than by the foregoing description, and

all modifications and variations as fall within the meaning and purview and range of equivalency of the appended claims are therefore intended to be embraced therein.

What it is desired to claim and secure by Letters Patent of the United States is:

A collar for spacing the upper body region and shoulder thereabove and upper reduced neck of a Thermos bottle from adjacent and opposite side walls and end closure of a carton comprising, a sheet of relatively stiff material formed to have connected together vertically disposed opposite and adjacent side and end walls for engaging the side and end walls of a carton, upper portions of said side walls being turned inwardly intermediate upper and lower ends thereof and towards one another providing coplanar horizontally disposed shelves with inner unconnected edges thereof in adjacency, upper portions of each said end wall at opposite vertical sides thereof above and connected to said shelves being turned inwardly onto said end walls on lines converging upwardly and inwardly from outer opposite ends of said shelves and the jointure of said side and end walls providing double thickness ears of inverted V shape extending upwardly from said shelves and having upper points disposed above said shelves for engaging the end closure of a carton, and said shelves provided with cut-outs on inner adjacent edges thereof cooperating to provide an opening for receiving the neck portion of a bottle.

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