Aug. 17, 1943. A. A. BUREAU ET AL. 2,326,926
FIBERBOARD CARRYING TRAY
Filed Aug. 14, 1941
2 Sheets-Sheet 1

INVENTOR
A. A. BUREAU
S. PRICE
BY Harry L. Swift
ATTORNEY
This invention relates to fiberboard carrying trays and particularly to stacking or nesting trays.

An object of this invention is to provide a simple, strong and enduring stackable tray which may be economically produced from an integral blank.

In attaining this object, in one embodiment of the invention, as applied to an article carrying tray, a one-piece blank is punched from water-proofed solid fiberboard of a suitable thickness which, when folded, produces a tray having slightly flared sides and ends of double thickness. The lower edges of the outer sides and ends terminate a suitable distance from the bottom of the tray, thereby providing supporting ledges at each side and end for stacking the tray upon the upper edges of another tray of similar construction, the portion of the tray below the ledges nesting in the other tray. The ends of the inner and outer sides are provided with end flaps which are folded into position between the inner and outer ends, the flaps on the outer sides being so shaped that when folded into predetermined relation with the lower ledge edge of the ends and secured that protuberant or bulging formations are produced at the corners of the outer sides and ends extending upwardly for a distance and tapering off into the flared sides of the tray to provide enlarged supporting ledge surfaces at the corners for supporting the tray upon another tray. After folding the inner and outer sides, ends and flaps they are secured together by stapling.

Other objects and advantages of this invention will more fully appear from the following detailed description taken in connection with the accompanying drawings, in which

Fig. 1 is a perspective view of a tray embodying the invention;

Fig. 2 is a plan view of a blank ready to be folded to produce the tray illustrated in Fig. 1.

Fig. 3 is an enlarged fragmentary vertical sectional view taken on the line 3-3 of Fig. 1 and showing the tray stacked on another tray;

Fig. 4 is similar enlarged fragmentary vertical sectional view taken on the line 4-4 of Fig. 1, and

Fig. 5 is an enlarged fragmentary bottom plan view of the lower right-hand corner of the tray shown in Fig. 1.

In the drawings the novel features of the invention are embodied in a simple rectangular tray 10 (Fig. 1) for general use in handling articles. Referring to Fig. 2 there is shown a one-piece blank 11 which, upon being folded and secured, forms the tray shown in Fig. 1. The blank 11 may be sheared or punched from water-proofed solid fiberboard or other suitable material of a thickness to give the desired strength and is formed with a plurality of transverse creasing or folding lines at each end and a plurality of longitudinal creasing or folding lines at each side, all indicated by broken lines, upon which the blank is folded to produce the tray shown in Fig. 1. At 12 is indicated a bottom portion bounded by transverse and longitudinal fold lines 13 and 14, respectively. End wall portions extend from the fold lines 13 at each end of the bottom portion 12 and comprise inner and outer end wall portions 17 and 18, respectively, which are foldable upon each other along transverse fold lines 19.

Side wall portions extend from the fold lines 14 at each side of the bottom portion 12 and comprise inner and outer side wall portions 20 and 21, respectively, which are foldable upon each other along longitudinal fold lines 24. The side wall portions 20 and 21 have end flaps 25 which are foldable along transverse fold lines 26 and 27, respectively, the fold lines 26 being formed at an angle for the purpose of providing the tray with flared sides and ends. Opposite sides of the flaps 25 are angularly sheared to provide cutouts 28 which separate them from each other and from the end wall portions 17 and 18. The outer sides of the flaps 25 are angularly sheared at 29 for a purpose which will be brought out shortly. Opposite end wall portions 17 and 18 are sheared at an angle, as indicated at 30, along their opposite edges, the angle being complementary to the angle of the fold lines 26, so that when the blank 11 is folded and secured the side wall portions 20 and 21 are flared complementary to the end wall portions 17 and 18.

It will be observed that the narrowest dimensions of the outer end and side wall portions 18 and 21, respectively, are similar but less than the narrowest dimensions of the inner end and side wall portions 17 and 20, respectively, so that when folded to form the tray 10 the lower edges of the outer end and side wall portions will lie in a common plane above the bottom 12 of the tray to provide supporting ledges 33, as shown in Figs. 1, 3 and 4. Also, it will be noted that the angle 30 on the end wall portions 17 and 18 extends to the outer edge of the outer end wall portion 18, the purpose of which will be described shortly.
The tray 10 is formed from the blank 11 by first bending upwardly along the fold lines 14 the inner side wall portions 18 and then bending downwardly the outer side wall portions 24 along the fold lines 26. This produces closed upper edges at the sides of the tray. Thereafter the inner end wall portions 17 are bent up along the fold lines 15 and then the flaps 25 on the ends of the inner and outer side wall portions 20 and 21 are bent inwardly along their fold lines 26 and 27 respectively, so that they will lie parallel with the outer faces of the inner end wall portions 17. The folding is then completed by bending downwardly the outer end wall portions 10 along the fold lines 19 to abut the inner faces thereof with the outer faces of the flaps 25 on the outer side wall portions 21. This produces closed upper edges at the ends of the tray.

Suitably spaced staples 34 adjacent to the supporting ledges 33 and at the corners of the tray serve to secure together the inner and outer side wall portions 20 and 21, as well as the inner and outer end wall portions 17 and 18 with the flaps 25 arranged theretwixt, thus firmly securing the folded blank 11. Before securing the staples 34 at each side of the corners of the tray, the angularly sheared edges 29 at the outer sides of the flaps 25 are first aligned with the ledge edge of the outer end wall portions 18. This causes the angularly sheared edge 30 of the outer end wall portions 18 to be aligned with the transverse fold lines 21 and produces protuberant or bulging formations 35 (Figs. 3 and 5) at each corner of the tray which extend upwardly for a distance and taper off into the flared sides of the tray, thus providing enlarged supporting ledge surfaces at the corners for supporting the tray upon another tray.

From the foregoing description, it will be apparent that a simple, strong and endurable stackable tray, particularly a tray of solid fiber board construction, is provided which is provided with supporting ledges at its sides of one thickness and at its ends of several thicknesses and additional enlarged ledge surfaces at the corners in the form of protuberant or bulging formations whereby the tray may be positively stacked upon the upper edges of another tray of similar construction.

While the features of this invention have been disclosed in a specific tray structure, it is, of course, understood that it may be applied to other types of trays and that modifications may be made without departing from the scope of the invention as defined in the appended claims.

What is claimed is:

1. A tray comprising a bottom, double sides and ends folded upwardly from the bottom and downwardly on the outside to form inner and outer walls, said outer walls terminating short of the bottom, the bottom having a smaller area than the open top, foldable flaps integrally attached to the ends of the double sides along fold lines, the fold lines of the flaps which are secured to the outer side walls being offset outwardly from the edges of the bottom, said first-named flaps being secured between the inner and outer end walls thereby forming bulging corners flaring away from and extending beyond the inner walls of the tray when the flaps are folded upon themselves.

2. A tray comprising a bottom, double sides and ends folded upwardly from the bottom and downwardly on the outside to form inner and outer walls, said outer walls terminating short of the bottom and the bottom having a smaller area than the open top, flaps attached to the ends of the double sides and tapered toward their free ends and foldable along fold lines offset from the edges of the bottom to provide bulging corners when the flaps are folded upon themselves, said flaps being fastened to the inner and outer end walls.

ARTHUR A. BUREAU.
STANLEY PRICE.