Feb. 15, 1955 M. BAUMANN 2,702,155

SHIPPING PACKAGE

Filed July 27, 1950

Fig. 1.

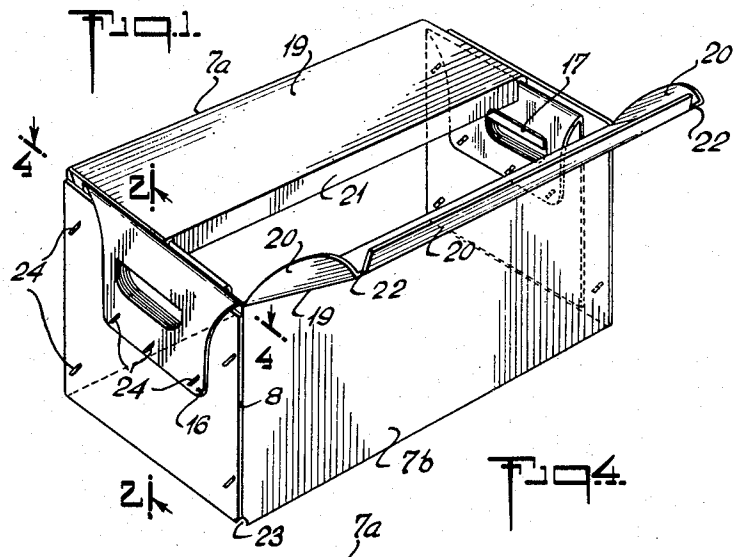


Fig. 4.

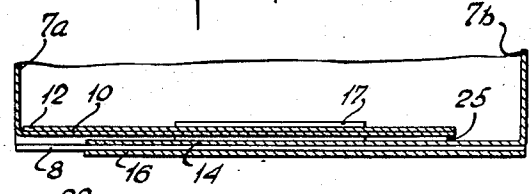


Fig. 3.

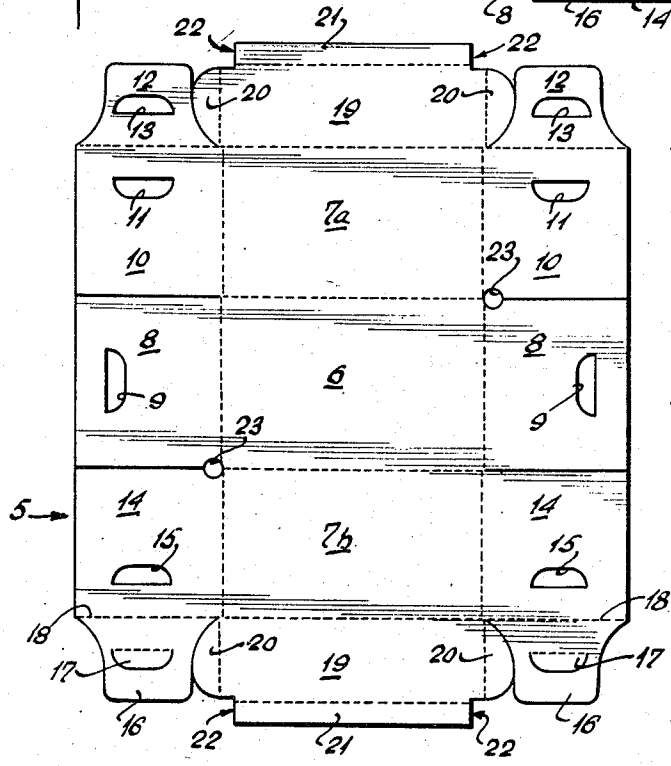
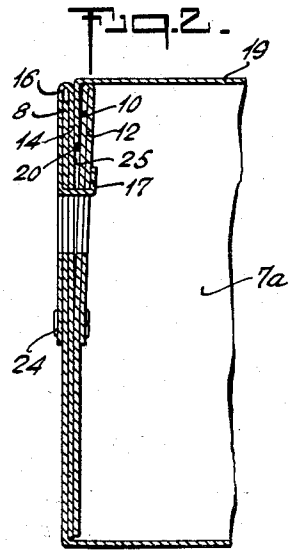


Fig. 2.



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SHIPPING PACKAGE

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1 Claim. (Cl. 229—52)

This invention relates to new and useful improvements in shipping containers generally and particularly seeks to provide a novel box fabricated from corrugated board or the like suitable for the packaging of bottled goods and in which the end walls are reinforced and provided with grooves constructed to receive the end flanges of closure flaps to hold the same in place.

An object of this invention is to provide a shipping container of the character stated which may be used repeatedly.

Another object of this invention is to provide a shipping container of the character stated which may be constructed from a single cut and scored blank of corrugated board or the like and which utilizes practically the whole area of a rectangular sheet, thus minimizing material waste.

Another object of this invention is to provide a shipping container of the character stated which has greatly reinforced end walls to withstand the stresses imposed thereon during handling and storing.

Another object of this invention is to provide a shipping container of the character stated which includes top closure flaps integral with the side walls and provided with side and end flanges adapted to enter receiving grooves formed by the upper portions of the end walls.

Another object of this invention is to provide a container of the character stated which includes a bottom, side walls, multi-ply end walls provided with handholes and flange-receiving grooves, and a pair of top closure flaps carried by said side walls and provided with side and end flanges adapted to enter the receiving grooves formed by the end walls.

Another object of this invention is to provide a container of the character stated which can be shipped and stored in a flat, knocked-down form and then simply and quickly erected when needed, thus conserving valuable space prior to actual use of the container.

With these and other objects in view, the nature of which will be more apparent, the invention will be more fully understood by reference to the drawings, the accompanying detailed description, and the appended claim.

In the drawings,

Fig. 1 is a perspective view of an erected container constructed in accordance with this invention;

Fig. 2 is an enlarged, vertical section of one end taken along line 2—2 of Fig. 1;

Fig. 3 is a plan view of a blank from which the container may be formed; and

Fig. 4 is an enlarged horizontal section taken along line 4—4 of Fig. 1.

Referring to the drawings in detail, the invention as illustrated is embodied in a shipping container so constructed and proportioned as to be particularly suitable for use as a container for shipping bottled goods.

The container is formed from a single cut blank of corrugated board or the like, generally designated at 5, which includes a bottom 6 and side walls 7*a*, 7*b*. The bottom carries a pair of outer end panels 8, 8 which are provided with cut-out handholes 9. The side wall 7*a* carries at each end an inner end panel 10 provided with a cut-out handhole 11 and an inner end reinforcing panel 12 extending from one side of the panel 10. The panel 12 is provided with a cutout handhole 13 and tapers generally outwardly. The side wall 7*b* carries at each end a central end panel 14 provided with a cut-out handhole 15 and an outwardly tapering reinforcing panel

16 similar to the panel 12 and which is provided with a hand-hole flap 17. Score lines 18 separating the panels 14 and 16 are preferably reverse scored as compared to the remaining score lines of the blank. Each of the side walls 7*a* and 7*b* carries a top closure flap 19 provided at each end with rounded end flanges 20 and a long narrow side flange 21. Said closure flaps are also provided at each end with notch formations, indicated at 22, between the side and end flanges thereof. Cut out drainage holes 23 may be provided and are so spaced on the blank that they will be in diagonally placed bottom corners when the container is erected.

By referring to Fig. 1 of the drawings it will be observed that a carton constructed in accordance with this invention when erected has the bottom 6, side walls 7*a*, 7*b*, five-ply end walls formed from the panels 8, 10, 12, 14, 16, and top closure flaps 19 so arranged as to define a generally rectangular body. The five-ply end walls may be stapled as at 24, glued or fastened by other means to retain the shape of the carton. The several handholes are so placed on the blank that they are in alignment when the box is erected and the handhole flaps 17 of the panels 16 can be folded in through the combined aligned handholes and then folded upwardly as shown in Fig. 3.

It should be noted that the end walls are formed to provide in the erected container a receiving groove 25 adapted to receive the rounded end flanges 20 of the top closure flaps 19. The outer end panel 8 is first folded into position, then the central end panel 14 is brought into juxtaposition with the internal surface of the outer panel 8. Now the outer end reinforcing panel 16 is folded outwardly over the panel 8 and down into juxtaposition with the external surface of the panel 8 so that upon fastening the three panels 8, 14, 16 form a unitary wall portion. The inner end panel 10 is then brought into an aligned position inside the above formed unit and the inner end reinforcing panel 12 is folded inwardly and downwardly into juxtaposition with inner panel 10 so that upon fastening the two panels 10, 12 form another unitary wall portion. As will be noted from Fig. 1, the staples 24 holding the end walls together are not placed higher than a short distance below the handholes in the central area of the end walls, although it is possible to place them much higher at the external edges of the end walls. By so placing the staples the inner wall unit composed of panels 10, 12 may be pushed slightly inward while the outer wall unit composed of panels 8, 14, 16 remains in position, thus forming the receiving groove 25, as shown in Fig. 3, which is adapted to receive the end flanges 20 of the top closure flaps 19. It should be noted that the manner of forming the end walls is such that the receiving groove 25 is formed without requiring the use of additional material. The notches 22 between the side flanges and end flanges at the respective outer corners of the top closure flaps allow the closures to pass over and fit snugly about the inner end unit composed of panels 10, 12.

Many efforts have heretofore been made to provide shipping cartons adaptable for the packaging of bottled goods in which the container is strong enough to withstand wear and tear of repeated usage and to provide an easily opened closure that will not tend to open from the stress of handling. Most of the stress from handling these containers is on the end walls and the stresses from storage on the upper edges. Attempts to provide slotted and reinforced ends have invariably compelled the use of additional blanks which requires more labor and material. The container herein described has added strength at the upper side edges due to the closure flaps being integral with the side walls. The end walls are five-ply thick so can withstand great stress and make a strong upper edge. In addition thereto the end walls are provided with receiving grooves adapted to receive the end flanges of the top closure, thus assuring a more stable closed package unit and also helping to maintain the shape of the container while being handled.

It is, of course, to be understood that various details of arrangements and proportions of parts may be modified within the scope of the appended claim.

I claim:

A container formed from a single blank of paper board and comprising a bottom, a pair of side walls, a pair of end walls provided with handholes, and a pair of top closure flaps, each of said end walls being formed from an outwardly positioned end wall panel carried by said bottom, an intermediate end wall panel carried by one of said side walls and provided with an outwardly folded extension overlying the outer face of said outwardly positioned end wall panel and containing a handhole in registry with the handhole thereof, and an inwardly positioned end wall panel carried by the other of said side walls and provided with an inwardly folded extension in juxtaposition therewith and containing a handhole in registry with the handhole thereof whereby to form an end wall having its upper portion of five-ply thickness and its lower portion of three-ply thickness, means to secure the plies together below the upper edges thereof whereby to permit separation of the upper edge of said inwardly positioned end wall panel and extension from said intermediate and outwardly positioned end wall panels and extension to form a receiving groove, said top closure flaps being formed as extensions of said side walls and provided with a depending flange at each end for insertion into said receiving groove.

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