

Oct. 10, 1939.

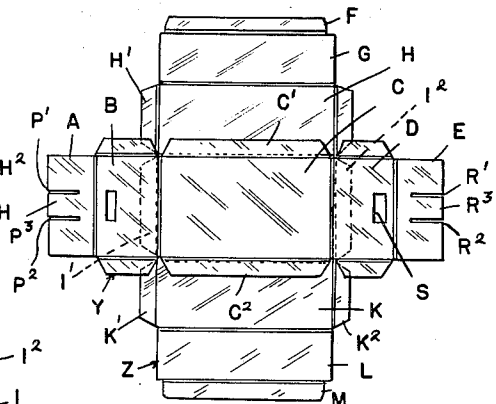
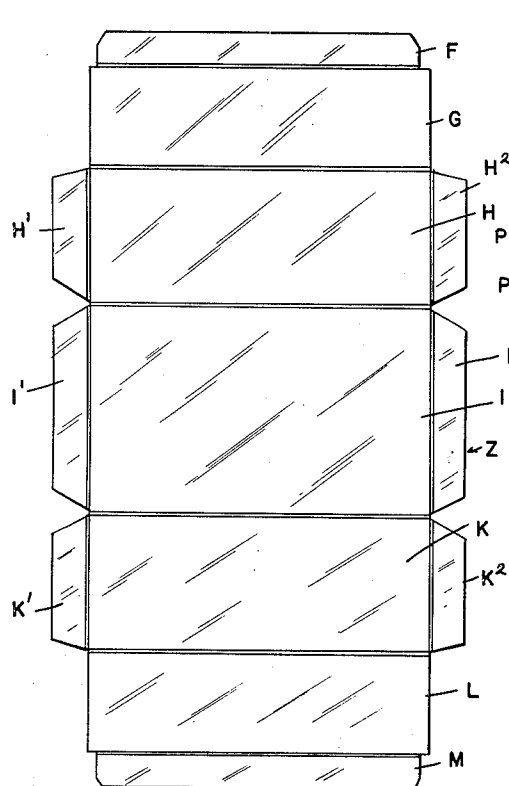
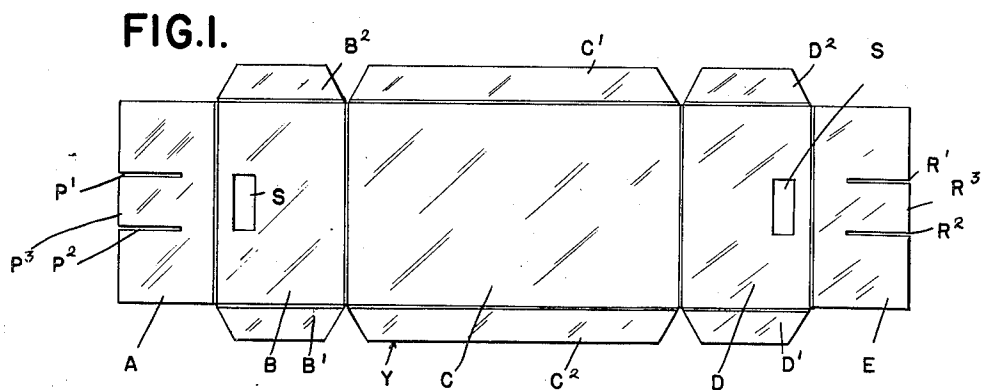
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2,175,476

SHIPPING CARTON

Filed Aug. 5, 1937

3 Sheets-Sheet 1



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3 Sheets-Sheet 2

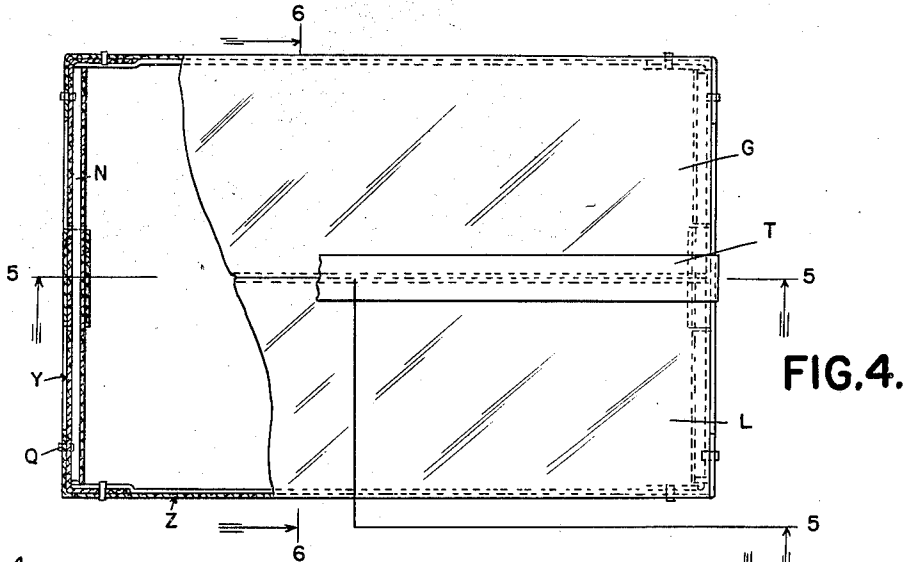


FIG. 4.

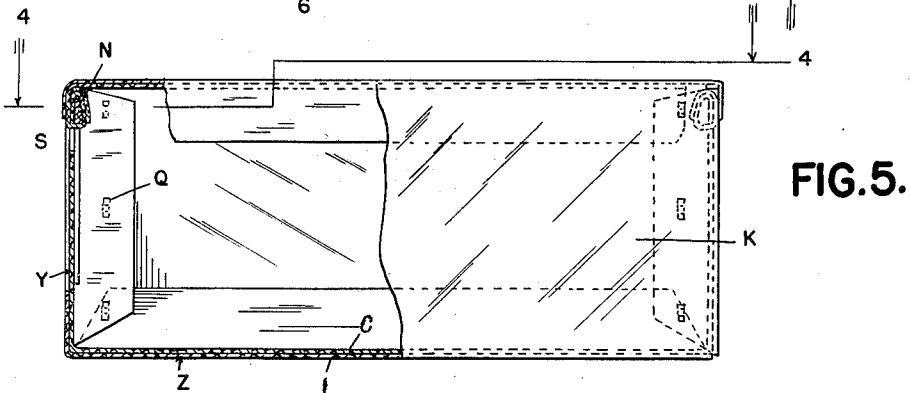


FIG. 5.

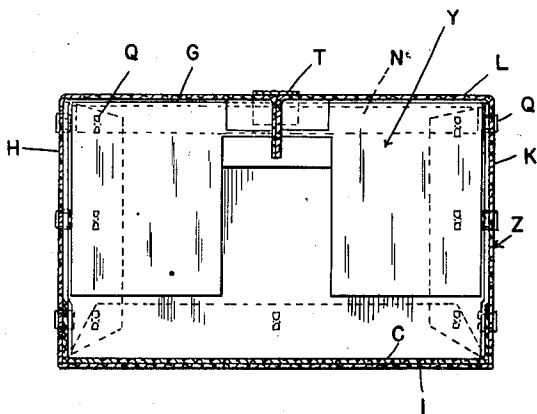


FIG. 6.

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FIG. 7.

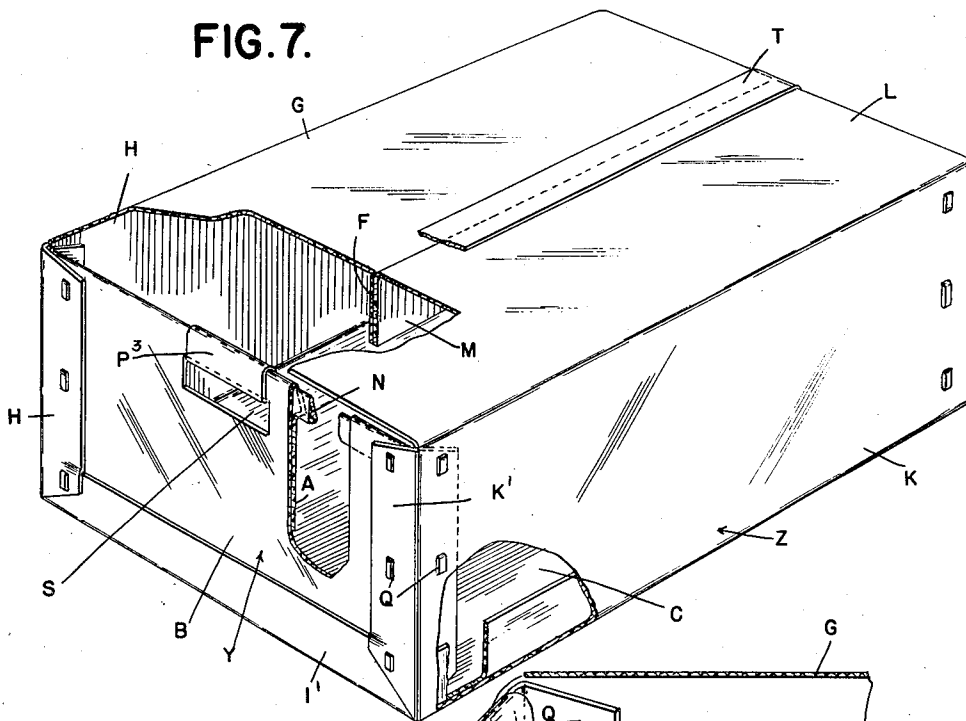
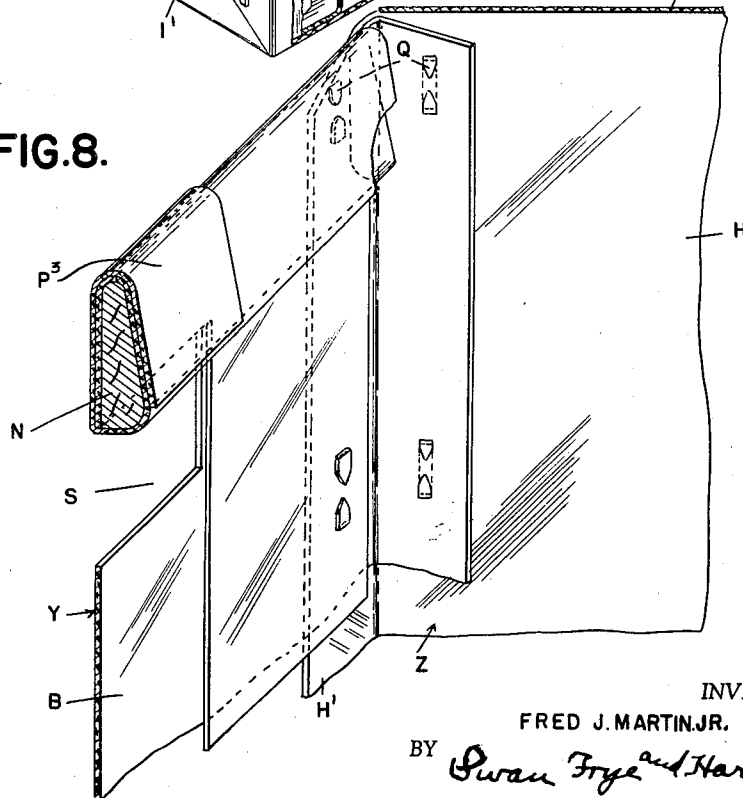


FIG. 8.



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UNITED STATES PATENT OFFICE

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SHIPPING CARTON

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Application August 5, 1937, Serial No. 157,587

3 Claims. (Cl. 229—23)

This invention relates to cardboard shipping containers, and has for its object the provision of an economically fabricable unit of this character which, after shipment with the parts flat, can be easily assembled, and which as completed offers a maximum of convenient packaging facilities and structural strength, which will easily stand up under its use as a shipping medium for filled bottles or the like, and which when filled and ready for shipment embodies means for facilitating its handling by warehouse men, delivery men and the like.

In the drawings:

Figure 1 is a plan view of the cut-to-shape blank comprising one of the two component units of a completed shipping carton.

Figure 2 is a similar plan view of the second unit of my improved carton.

Figure 3 is a plan view on a reduced scale of the two blanks shown in Figures 1 and 2 in the superposed and right-angular position to one another which they assume when the building-up of the carton walls to enclosing form is started.

Figure 4 is a plan view from above of the assembled carton with parts broken away to show the interior arrangement; this view is taken along the broken line 4—4 of Figure 5 and looking in the direction of the arrows there shown.

Figure 5 is a side elevational view largely in section, taken along the lines 5—5 of Figure 4 and looking in the direction of the arrows there shown; it will be noted that in the right-hand portion of Figure 4 there are two lines 5 and their arrows shown, these being employed to emphasize the fact that the side elevational showing of this Figure 5 is deliberately broken about the center.

Figure 6 is a transverse sectional view on line 6—6 of Fig. 4.

Figure 7 is a perspective of the assembled carton with parts broken away in section to show the cooperative action between the various component parts of the folded blanks of which the cartons are made.

Figure 8 is a fragmentary perspective of the interior of the carton taken from a point slightly above the top level of the assembled carton, designed to bring out the over-folded construction whereby the reinforcement of the hand-hold portion of the cartons is effected.

The blank Y shown in Figure 1 and the blank Z shown in Figure 2 are severally cut to shape from cardboard stock, and one of each of these is required for the completed carton forming the subject of this disclosure. The blank Y is cut

and folded so that in its flattened-out form it comprises the sections A, B, C, D, and E. The blank Z similarly comprises the sections F, G, H, I, K, L and M. The section I of the blank Z is just enough larger than the section C of the blank Y so that when the blank Y is superposed upon the blank Z, as shown in Figure 3, the section C will just fit within the section I of the blank Z and allow for turning up of the adjacent sections H and K of the latter, these last-named sections forming the sides of the carton as assembled. Similarly the sections or panels B and D of the blank Y constitute the end panels of the completed carton. The superposition of the panel C over the panel or section I thus provides at the outset a double bottom for the completed carton, and when the marginal folded-over sections C' and C² of the panel C are folded to right-angular position relatively to the plane of the panel C they lie against the lower portions of the side panels H and K respectively of the blank Z and are adapted to be fastened thereto by staples, thus structurally assembling both elements of the carton's bottom in a manner to benefit from the double strength thus afforded.

Similarly when the panels B and D of the blank Y are turned to perpendicular position relatively to the plane of the section C the correspondingly bent integral sections I' and I² are bent up and stapled to the lower portions of the end panels B and D respectively of the blank Y. It will be noted that each of the end panels B and D and of the side panels H and K have creased-off end portions as B', B², D', D², H', H² and K', K², which with the side and end panels in perpendicular position relatively to the bottom of the box thus overlap one another at what are the corners of the box, making a double ply overlap of the cardboard material along the corner edges, which, when they are similarly united by stapling, as brought out at Q in Figures 4, 6, 7 and 8, give an especially strong construction at these points.

There remain to be considered the terminal sections A and E of the blank Y and F, G, L and M of the blank Z. It will be noted as to the former that each is centrally kerfed, as at P', P² and R' and R² respectively, leaving a central tongue portion in each, as P³ and R³. The panels flanking these central sections are adapted to be folded down against the then adjacent inner surfaces of their panels B and D respectively, and secured thereto by stapling, thus in effect making a double wall for each of the end panels as to fully two-thirds of their respective surfaces. The cen-

tral sections P³ and R³ are adapted to be wound about a reinforcing wooden or similar rod or bar, as N, in the manner shown particularly in Figures 7 and 8, the tips of each being of course bent over so as not to interfere with the hand-
 5 hold apertures S in the end wall sections. Since the end portions of these bars or rods N also engage within the overfolded portions P' and P² and R' and R² respectively of the thus reinforced
 10 end panel, a sufficiently strong assemblage of the parts is effected at the ends of the carton, so that the cardboard will not easily tear when lifted by a user employing these hand-holds; and the wrapping around of the terminal tongues P³ and
 5 R³ about the reinforcing wooden bar makes the curvature of that portion of the carton's wall which rests upon the hands or fingers of the user so gentle that no abrasion of the hands or fingers is likely to result.

20 The built-up carton as thus far described is now complete except for the top closure, which is cared for by the over-folded panels G and L of the blank Z, and which together are of a breadth substantially equal to that of the bot-
 25 tom panel I. At the outer edge of each of these top panels G and L there are provided integral overfolded sections, as F' and M respectively, which depend interiorly of the box when the top panels G and L are swung to horizontal posi-
 30 tion, thus rendering the top or roof of the box as thus constituted additionally free from a tendency to buckle under strain. The externally meeting edges of the top panels G and L may then be sealed in position in any desired man-
 35 ner, as, for example, by the paper adhesive strip T, and the carton with its contents is then ready for shipment or handling. It should also be noted that, subject to what inconvenience may result from having to remove the correlating staples
 40 whereby the various wall parts are held in position, the carton after it has been delivered and emptied of its contents may be disassembled and folded out flat for shipment with its constituent blanks Y and Z spread out in compact relation,
 45 so that the blanks required for quite a large number of assembled cartons would total a relatively small cubic volume.

What I claim is:

1. A shipping carton consisting of a pair of
 50 cardboard blanks each folded along selected lines to provide for the functioning of the panels thus formed as constituent parts of the carton as a whole, the central panels of each of the blanks being of approximately the same size and being
 55 adapted to be registeringly positioned one above the other to form a double bottom for the carton, and the sections immediately flanking the center section of each of said blanks extending outwardly therefrom in right-angular relation to the cor-
 60 responding flanking portions of the other blank, and being bent upwardly from the plane thereof to form the side panels and the end panels respectively of the carton, the recited side panel por-
 65 tions having terminal extension portions each of which upon being further folded over are adapted to together serve as the top closure portion of the carton, and the recited end panel sections being provided with hand hold apertures which are reinforced by the folded-over engage-

ment thereof of terminally positioned exten-
 sions of the end panel sections the lateral mar-
 ginal portions of which are fastened to the ad-
 5 jacent surface portions thereof, and each of the side panel and end panel portions of the carton being provided with overbent marginal portions which upon being brought to overlapping registry with similar overbent marginal portions of the carton panels are adapted to be fastened to one another, thereby providing additional strength
 10 to the carton along its corner edges.

2. A shipping carton comprising a pair of selectively creased cardboard blanks whose respec-
 tive center portions are approximately the same size and are adapted to be registeringly positioned one above the other to form a double bottom
 15 for the carton, said blanks when thus positioned each have their respective terminal portions positioned in right-angular relation to the corresponding parts of the other blank, those portions of each blank immediately adjacent the recited center sections being adapted, when bent to posi-
 20 tions of right-angularity with respect to the planes thereof, to function as the side and end panel sections of the carton respectively, the side panel sections having terminal extension
 25 portions which are adapted to be further folded over the top of the carton for effecting the closure of that face thereof and the corresponding panel portions of the other blank being similarly
 30 adapted, upon being bent to substantially perpendicular position relatively to the bottom panels, to serve as the end panels of the carton, said end panels being provided with hand hold apertures,
 35 and the reinforcement of the top edges of the panel walls surrounding the same being effected by the overbending and attachment of terminal portions thereof against the adjacent face of their respective end panel portions, and the
 40 marginal edges of the several side panel and end panel portions being provided with integral extensions which upon assemblage of the carton overlap similar and adjacently located extension
 45 portions, and are adapted to be attached for effecting the reinforcement of the corner edges of the carton as assembled.

3. In a shipping carton the combination in initially cruciform relation of a pair of selectively bent blanks whose central portions thus posi-
 50 tioned one over the other are of substantially the same shape and size and which function accordingly as a double bottom for the assembled carton, integrally correlated additional panels on either side of the recited center portion of each blank, and marginal projections from the
 55 panels constituting said additional panel portions which, upon the assemblage of the carton into three-dimensional contour, overlap one another along the vertical marginal edges of the carton and are adapted to be attached to one
 60 another to effect a reinforcing additional wall thickness of the carton along such vertical corner edges thereof, and overbent integral extensions of said end panels structurally integrated with the adjacent surfaces of their respective
 65 end panels to effect the reinforcement of the top edges thereof against applied lifting strains.

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