Feb. 26, 1963 R. P. WOJCIK 3,079,061

PACKING AND SHIPPING CONTAINER

Filed Aug. 7, 1961

Fig. 1

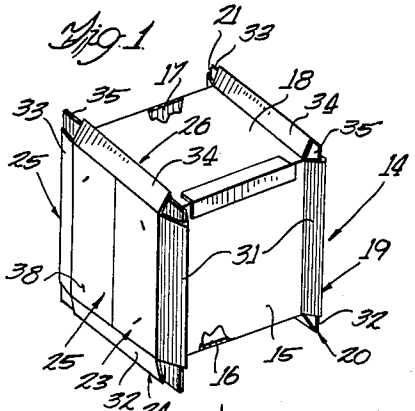


Fig. 3

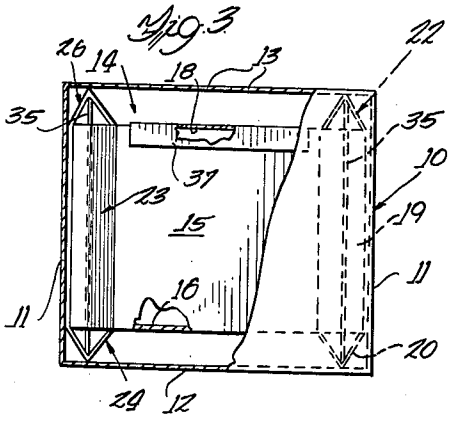


Fig. 2

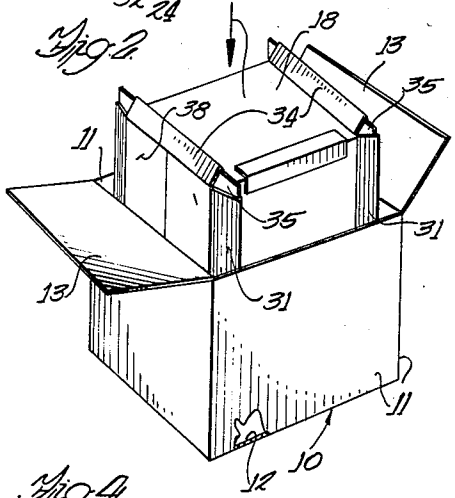


Fig. 5

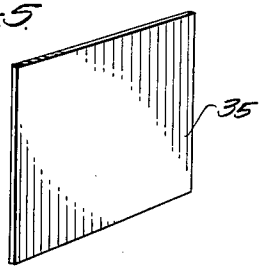


Fig. 4

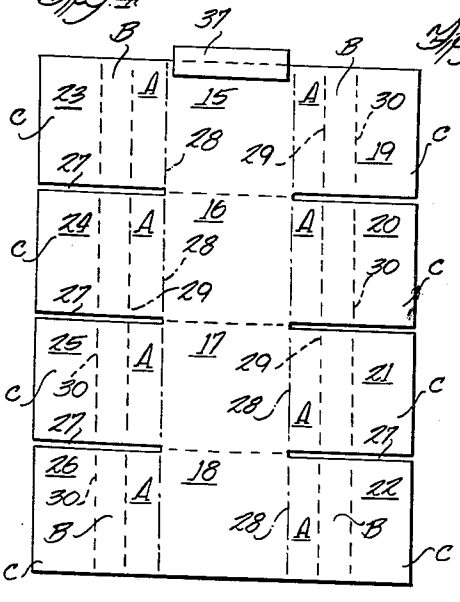
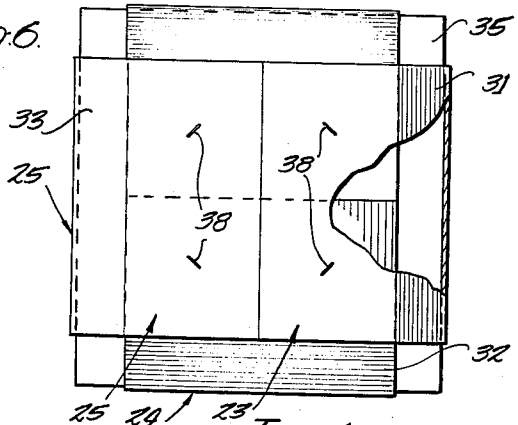


Fig. 6



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PACKING AND SHIPPING CONTAINER

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The present invention relates to packing and shipping containers, and, more particularly, to a paperboard carton having an inner container for enclosing the packaged goods to be shipped.

To safeguard the shipment of frangible and delicate devices, it is often desirable to provide an inner compartment within a paperboard container, the said inner compartment containing the item to be shipped, and being suitably supported and spaced from the walls of the outer container or carton so as to be secure against damage during shipment. It is a prime object of this invention therefore to provide an improved packing and shipping container having an outer container and an inner container adapted to contain the article to be shipped in spaced relation from the walls of the outer container.

Another object of the invention is to provide an improved shipping container having an inner container adapted to enclose an article to be shipped, the said inner container being suitably spaced, by means of spacers, from the walls of the outer container.

A still further object is to provide an improved shipping container having an inner packaging receptacle, the said receptacle being constructed of paperboard folded into a packaging container having increased strength qualities and including spacer provisions which suitably space the inner container from the walls of the outer container so as to safeguard the article to be shipped from damage.

These and other objects will become more readily apparent from a reading of the description when examined in connection with the accompanying sheet of drawing.

In the drawing:

FIGURE 1 is a perspective view of an inner packaging container;

FIGURE 2 is a perspective view of an outer container showing an inner container partially inserted within the outer container;

FIGURE 3 is a side-elevational view of an improved container construction showing a portion of a wall broken away to disclose in elevation an inner container;

FIGURE 4 is a plan view of a container blank;

FIGURE 5 is a perspective view of a stiffener member; and

FIGURE 6 is an end-elevational view of an inner container.

Referring now particularly to FIGURE 2, an outer paperboard carton or packing container is generally designated by the reference character 10 and includes four upright side walls 11, a bottom wall 12, and top closure flaps 13, all of conventional construction. Referring to FIGURES 1, 2, 3, and 6, an inner container or inner packaging carton is generally designated by the reference character 14. The inner container 14 comprises side walls 15, 16, 17, and 18, which are positioned in rectangular or tube-shaped fashion. The peripheral edges of the side walls 15, 16, 17, and 18 have hingedly connected thereto flaps 19, 20, 21, 22, 23, 24, 25, and 26, as best shown in FIGURE 4. The flaps 19, 20, 21, 22, 23, 24, 25, and 26 are separated by means of slots 27 as indicated in FIGURE 4. The sides 15, 16, 17, and 18 are defined at their outer edges by means of fold or score-lines 28 in the upper surface of the blank shown in FIGURE 4. The score-lines 28 are so spaced from the opposite ends of the blank to therefore provide the central panels 15, 16, 17, and 18

which are the side walls in the assembled structure of the inner container 14.

To permit hinged folding of the side walls 15, 16, 17, and 18, fold or score-lines 28' are provided on the blank on a surface opposite to the surface on which the score-lines 28 are provided. The score-lines 28' extend perpendicular to the lines 28 to permit folding of the walls 15 through 18 to, in effect, provide a tubular construction. Flaps 19 through 26 are each provided with transversely extending fold or score-lines 29 and 30 which are parallel to the lines 28 in the blank condition as shown in FIGURE 4. The score or fold lines 29 and 30 are provided on the side opposite to that on which the score-lines 28 are provided. The score-lines 29 and 30 of each of the flaps 19 through 22 and the score-lines 29 and 30 on the flaps 23 through 26 are also in longitudinal alignment respectively.

In the unbent or blank condition as shown in FIGURE 4, the score-lines 29 and 30 of each of the flaps divide each of the flaps into portions A, B, and an extension C. FIGURES 1, 2, 3, and 6 show the inner container of tubular form which is provided when the blank 40 is folded on the score-lines indicated. The portions A are hinged or folded along the lines 28 which are the edge portions of the sides 15, 16, 17, and 18. The portions A and B are folded along the score-line 29 to provide V-shaped ends 31, 32, 33, and 34, best shown in FIGURES 1 and 2. These V-shaped ends are, in effect, spacer members which project outwardly from the sides 15 through 18. The V-shaped ends or spacer members 31 through 34 each have an outer apical surface formed along the score-lines 29 and, of course, also are provided on the inner side by an inner apical surface coincident with the score-line 29. Rectangular stiffeners 35 are positioned so that the edges of the stiffeners 35 are seated within the inner apical surfaces of the V-shaped spacer ends 31 through 34. The flap extensions C are then folded as indicated in the figures so that certain of the extensions C of each of the flaps overlap. A paper tape 37 is secured to the ends of the blank to engage sides 15 and 18 for securing the inner container 14 in the assembly shown. Staples 38 are then secured through the overlapping extension C to provide a strong and secure inner container 14.

The positioning of the stiffeners 35 and securing of the staples 38, of course, takes place after the article to be shipped has been packed within the inner container 14. The inner container 14 and the article therein is then placed into the outer container 10 whereupon the top flaps 13 are closed and the container is ready for shipment. It will be apparent that with the construction of the inner container, the article within the inner container 14 is literally suspended within the container 10 and completely removed from the sides 11 of the container 10 so that damage to the container 10 is not necessarily imparted to the container 14. In other words, there are voids about all of the sides of the inner container 14 since the outer apical surfaces of the V-shaped spacers 31 through 34 suitably space the walls 15 through 18 and opposite ends of the inner container 14 from the sides, bottom, and top of the container 10.

Thus it is apparent that a single blank with suitable stiffeners, as shown, provide an inner container 14 which is strong, simple to assemble, and which provides an effective spacer arrangement to keep the article which is packed in suspended and spaced relation within the outer container of the shipping unit.

It can thus also be seen that the objects of the invention have been fully achieved and that an improved packing and shipping container has been described. It must be understood that changes and modifications may be made which do not depart from the spirit of the invention as

disclosed nor from the scope thereof as defined in the appended claims.

What is claimed is:

1. In a container comprising a bottom, top, and four outer upright side walls, an inner packing enclosure within said container comprising four inner side walls connected together to provide a rectangular tube with four opposed edges, first and second opposed spacing structures for said tube, each including flaps hingedly connected to and extending from each of the opposite edges of said side walls, said flaps each having inner portions and outer flap extensions, said inner portions being folded to provide V-shaped spacers having inner and outer apical surfaces, said spacers extending longitudinally along said opposed edges, certain of said flap extensions being positioned in overlapping relation to close said tube, means connecting said overlapping flap extensions, and a rectangular stiffener member on each structure spaced laterally from and disposed between said edges and said extensions and being supported at its periphery by the inner apical surfaces, the outer apical surfaces of said spacer portions engaging said outer walls to space said enclosure therefrom.

2. In a container comprising a bottom, top, and four outer upright side walls, an inner packing enclosure within said container comprising four inner side walls connected together to provide a rectangular tube with four opposed edges, first and second opposed spacing structures for said tube, each including flaps hingedly connected to and extending from each of the opposite edges of said side walls, said flaps each having inner portions and outer flap extensions, said inner portions being folded to provide V-shaped spacers having inner and outer apical surfaces, said spacers extending longitudinally along said opposed

edges, said flap extensions being positioned to close said tube, means connecting said flap extensions, and a stiffener member on each structure spaced laterally from and disposed between said edges and said extensions and being supported at its periphery by the inner apical surfaces, the outer apical surfaces of said spacer portions engaging said outer walls to space said enclosure therefrom.

3. In a container comprising a bottom, top, and outer side walls, an inner packing enclosure within said container comprising side walls connected together to provide a tube with opposed edges, opposed spacing structures adjacent said opposed edges, said structures each including flaps hingedly connected to said opposed edges, said flaps each having inner portions and outer flap extensions, said inner portions being disposed in V-shaped relation providing inner and outer apical surfaces extending along and being spaced outwardly from said opposed edges, a stiffener member for each structure, said stiffener member having peripheral edges seated in the inner apical surfaces, and means connecting said flap extensions in laterally spaced and in parallel relation relative to said stiffeners, said outer apical surfaces engaging certain of said outer walls to space said enclosure therefrom.

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