July 6, 1954 E. B. WHITEHEAD 2,682,949

CARTON

Filed Sept. 13, 1950

Fig. 1.

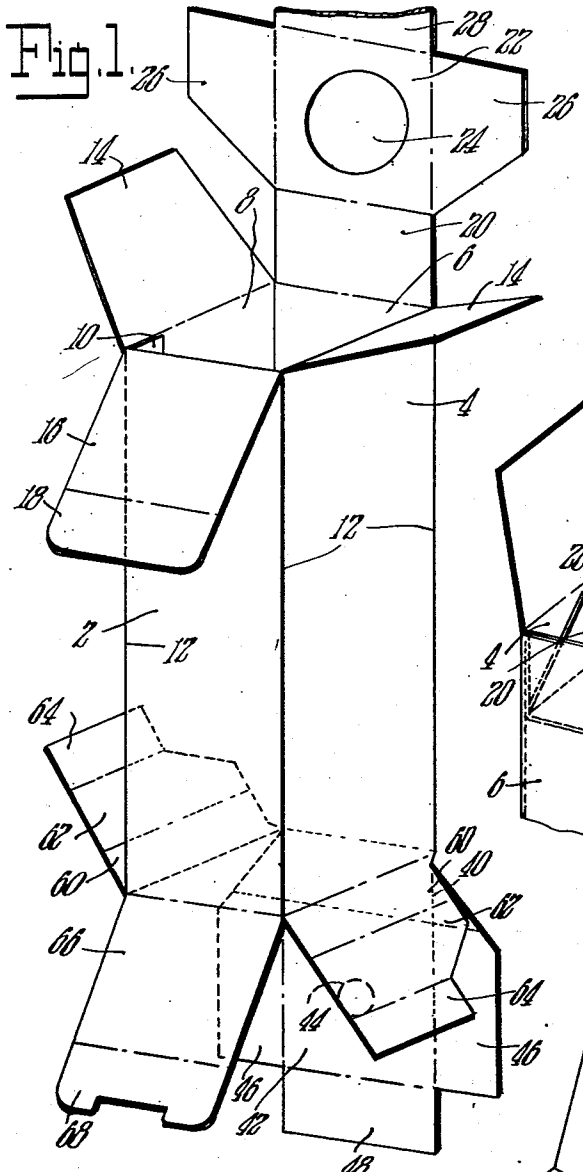


Fig. 2.

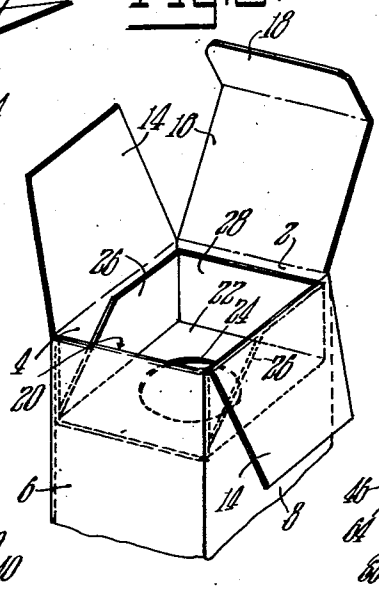


Fig. 3.

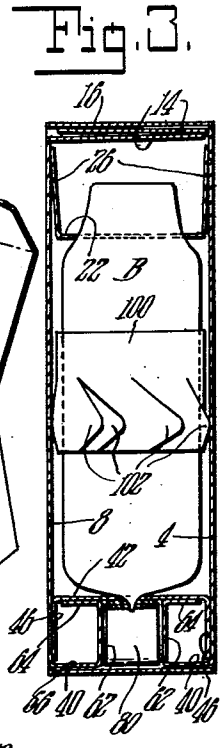


Fig. 4.

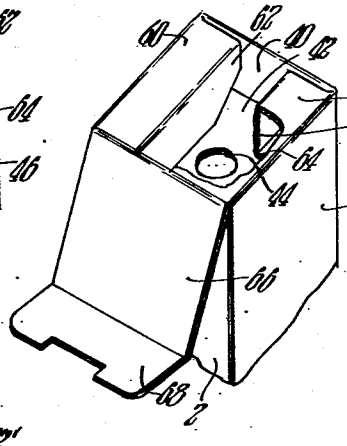


Fig. 5.

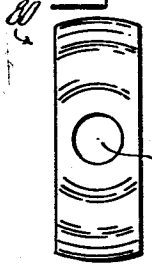


Fig. 6.

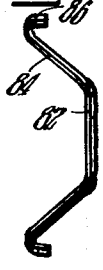
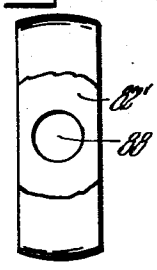


Fig. 7.



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2,682,949

CARTON

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Application September 13, 1950, Serial No. 184,556

1 Claim. (Cl. 206—46)

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This invention relates to improvements in receptacles and is directed more particularly to improvements in cartons which are foldable so as to provide a shipping container for fragile articles.

The principal objects of the invention are directed to the provision of a carton blank which is adapted for setting up so as to provide a receptacle for a fragile article such as the glass filler of a Thermos bottle and to protect same against injury or breakage.

Such a filler is very fragile and usually has a nipple depending from the lower side thereof which is easily broken off so that the filler becomes useless.

According to the novel features of this invention, a carton blank is provided which is readily set up to provide a receptacle which is particularly adapted for holding a Thermos bottle filler and is characterized by a means for holding the filler from contacting the side walls of the receptacle and by a means cooperating therewith for holding the lower end of the filler and nipple depending therefrom from contacting with the receptacle closing means at the lower end thereof.

The invention consists generally in providing in a carton construction a shock absorbing or resilient member for holding the fragile article spaced from the lateral walls of the carton and in providing a cooperative relation between the shock absorbing members and the end flap members which prevents movement of the contained article longitudinally of the lateral wall of the container.

With the foregoing and various other novel features and advantages and other objects of my invention as will become more apparent as the description proceeds, the 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 claim hereunto annexed and more fully described and referred to in connection with the accompanying drawings wherein:

Fig. 1 is a perspective view of the carton embodying the novel features of the invention with the side walls arranged in set-up tubular form;

Fig. 2 is a perspective view of the upper end of the carton shown in Fig. 1;

Fig. 3 is a sectional view showing the carton of the invention;

Fig. 4 is an inverted perspective view of the lower end of the carton shown in Fig. 1; and

Figs. 5, 6 and 7 are bottom plan, side elevational, and top plan views respectively of the shock absorbing device of my invention.

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

A carton is shown in Fig. 1 which has panels numbered 2, 4, 6 and 8 which provide longitudinal side walls for a receptacle in the conventional manner.

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The panel 2 has a longitudinal tab 10 which is secured to an adjacent longitudinal edge of panel 8 and the panels are hinged at their edges as at 12 to facilitate setting up the carton as shown in Fig. 1.

Upper end flaps 14 are hinged at the upper ends of panels 4 and 8 and an upper end closure 16 having an upper closure tuck 18 hinged at one side thereof as shown in Fig. 1 is hinged on the opposite side to the upper end of panel 2.

The panel 6 has hinged thereto at its upper end an upper platform support member 20 which has hinged thereto at the opposite side thereof an upper platform member 22. The member 22 is provided with a central opening 24 therein for purposes subsequently to be described.

On the sides of the member 22 adjacent the member 20 are hinged upper platform side flaps 26 and 26 and on the side of member 22 opposite to member 20 is an upper platform end flap 28.

The members 20, 22, 26 and 28 are of such dimension that the member 20 when swung inwardly relative to the panel members lies adjacent the upper extremity of the panel 6 and the member 22 is nested within the carton in a plane parallel to the plane of the top of the carton. The members 26, 26 and 28 are folded upwardly and outwardly relative to member 22 adjacent the respective walls 4, 8 and 2, all as is shown in Fig. 2.

Upon the insertion into the carton of the members 20, 22, 26, 26 and 28, the end flaps 14 may be folded over and the closure 16 may be brought into position in the usual manner so as to enclose completely the upper end of the carton with the tuck member being receivable in the opening between the member 20 and the flap members 26 and 26.

At the lower end of the carton, a lower platform support member 40 is provided which is hinged to the lower end of the panel 6. At the opposite side of the member 40 a lower platform member 42 is hinged. The member 42 is provided with a central opening 44 therein for purposes subsequently to be described.

On the sides of the member 42 adjacent the member 40 are hinged lower platform side flaps 46 and 46 and on the side of member 42 opposite to member 40 is an upper platform end flap 48.

The members 40, 42, 46 and 48 are of such dimension that the member 40 when swung inwardly relative to the panel members lies adjacent the lower extremity of the panel 6 and the member 42 is nested within the carton in a plane parallel to the plane of the bottom of the carton. The members 46, 46 and 48 are folded downwardly and outwardly relative to member 42 adjacent the respective walls 8, 4 and 2 all as is best shown in Fig. 3.

Inner channel flap members 60 are hinged at the lower ends of panels 4 and 8 and said members 60 have hinged on their opposite sides intermediate channel flap members 62. Outer channel members 64 are hinged to the opposite sides of the members 62.

Each set of members 60, 62 and 64 are foldable along their respective hinge lines so as to be foldable inwardly within the lower end of the carton so that the members 64 when in set up position lie adjacent and support the underside of member 42 which lies thereagainst, all as shown in Fig. 4.

The intermediate members 62 form, as shown in Figs. 3 and 4, a channel therebetween into which a shock absorber shortly to be described is insertable.

A lower end closure 66 having a lower closure tuck 68 hinged at one side thereof as shown in Fig. 4 is hinged on the opposite side to the lower end of the panel 2.

Upon the insertion into the carton of the members 40, 42, 46 and 48, the lower end closure 66 may be folded over and brought into position in the usual manner so as to completely enclose the lower end of the carton with the tuck member being receivable in the opening between the member 40 and the inner channel flap member 60.

The shock absorber comprises a metallic member 80 having a central body portion 82 and angularly disposed intermediate portions 84 at opposite sides thereof which terminate at their free ends in upturned outer end portions 86 as shown in Fig. 6. An aperture 88 is centrally located in the body portion and a resilient material 82' covers the upper surface of the portion 82.

The shock absorber is of such dimension as to nest snugly in the channel provided between the intermediate members 62 when same are in set up position.

When a bottle B or similar article is placed within the carton and the upper and lower platform members 22 and 42 and associated components are placed in their operative positions, the neck or upper extremity of the bottle is receivable through the opening 24 in the member 22 and the nipple (in the case of a Thermos bottle filler) or lower extremity of the bottle is receivable through the opening 44 in the member 42.

A protective device 100 comprising a collar member 100 having outwardly projecting tabs 102, shown and described in an application for patent filed by me simultaneously with this application, may also be employed to prevent the bottle from unwanted slippage within the carton.

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 claim 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 claim are therefore intended to be embraced therein.

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

A protective shipping and storage carton structure for receiving and engaging the sides and ends of an elongated fragile Thermos bottle which is provided with an upper reduced neck and a projection depending from the bottom thereof comprising, secured together opposite and adjacent vertically disposed longitudinal side walls of relatively greater length and transverse width than the length and diameter of the bottle to be received therebetween, an upper platform having an opening therethrough for receiving the neck of a bottle and hinged connections between one edge of said platform and an upper edge of one of said side walls arranged for positioning said platform horizontally between upper portions of said side walls and downwardly at a distance below upper edges thereof, and members hingedly connected to other adjacent edges of said platform for frictionally engaging inner sides of said side walls, flaps hingedly connected to upper edges of other of said side walls arranged for overlapping relation to close the upper end of said carton, a lower platform having an opening therethrough for the projection at the bottom of a bottle and hinged connections between one edge of said platform and lower edge of one of said side walls arranged for positioning said platform horizontally and upwardly from the lower edges of said side walls in shock absorber supporting position, and members hinged to adjacent side edges of said platform for frictionally engaging inner sides of said side walls in said position of the lower platform, channel forming members hinged to lower edges of opposite side walls adjacent said one side wall and having other channel forming members hinged thereto arranged to abut said lower platform and provide a transverse relatively narrow channel extending between the lower end of said one wall and a side wall opposite thereto having an open transverse side at the lower end of said carton, a lower closure hinged to the lower edge of the side wall opposite to said one side wall for closing the lower end of the carton and having a flap hinged thereto for frictional engagement with the hinged connection between said lower platform and one wall, said channel forming members being disposed between and engaging said platform and closure, and a substantially rigid shock absorber in said channel between said platform and closure formed from an elongated strip of metal in the form of a U to have an intermediate portion for engaging the underside of said platform and provided with an opening in alignment with the opening of the lower platform for the projection of said bottle and having downwardly extending opposite end portions for resting on said closure whereby to support said lower platform, and said shock absorber provided with resilient material on the intermediate portion thereof underlying said platform.

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