

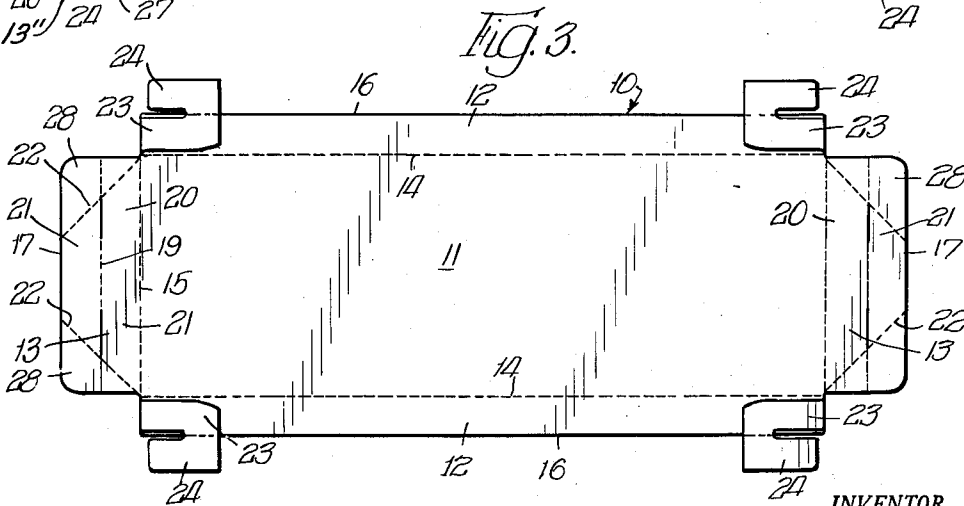
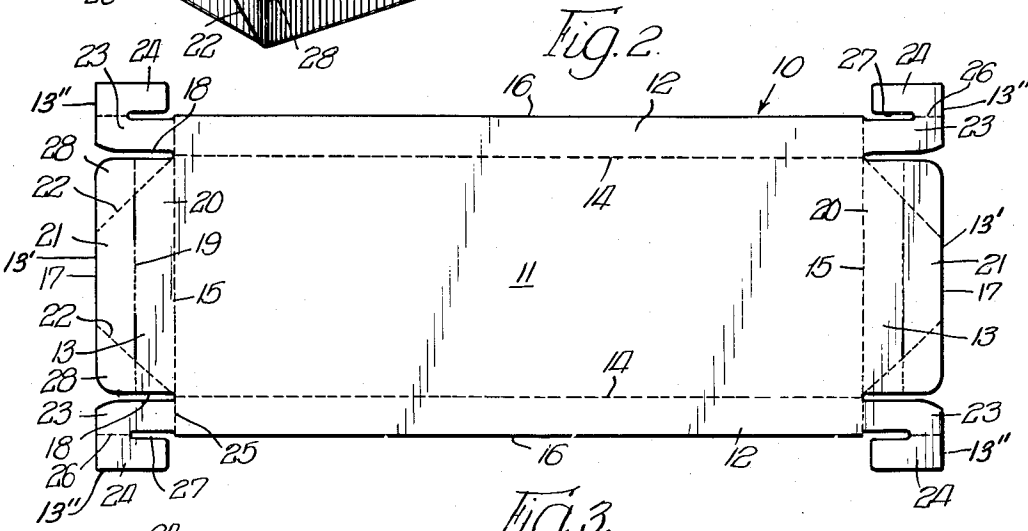
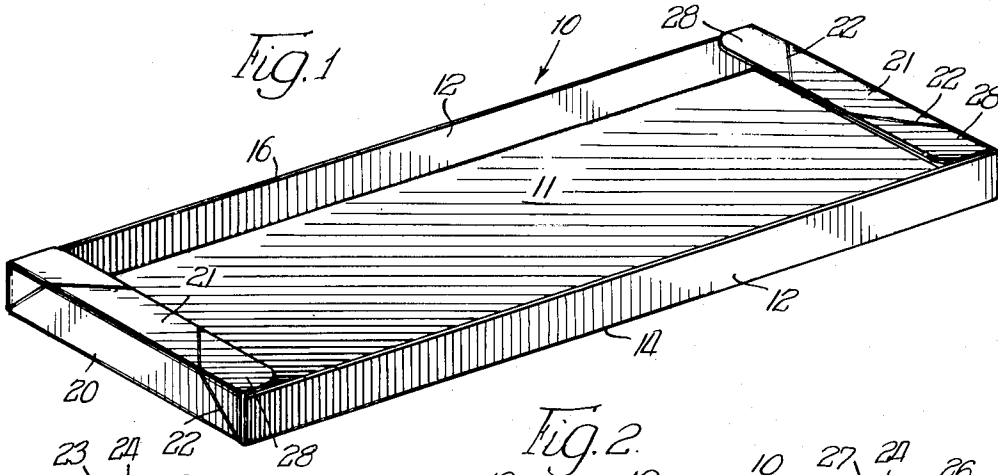
Feb. 14, 1956

E. L. ARNESON
TRAY TYPE CONTAINER

2,734,677

Filed Jan. 7, 1952

2 Sheets-Sheet 1



INVENTOR.

Edwin L. Arneson,

BY

Cromwell, Bristol & Warden
attys.

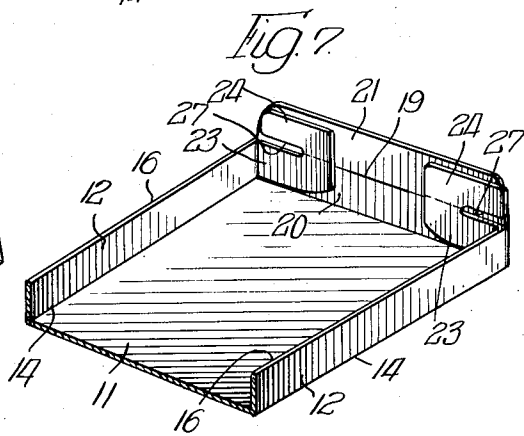
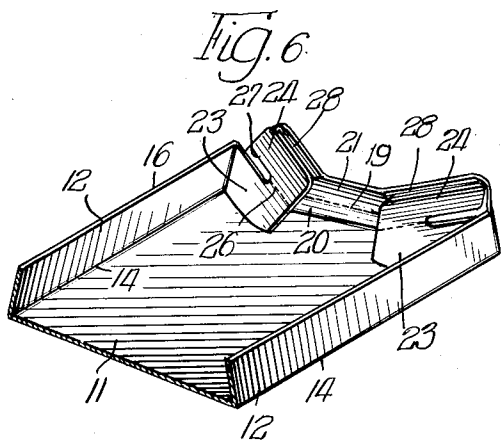
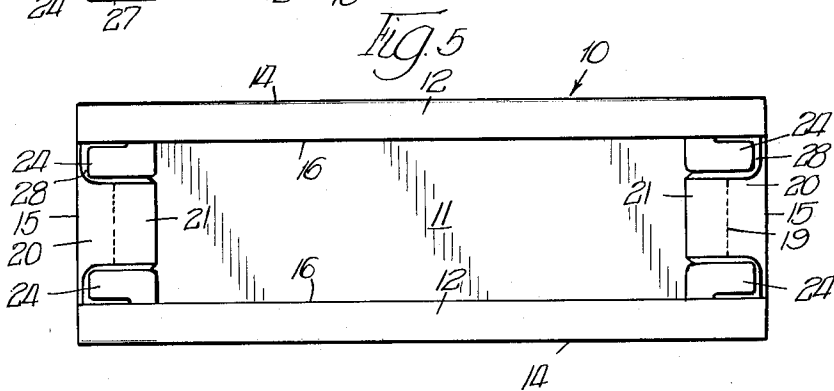
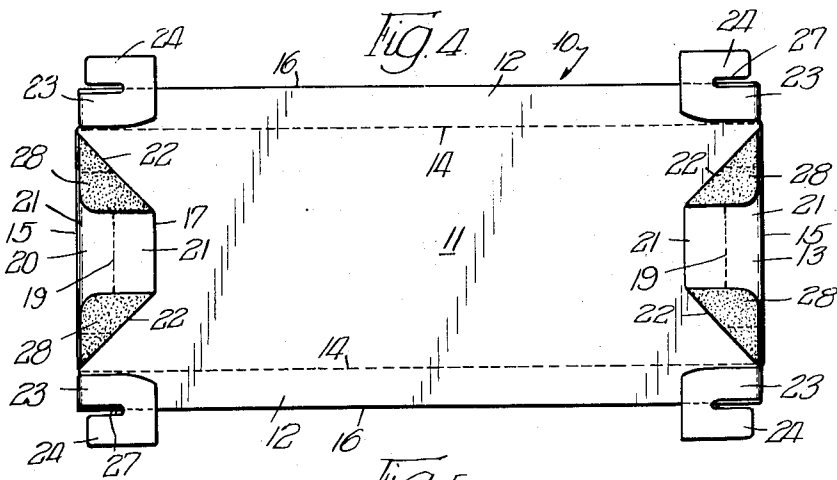
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2 Sheets-Sheet 2



INVENTOR.
Edwin L. Arneson,
BY
Cromwell, Strick & Warden
attys.

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TRAY TYPE CONTAINER

Edwin L. Arneson, Morris, Ill., assignor to Morris Paper Mills, Chicago, Ill., a corporation of Illinois

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5 Claims. (Cl. 229—32)

This invention relates to containers and is more particularly concerned with improvements in tray-like cartons which are adapted for use in packaging various articles of merchandise.

It is a general object of the invention to fabricate from a cut and creased blank of paperboard material a relatively shallow tray-like carton or box which is adapted to be collapsed for shipment and which when erected for use is stronger and sturdier than similar cartons heretofore available.

It is a more specific object of the invention to provide a relatively shallow, elongate tray having side and end walls which are hingedly joined at adjacent ends by a corner connecting flap of improved construction.

It is a further object of the invention to provide a relatively shallow, elongate, tray-like receptacle of open face, collapsible construction which is adapted to be economically manufactured from a paperboard blank with a minimum waste of material.

These and other objects of the invention will be apparent from a consideration of the container which is shown by way of example in the accompanying drawings, wherein:

Fig. 1 is a perspective view of a container, in erected condition, which illustrates the principles of the invention;

Fig. 2 is a plan view of a paperboard blank which is cut and scored to provide the necessary panels for fabricating the container of Fig. 1;

Figs. 3 and 4 are plan views illustrating steps in the method of folding the blank;

Fig. 5 is a plan view of the completed container, in collapsed condition; and

Figs. 6 and 7 are fragmentary perspective views illustrating steps involved in setting up the container.

Referring to the drawings, there is illustrated an open face, elongate container which incorporates therein the principal features of the invention and which is particularly adapted for use in the packaging of merchandise such as neckties or articles of a similar character.

The illustrated container is fabricated from a blank 10 of paperboard, or other relatively flexible material of similar character, which is cut and scored as shown in Fig. 2. The blank 10, which is generally rectangular, is divided into a central panel forming portion 11, oppositely disposed side panel forming portions 12 and opposite end panel forming portions 13, by longitudinal score lines 14, which are spaced inwardly of the side edges, and transverse score lines 15, which are spaced inwardly of the ends. The central panel 11 which is defined by the score lines 14, 14 and 15, 15 constitutes a major portion of the blank and is adapted to provide the bottom wall of the tray when erected as shown in Fig. 1. The side panels 12 which are defined by the transverse score lines 15, the longitudinal score lines 14 and the longitudinal cut edges 16 are relatively narrow and are adapted to form the upstanding side walls of the tray.

The end panels 13 which extend between the transverse score lines 15 and the end edges 17 of the blank are of

2

greater width than the side panels 12. They are divided transversely of the blank 10 by relatively narrow longitudinally extending cut slots 18 which extend inwardly from the end edges 17 to the transverse score lines 15 and which are aligned with the longitudinal score lines 14, the cutting lines forming the slots diverging near the outer end of the slots so that the outer corners of adjacent panel portions are rounded or beveled. The slots 18 divide the end panel forming portions 13 of the blank into a central portion 13' and two laterally spaced side portion 13''. The central portion 13' is divided by transverse score line 19 into inner end wall forming portion 20 and outer top flap forming portion 21. The inner portion 20 is preferably the same width as the side wall panels 12 while the outer portion 21 which is illustrated as of equal width may vary somewhat. The central panel portion 13' is scored along diagonal lines 22 for a purpose which will be described. Each side portion 13'' of panel 13 comprises an inner corner connecting flap 23 and an outer connecting or reinforcing tongue or tab member 24. The inner flap 23 extends longitudinally of the blank 10 being integrally joined to the end of side wall panel 12 and extending therefrom beyond the end portion 25 of the transverse score line 15. The outer tongue member 24 is approximately the same width as flap 23 and somewhat shorter. It extends laterally beyond the side edge 16 being separated from the flap 23 by a longitudinally extending score line 26 and an inwardly opening narrow slot 27. The score line 26 and slot 27 are aligned with each other and with the side edge 16 of the blank.

The manner in which the panels are folded and connected to form the container or tray is shown particularly in Figs. 3 to 5. The corner connecting flaps 23 are first folded inwardly about the transverse score lines 25 flat against the side wall panels 12. The central end panels 20, 21 are next folded inwardly about score lines 15. The triangular corner portions 28 (Fig. 2) of the end panels 13, which are formed by diagonal score lines 22, are then folded inwardly into flat engagement with the outer face of the remainder of the end panels and a suitable adhesive is applied to the exposed faces thereof, as shown in Fig. 4. The side wall forming panels 12 are thereafter folded inwardly about the longitudinal score lines 14 bringing the end connecting flaps 23 and reinforcing tongues 24 into partially overlapping engagement with the adhesive coated triangular corner portions 28 and completing the assembly with the container in flattened or collapsed condition.

The container is erected for use (Figs. 6 and 7) by first bringing the side walls 12 to their upstanding position while simultaneously moving the end connecting tabs 23 and tongues 24 about score lines 25 into upstanding relation at the ends of the container. Thereafter the endmost panels 21 are foiled inwardly about score lines 19 into parallel relation with the bottom panel 11 which brings the corner connecting tongues 24 in horizontal position by folding about the score lines 26. The article being packaged, for example, a necktie, may be folded as desired and placed in the tray prior to folding down the endmost flaps 21 which form a cover member at each end of the tray. The package is then completed by applying a transparent overall wrapper around the tray or container and the article positioned therein.

While specific details of construction and particular materials have been referred to in the description of the illustrated device, it will be understood that other details of construction and other materials may be employed within the scope of the invention.

I claim:

1. In a tray construction having a bottom and side and end walls collapsible inwardly thereon, said end walls having an integral top end flap hinged inwardly thereof

3

to form a partial top cover at the end of the tray, a corner connecting member comprising a connecting flap portion and a connecting tongue portion, said connecting flap portion being hingedly joined at one end to the adjoining side wall and having an adjacent portion of its outer face secured to the inner face of the adjoining end wall, said connecting tongue portion being hingedly joined to said connecting flap portion along a hinge line normal to the hinge line of said connecting flap with said adjoining side wall and said connecting tongue portion being secured in face engaging relation with said top cover forming end flap.

2. In a tray construction having a bottom and side and end walls collapsible inwardly thereon, said end walls having an integral end flap adapted to be hinged inwardly thereof to form a partial top cover at the end of the tray, a corner connecting member comprising a connecting flap portion and a connecting tongue portion, said connecting flap portion being hingedly joined to the adjoining side wall and having a part of its outer face secured to the inner face of the adjoining end wall, said connecting tongue portion being hingedly joined to said connecting flap portion along a line normal to the hinge line of said connecting flap portion and said side wall and said connecting tongue portion having a part of its outer face secured to the inner face of said top cover forming end flap.

3. In a tray construction having a bottom and side and end walls collapsible inwardly thereon, said end walls having an integral top transversely extending end flap adapted to be hinged inwardly thereof to form a partial top cover, a corner connecting member comprising two generally rectangular inner and outer connecting tab portions, the inner one of said connecting tab portions being hingedly joined at one end to the end of the adjoining side wall and having a triangular portion of its outer face at the same end thereof secured to the inner face of a triangular end portion of the adjoining end wall, said tab portions being hinged to each other along a hinge line parallel with the top edge of the adjacent side wall and the outer one of said connecting tab portions being secured in face engaging relation with the end portion of the adjoining cover forming end flap, and said end walls and top cover forming end flaps having fold forming crease lines extending inwardly and upwardly from the bottom corners of the end walls.

4

4. A relatively shallow elongate tray formed from a paperboard blank cut and creased to provide when erected a bottom, upstanding side and end walls integral therewith, top end flaps extending inwardly in generally parallel relation to said bottom, and corner members connecting the side walls to the end walls and top end flaps, said corner connecting members each being divided into two generally rectangular portions hingedly connected along portions of adjoining side edges on a line extending transversely of the erected tray, said corner connecting members each having an outwardly opening slot aligned with the hinge line connecting said rectangular portions, one of said rectangular portions being secured along an end edge to the end edge of the adjoining side wall and having a portion of the face thereof adjacent the same end edge secured in face engagement with the adjoining end wall, and the other of said rectangular portions being secured to the adjoining top end flap.

5. A tray formed from a paperboard blank cut and creased to provide a plurality of hingedly connected panels which when erected provide a bottom and side and end walls collapsible rearwardly thereon, said end walls each having an integral top end flap hinged inwardly thereof to form a partial top cover at the end of the tray, a corner connecting member comprising a connecting flap portion and a connecting tongue portion, said connecting flap portion being hingedly joined at one end thereof to the adjoining side wall and having an adjacent portion of its outer face secured in face engagement with the inner face of the adjoining end wall, said connecting tongue portion being hingedly joined to said connecting flap portion along a hinge line which coincides with the hinge line connecting said top cover forming end flap with said end wall and said connecting tongue portion being secured in face engaging relation with said top cover forming end flap.

References Cited in the file of this patent

UNITED STATES PATENTS

1,926,366	Bergstein	Sept. 22, 1933
2,160,643	Burel	May 30, 1939
2,303,996	Hirsch	Dec. 1, 1942
2,532,808	Grinnell	Dec. 5, 1950
2,555,655	Painter	June 5, 1951