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G. C. NYDEGGER

2,836,341

BOX

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FIG. 1.

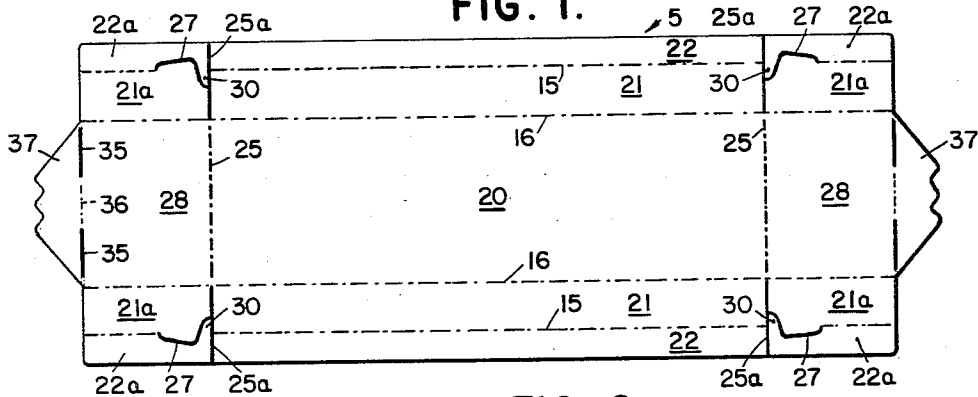


FIG. 2.

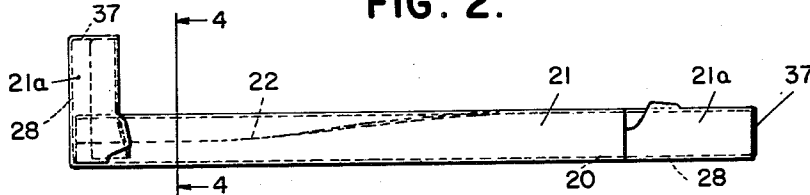


FIG. 3.

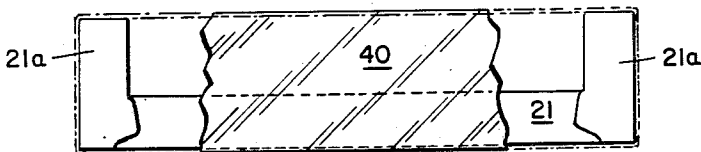


FIG. 5.

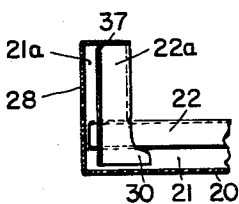


FIG. 7.

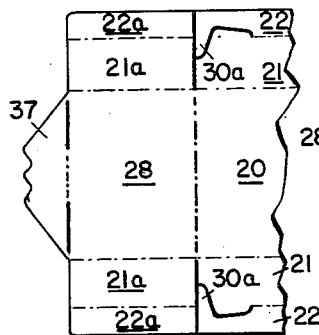


FIG. 8.

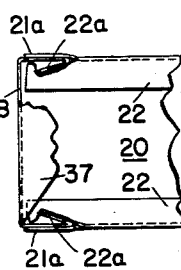


FIG. 4.

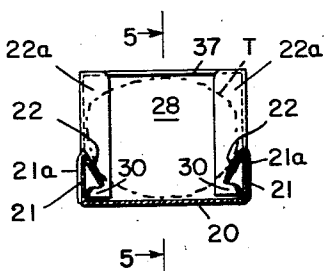
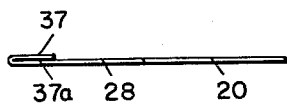


FIG. 6.



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2,836,341

BOX

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2 Claims. (Cl. 229—34)

This invention has to do with boxes and methods of making the same, and relates more particularly to a display type of box or container which is made of flexible cardboard or other equivalent material, which has relatively high end walls and relatively low side walls and is adapted to be wrapped with transparent material so that the contents of the box are visible through the wrapping.

Boxes of this general type are well known, but those of which I am aware, because of their necessarily somewhat skeletal construction, have been extremely weak and are incapable of withstanding the abuses to which a display box of merchandise is ordinarily put in the trade. Another shortcoming of such boxes of the prior art is that they do not properly support the contents to properly protect and display them. Prior art boxes of this character have also been of a construction requiring considerable time to assemble into final form.

It is, therefore, an object of my invention to provide a box or container which overcomes those shortcomings of prior art boxes and which, although it is comprised of somewhat skeletal construction for maximum display purposes, it is sufficiently strong to withstand hard usage.

Another object is to provide a box of this character which also furnishes a novel platform or shelf portion for supporting the contents.

A further object is to provide a box of this character which is so constructed that it is extremely economical to manufacture and assemble.

A still further object is to provide a method of making boxes or containers which achieves the foregoing named purposes.

While the features which I believe to be new in my invention are more particularly set forth in the appended claims, for the purposes of explaining my invention I shall now describe a presently preferred embodiment thereof for which purpose I shall refer to the accompanying drawings, wherein:

Fig. 1 is a plan view of a blank used in forming my box;

Fig. 2 is a side elevation with the box partially formed;

Fig. 3 is a side elevation of the fully formed box;

Fig. 4 is a section taken on line 4—4 of Fig. 2;

Fig. 5 is a fragmentary section taken on line 5—5 of Fig. 4;

Fig. 6 is a fragmentary view showing a modification;

Fig. 7 is a fragmentary plan view of a modified form of blank; and

Fig. 8 is a fragmentary top plan view of an end portion of a modified box formed from the blank of Fig. 7.

In the drawing, the numeral 5 denotes a flat blank from which my box is formed, the blank preferably being die-cut from a sheet of flexible cardboard or like material.

The blank is scored longitudinally along the two lines 15 and the two lines 16 to define bottom wall 20, side walls 21 having end extensions 21a and flange portions 22 having end extensions 22a. The blank is relatively more heavily scored transversely along two lines 25 to define

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end walls 28 of a height greater than the height of side walls 21, along which lines the end walls 28 are bent into position perpendicular to the bottom wall 20, said lines 25 having end extensions 25a which constitute slits. Aligned slits 35 and scored line 36, at each end of the blank, provide fold lines for the tabs 37. Cuts or slits 27 define ears 30 for the purposes to be described.

In forming a box from the described blank, the blank is preferably first folded along the lines 35—36 until the tabs 37 are perpendicular to the blank. Then the blank is folded from end to end along lines 15 until the portions 22 and 22a are at an acute angle to the blank and the blank is then folded along lines 16 until the sides 21 and extensions 22a are perpendicular to the bottom 20 and at an acute angle to flanges 22 and 22a.

Next, the blank is folded along lines 25 until the ends 28 are perpendicular to the bottom wall 20 and until the portions 21a and 22a are perpendicular to the sides 21.

As each of the ends 28 is thus swung upwardly with their side portions 21a and 22a and ears 30, the ears 30 will snap under the respective inwardly disposed overhanging flange portions 22 so that the end walls are held uprightly in the position perpendicular to the bottom wall, and also the side walls are held uprightly against swinging outwardly from the upright positions as shown in Fig. 4.

This completes the formation of the skeletal box having relatively high end walls 28 and relatively low side walls 21, and it will be observed that the box is transversely reinforced by the tabs 37, is reinforced longitudinally by the flanges 22 and side walls 21, and is reinforced vertically by the flange portions 22a and side extensions 21a.

My box is peculiarly well suited for containing spherical objects, such as tomatoes T, or various sorts of round or oval shaped products such as crackers, because the flanges 22 form a sort of platform or shaft for supporting them and preventing them from rolling from side to side of the box. For instance, spherical fruits, such as tomatoes, vary in size to a considerable extent, and when packed in a conventional box they must be graded as to size and different sized boxes used for different grades. However, the platforms or shelves provided by the flanges 22 of my box enable articles of different sizes to be packed in a single box since the flanges not only prevent them from rolling from side to side, but also support them in proper position for effective display.

After the box is filled with whatever it is to contain, it is provided with a wrapping, preferably a wrapping 40 of a transparent material such as cellophane or the like, the wrapping preferably being secured at its ends in the conventional manner, as by heat-sealing.

In practice, after the blanks are folded along the lines 15—16 and 35—36, they are conveyed endwise through a slideway in end to end abutment. Pressure on the next to the end blank tending to move it endwise causes its end portion to engage the contiguous end portion of the endmost blank, swinging it upwardly into position perpendicular to the bottom wall and automatically causing the ears 30 to lockably engage beneath the flanges 22.

In Fig. 6 I show a modification wherein the tabs 37 are first folded over against the end walls 28 and adhered thereto by adhesive 37a.

It will be apparent that the locking ears do not necessarily have to be specifically in the position shown in Figs. 1—5. For instance, in the modified embodiment of Figs. 7 and 8 the ears 30a may be cut from the side walls 21 and flanges 22 so that, when the end walls are folded into position perpendicular to the bottom wall, as shown in Fig. 8, the ears 30a lockably engage behind the in-turned flange portions 22a of the end walls.

I claim:

1. A box comprised of a blank of flexible material and having a bottom wall, a pair of upright side walls each having at its top edge portion a longitudinal intumed flange disposed at an acute angle thereto, and a pair of upright end walls each having at each of its side edge portions an intumed flange disposed substantially parallel with the contiguous side walls; each of said intumed flanges having at its outer edge portion an inwardly folded extension separated therefrom from its bottom end to a point spaced upwardly from its bottom end, and each of said extensions having a laterally projecting ear portion at its bottom end engaging beneath the bottom edge portion of the contiguous one of said intumed side wall flanges to retain the contiguous side wall in upright position, that portion of each of said intumed end wall flanges at and adjacent to its bottom edge portion engaging the outer surface of the contiguous side wall.

2. The box of claim 1 wherein said end walls were of a height greater than the height of said side walls.

References Cited in the file of this patent

UNITED STATES PATENTS

546,767	Knobeloch	Sept. 24, 1895
651,085	Otis	June 5, 1900
667,112	Beers	Jan. 29, 1901
916,509	Wade	Mar. 30, 1909
1,041,872	Regenstein	Oct. 22, 1912
1,724,589	Houigbaum	Aug. 13, 1929
2,128,342	Zalkind	Aug. 30, 1938
2,155,450	Shoemaker	Apr. 25, 1939
2,465,588	Hartman	Mar. 29, 1949
2,488,703	Buttery	Nov. 22, 1949
2,532,808	Grinnell	Dec. 5, 1950