Jan. 18, 1949. C. H. HENSLEY 2,459,645

FOLDED-BLANK BOX TRAY

Filed July 5, 1946

FIG. 1.

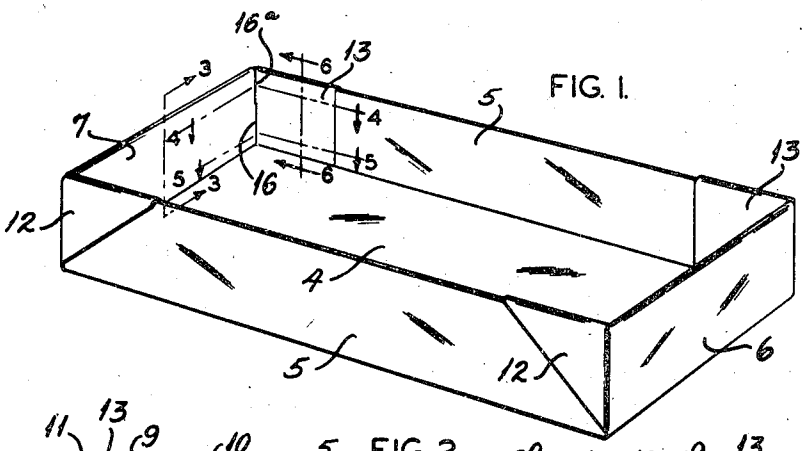


FIG. 2.

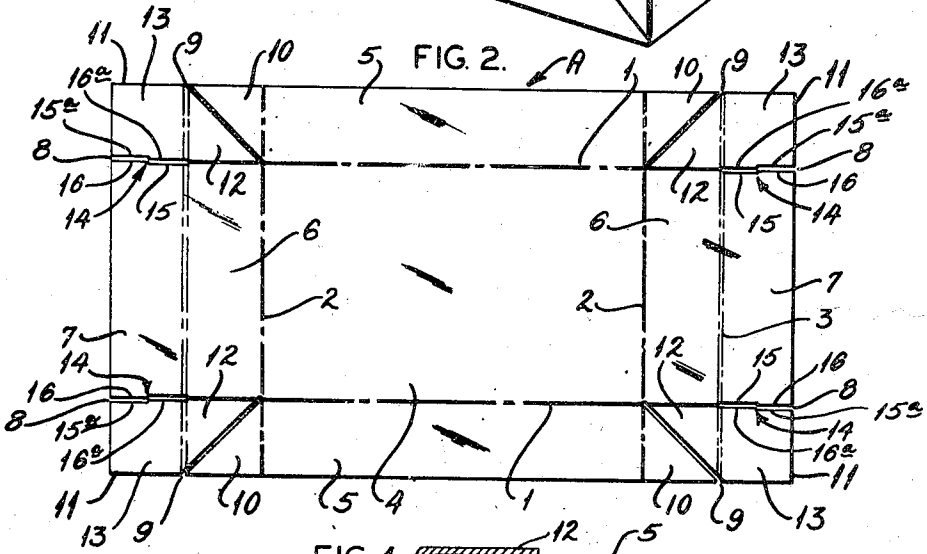


FIG. 4.

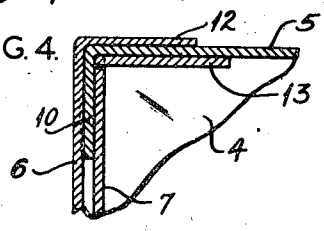


FIG. 3.

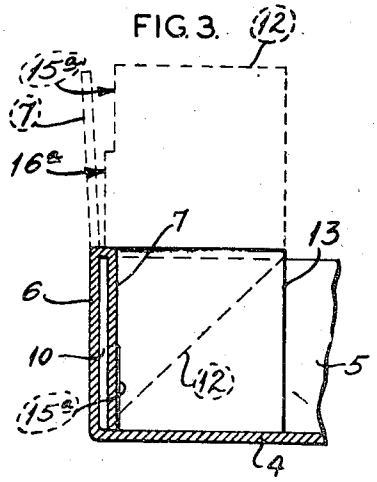


FIG. 5.

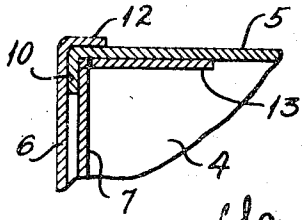
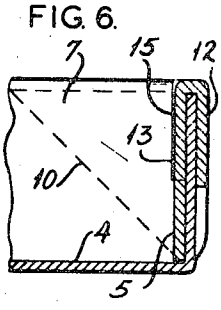


FIG. 6.



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FOLDED-BLANK BOX TRAY

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2 Claims. (Cl. 229—34)

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This invention relates to folded-blank box trays of the kind in which two of the sides have corner flaps folded inward and secured by folding over upper marginal flaps of the other two sides.

The invention has for its principal object to provide a box tray of the above type having corner constructions which are strong and durable and of neat and attractive appearance, which will dispense with the need for separate fasteners and which will permit the box tray to be quickly and easily set up and knocked down.

The invention consists in providing two of the sides of a box tray of the above type with end flaps that are folded around the corners of said tray against the outer faces of the other two sides thereof and are thence folded downwardly over the upper edges of said other two sides and against the inner faces thereof in inside corner forming relation to the downturned upper marginal flaps of said two first mentioned sides; it also consists in shaping the adjacent inside corner forming edges of said downturned end and upper marginal flaps so that each locks the other in place; and it also consists in the folded-blank box tray and in the parts and combinations and arrangements of parts hereinafter described and claimed.

In the accompanying drawing, which forms part of this specification and wherein like symbols refer to like parts wherever they occur,

Fig. 1 is a perspective view of a folded-blank box tray embodying my invention,

Fig. 2 is a plan view of the blank from which the box tray is formed,

Fig. 3 is an enlarged fragmentary vertical cross-section view on the line 3—3 in Fig. 1,

Figs. 4 and 5 are enlarged fragmentary horizontal sectional views on the lines 4—4 and 5—5, respectively, in Fig. 1; and

Fig. 6 is an enlarged fragmentary vertical sectional view on the line 6—6 in Fig. 1.

In the accompanying drawing, my invention is shown embodied in a folded-blank box tray which is adapted to form one of the two collapsible sections of a telescopic box. The box tray is made from a rectangular blank A of corrugated board, fiberboard or other bendable material which is divided by a longitudinal score line 1 along each side margin and by transverse score lines 2 and 3 adjacent to each end margin into a bottom panel 4, side wall panels 5 and end wall panels 6 with marginal flaps 7. The blank is slit or notched, as at 8, along the longitudinal score lines 1 from the ends of said blank to the outermost transverse score lines 3. The blank is also

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slit or notched diagonally, as at 9, along its sides from the ends of the outermost transverse score lines 3 to the points where the longitudinal score lines 1 intersect the innermost transverse score lines 2. The diagonal slits 9 form triangular flaps 10 at the ends of the side wall panels 5; and said diagonal slits, together with the longitudinal slits 8, form locking flaps 11 having triangular portions 12 connected to the ends of the end wall panels 6 and rectangular free end portions 13 connected to said triangular portions along the outermost transverse score lines 3. As shown in the drawing, the longitudinal slits 8 are offset, as at 14, midway of their length to provide notches 15 and tongues 16 along the ends of the flaps 7 and a reverse arrangement of notches 15^a and tongues 16^a along the inner edges of the rectangular free end portions 13 of the flaps 11.

The above box tray is set up or erected by first folding the side wall panels 5 upwardly, then folding the triangular end flaps 10 of said side wall panels inwardly at right angles thereto, and then folding the end wall panels 6 upwardly against the inturned end flaps. The upper marginal flaps 7 of the end wall panels 6 are then folded downwardly on the inner side thereof in overlapping relation to the inturned triangular end flaps 10 of the side wall panels 5, with the lower edges of said upper marginal flaps seating against the bottom panel 4 and with their tongue portions 16 in frictional engagement with the inner side faces of said side wall panels. The triangular portions 12 of the end flaps 11 of the end wall panels 6 are then folded around the corners of the tray against the outer side faces of the side wall panels 5, after which the rectangular free end portions 13 of said end flaps are bent downwardly over the upper edges of said side wall panels and against the inner side faces thereof with the lower edges of said downwardly folded portions seating on the bottom panel. In this folded position of the portions 13 of the flaps 11, the tongues 16^a thereof seat in the notches 15 in the flaps 7 and the tongues 16 seat in the notches 15^a of the folded portions 13 of the flaps 11.

The hereinbefore described folded-blank box tray construction has several important advantages. The blank may be shipped in the flat and quickly and easily set up without the use of separate fastening members. The folded corner flap arrangement greatly increases the strength and rigidity of the box at the corners thereof and thus enables the boxes to be stacked and to withstand rough handling. The exposed corner

portions of the locking flaps improve the appearance of the tray; and the interlocked tongues and recesses along the adjacent ends of the downturned upper marginal flaps and end flaps of the end wall panels serve to firmly hold said flaps in locking position.

Obviously, the hereinbefore described folded-blank box tray construction admits of considerable modification without departing from the invention. Therefore, I do not wish to be limited to the precise construction shown and described.

What I claim is:

1. A rectangular folded-blank box tray comprising a bottom panel, two side wall panels having inturned end flaps, and two end wall panels disposed alongside of said inturned end flaps against the outer faces thereof and having upper marginal flaps folded downwardly over said inturned end flaps against the inner sides thereof, said end wall panels having corner locking end flaps with inner portions that are folded around said side wall panels against the outer sides thereof and outer portions that are folded downwardly over the upper edges of said side wall panels and against the inner faces thereof, the adjacent ends of said downwardly folded upper marginal flaps of said end wall panels and said downwardly folded outer portions of said corner locking end flaps of said side wall panels being each formed with a notch and a tongue, the tongue of each of said adjacent ends fitting within the notch in the other of said adjacent ends, said folded-blank box tray being made from a one-piece rectangular blank which is divided by slits and score lines into said bottom panel, said side wall panels and their end flaps and said end wall panels and their upper marginal flaps and corner locking end flaps, said adjacent ends of said upper marginal flaps and said outer portions of said corner locking end flaps being defined at each corner of said blank by a single slit which is offset laterally intermediate between its ends to provide said interfitting notches and tongues at the corresponding corner of said folded-blank box tray.

2. A rectangular box tray blank which is divided by a longitudinal score line along each side margin and two transverse score lines adjacent to each end margin into a bottom panel, side wall panels and end wall panels with marginal flaps, slits extending along said longitudinal score lines from the ends of said blank to the outermost transverse score lines, and slits extending diagonally from the ends of the outermost score lines to points of intersection of said longitudinal score lines and said innermost transverse score lines, said slits forming triangular end flaps at the ends of said side wall panels and flaps at the ends of said end wall panels having triangular inner portions and rectangular outer portions, said longitudinal slits defining the adjacent edges of the marginal flaps of said end wall panels and said rectangular outer portion of said triangular end flaps, said longitudinal slits being offset laterally intermediate between their ends to provide along each of said adjacent edges a notch and a tongue, the tongue on each of said adjacent edges being disposed opposite the notch in the other of said adjacent edges.

CLAUDE H. HENSLEY.

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