Jan. 14, 1930. A. J. TANNER 1,743,502

PACKING AND DISPLAY CONTAINER

Filed Nov. 12, 1928

FIG. 1.

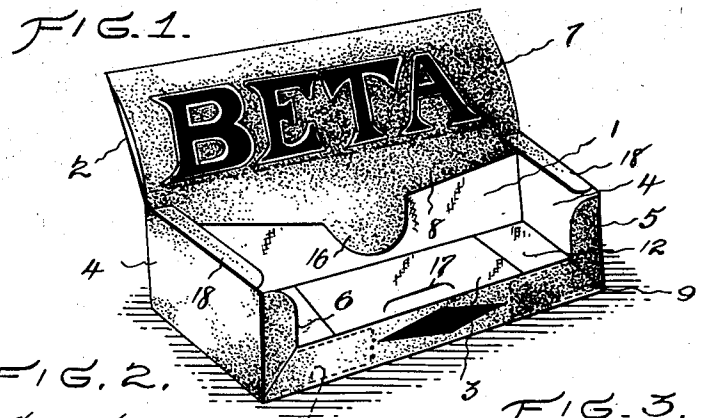


FIG. 2.

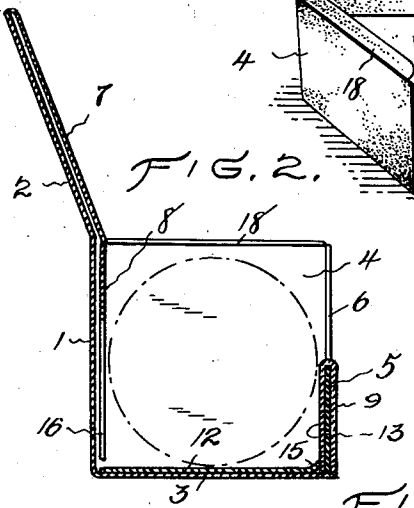


FIG. 3.

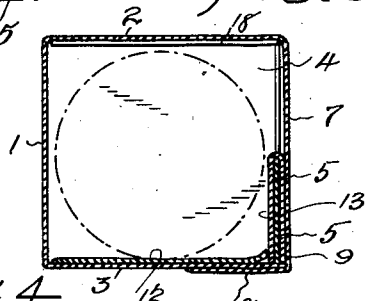
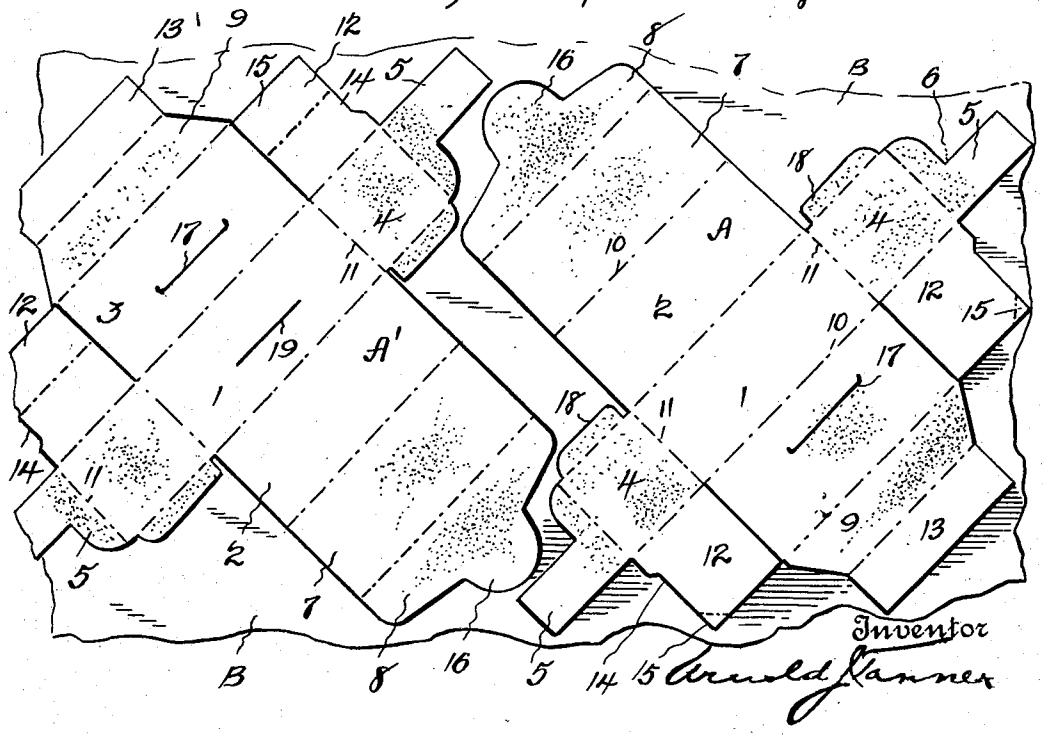


FIG. 4.



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UNITED STATES PATENT OFFICE

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PACKING AND DISPLAY CONTAINER

Application filed November 12, 1928. Serial No. 318,629.

The present invention relates to packing and display containers for merchandise and the object of the invention is to produce an improved container which will be highly efficient both as a packing box and as a display medium. The present container employs improvements which are disclosed in previous applications, Serial No. 227,368 filed Oct. 20, 1927, and Serial No. 270,924 filed Apr. 18, 1928. The containers forming the subject of these prior applications are in each instance composed of a one sheet blank having extensions which are partly cut away and folded inwardly to form an open front for the container and a support for the bottom which is suspended from said open front. In the case, Serial No. 227,368, said extended ends are locked together by retentive means and in the other case, the extension is on one side only and the free end is glued to the body of the blank. It is the purpose of the present invention to improve certain details in order to render the container even more efficient and more easy to assemble, and also, to provide means so that the folded over end of the bottom forming portion is positively held in its folded position. Conjunctively with these and other improvements in the construction of the container, a method of cutting out the blanks therefor has been designed whereby the rigidity of the container is enhanced. Besides this strengthening, economy is obtained in the cutting out of the blanks so far as saving of waste stock is concerned; also lighter stock may be used and the latter is an important factor when volume of production is concerned.

Embodiments of the invention will be hereinafter described with reference to the accompanying drawings, wherein—

Figure 1 is a perspective view of the improved container in its set up and open position;

Figure 2 is a cross section of the container in the open position;

Figure 3 is a cross section of the container in its closed position, and

Figure 4 shows a pair of blanks and the method of arranging the same in the improved method of blanking.

Referring to said drawings, particularly Figure 4, herein duplicate blanks are shown and one such blank is employed in the construction of a container. Said blank is divided into a number of sections or parts which are defined by scoring or creases and which sections are designated by the various reference numerals, the same parts being indicated by the same reference numerals in the set up container shown in the other figures. Said sections consist of the sections 1, 2, 3 and 4, section 1 being properly termed the central or basic section which in the set up position forms the back wall of the container. Sections 2 and 3 extend above and below said central section 1 and form respectively the top cover and bottom of the container. Sections 4 extend laterally from the section 1 and provide the end walls of the container. The sections 4 have lateral extensions 5 which are cut out to produce an open front wall 6 when folded inwardly towards each other.

The extension 2 of the blank above referred to has an extended folding part 7 which forms the cover for the open front of the container. Said latter extension 7 carries a folding flap 8 which is arranged to fold under the container. The other extension 3 has a further extended part 9 which is arranged to be folded over the reduced ends of sections 5 serving thus to suspend the bottom 3 from said front wall and, at the same time, retain the folded blank in its set up position. The various sections are foldable on the transverse and vertical scoring or creases 10 and 11.

The lateral extensions 4 carry the depending inwardly folding sections or members 12 and these latter members are arranged to engage and retentively hold the inwardly folded end 13 of the extension 9 in its folded position. The retentive means are provided by the cut out edges 14 of said members 12 and the turned up corners 15 or in some cases the ends of said members 12 may be bent upwardly.

In the assembling of the improved container, the first operation is to fold over the members 3 and 12 on the creases 10. The

side members 4 are then folded on the creases 11 thus bringing the ends 5 in a position where they lie adjacent to one another in alignment. The extension 9 is then folded so that the end 13 is brought over the extensions 5 and the edges of said end 13 are engaged against the cut out edge 14. To insure a positive retention, the corners 15 are turned upwardly to engage said end 13. The container thus assembled is now ready to receive the merchandise and when packed, the section 2 and its extensions, are folded over so as to close the container with the tongue 16 of the flap 8 engaged in the slot 17. When so folded and closed, the container is safely held against accidental opening and provides a rigid and strong packing medium.

When it is desired to open the container to display the contents thereof, the cover part 2—7 is folded on itself so as to be held in a position to furnish a raised display card or device and which latter is held in its raised position by engagement of the side edges of the flap 8 against the cut out edges of the side flaps 18 which are carried by the end pieces 4. It will be noted that the flaps 18 also serve to effectually close the ends of the container.

Figure 4 illustrates the improved method of cutting out the blanks and therein a pair of blanks A and A′ are shown as being cut from a sheet B. Due to the irregularity of the outline of these blanks, considerable economy is obtained by cutting the blanks out diagonally from the sheet substantially on an angle of 45 degrees. It is, of course well known, in various arts, for instance that pertaining to sheet metal working, to cut blanks out diagonally from a sheet to save stock. In the present case, the blanks are cut diagonally not only for the purpose of saving stock but to obtain other advantages.

One advantage of cutting the blank on the bias is that when so cut the blank is stiffer than when it is cut straight with the grain. In the latter case the creases and folds run with the grain or at right angles thereto. Where the folds or creases are at right angles to the grain, the folding operation is more difficult and furthermore, the prepared surface of the stock is apt to break on the folding line. The creases with the grain are more easy to fold but the various sections such as 1, 2, 3 and 7 have a greater stiffness longitudinally than transversely. Further, it is to be noted that the display card such, for example, as shown in Figure 1, has the natural tendency to curve as shown when the grain runs longitudinally.

When the blanks are cut out on the bias or diagonally on an angle of substantially 45 degrees, the rigidity or stiffness is the same both longitudinally and transversely and then the display card has the tendency to lie in a flat position as shown in Figure 2. The container itself when made up from a straight cut blank is more rigid against the grain of the material than with the grain but when a bias cut blank is employed, there is an equalization of rigidity so that the box will have the same stiffness and strength transversely as longitudinally.

In some instances it may be desirable to eliminate the side flaps 18 and in that case the slot 19 in the back wall section 1 of blank A′ is provided to receive the tongue 16.

Various modifications may be made in carrying out the details of the invention hereinbefore described but it is to be understood that any modification coming fairly within the terms of the appended claims shall be covered thereby.

I claim—

1. A container of the class described comprising a receptacle having an open top; a closed bottom; front, back, and side or end walls; an extension from the back wall arranged to fold into one operative or closing position over said open top, said front wall and under said bottom and to be retentively held in this closing position; said extension in another operative or display position folding on itself to provide a display device and inwardly folding flaps extending from said side or end walls engaging and retaining said extension in its said display position.

2. A container of the class described constructed from a single blank comprising a body portion having lateral extensions therefrom; said body portion forming the bottom, and the front and back walls of the container; said lateral extensions forming the side or end walls of the container; said body portion comprising an extension extending upwardly from said back wall, said extension being adapted to form a cover for the open top and front of the container and the free end of said body extension being arranged to be engaged in said bottom whereby said cover is retentively held in its closing position; said body extension being foldable on itself to form a display device when the container is open and means adjacent to the top edge of said side or end walls engaging the edges of said body extension whereby the latter extension, when employed as a display device, is retained in a raised or display position.

3. A container of the class described constructed from a single blank comprising a body portion having lateral extensions, said body forming the bottom and the front and back walls of the container; said extensions forming the side or end walls of the container; said extensions having extended ends folding inwardly; one end of said body portion folding over said extended ends; a

continuation of said body portion extending from said back wall and adapted to form a cover for the open top and front of the container when closed, the free end of said cover folding under said bottom and engaged therein; said cover when open providing a display device and means carried on the top edge of said side or end walls whereby said device is held in a raised or folded display position.

4. A container of the class described constructed from a single blank comprising a body portion having lateral extensions, said body forming the bottom and the front and back walls of the container; said extensions forming the side or end walls of the container; said extensions having extended ends folding inwardly; one end of said body portion folding over said extended ends; a continuation of said body portion extending from said back wall and adapted to form a cover for the open top and front of the container when closed; said cover when open providing a display device; means comprising flanges extending inwardly from the top edges of said side or end walls whereby said device is held in a raised or folded display position and the end of the body portion folding over said lateral extensions being engaged so as to operate as self-retentive means for retaining the container in its assembled condition.

Signed at New Haven, county of New Haven, State of Connecticut, this 10th day of November, 1928.

ARNOLD J. TANNER.