July 12, 1960 D. LEVKOFF 2,944,720

CARTONS

Filed Feb. 8, 1957

FIG. 1.

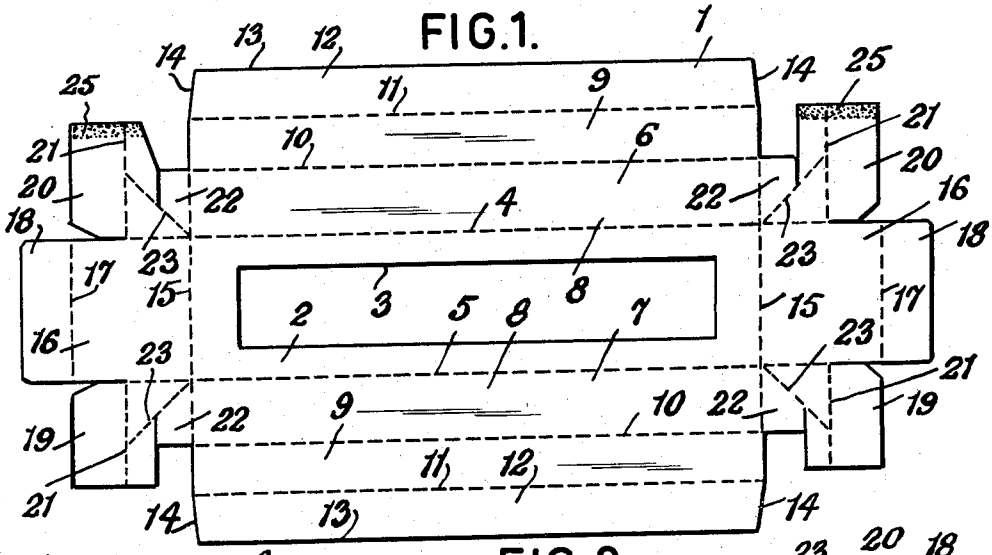


FIG. 2.

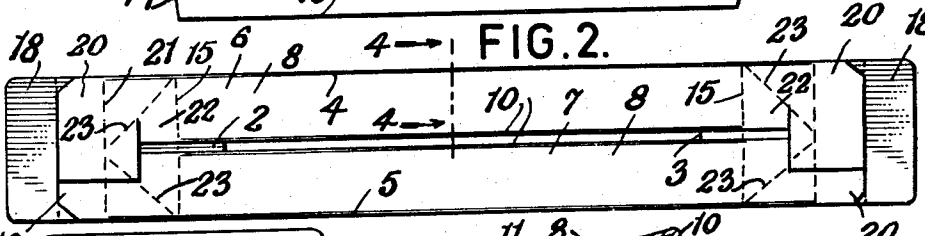


FIG. 3.

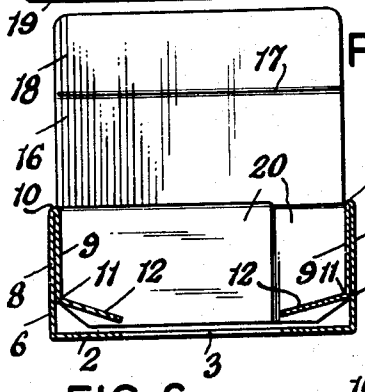


FIG. 4.

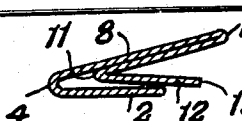


FIG. 5.

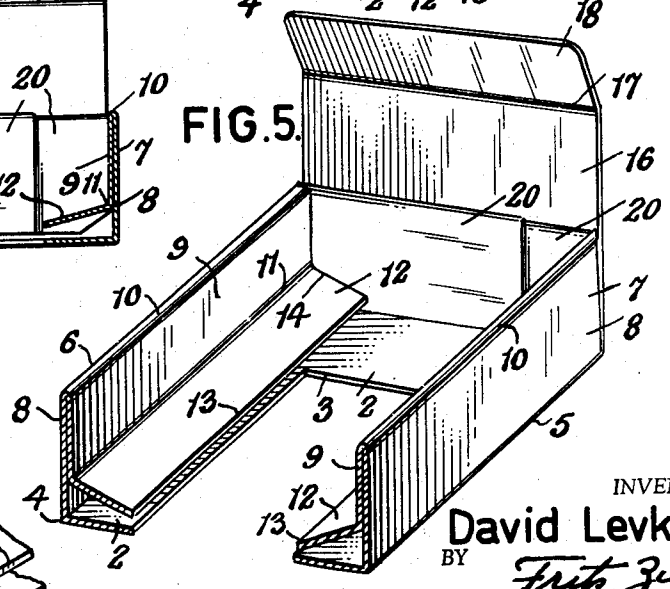
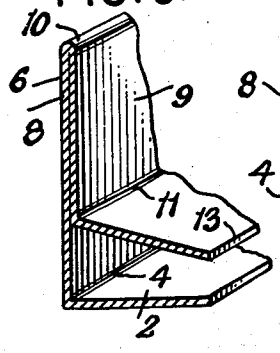


FIG. 6.



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CARTONS

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3 Claims. (Cl. 229—31)

This invention relates to cartons, and more particularly to those of a tray-like type usually employed for containing vegetables, fruits, baked goods, candies and many other products.

It is an object of the invention to provide a carton of this type in which the goods will be supported in a manner to absorb shocks during transmission and handling of the filled carton and thus protect the contained merchandise. It is an object of the invention to provide, in a carton of this character, a false bottom composed of elements on which the goods will be springily supported, such bottom being formed of flap elements extending integrally and floatingly from opposed side walls of the carton.

It is an object of the invention to provide a tray-like carton in which at least some of the walls thereof shall be composed of a plurality of layers or plies, with one ply of each wall extended laterally at the lower end of such ply in a manner to provide a free-end supporting flap co-operating in the formation of ledges constituting a false bottom for springily supporting the goods.

It is a further object of the invention to provide means at the bottom of the carton for supporting the goods in a cushioned manner, which means shall consist of free-end extensions from walls of the carton.

With these, and other objects to be hereinafter set forth in view, I have devised the arrangement of parts to be described and more particularly pointed out in the claims appended hereto.

In the accompanying drawing, wherein an illustrative embodiment of the invention is disclosed,

Fig. 1 is a face view of the cardboard blank from which the improved carton is formed;

Fig. 2 is a face view of the carton in its glued, folded and flattened or collapsed condition as delivered to the consumer;

Fig. 3 is an enlarged transverse sectional view through the erected carton;

Fig. 4 is a sectional view, taken substantially on the line 4—4 of Fig. 2, looking in the direction of the arrows;

Fig. 5 is a transverse sectional view, in perspective, through the erected carton, and

Fig. 6 is a sectional view through one of the side walls of the carton.

Referring to the drawing, 1 generally indicates the one-piece cardboard blank from which the carton is formed, the same being provided with a central panel 2 constituting the bottom wall of the carton. In the embodiment shown the bottom wall 2 is provided with an elongated opening 3 for aiding in the partial exposure of bottom portions of the goods for inspection by a purchaser. The bottom wall 2 may, of course, be completely closed, when inspection of the bottom portions of the goods is found unnecessary.

The longitudinal edges of the bottom 2 are defined by parallel score lines 4 and 5, the side walls 6 and 7 being located beyond these score lines. The side walls 6 and 7 are each composed of two plies or thicknesses of cardboard, the outer ply of each side wall being indicated at 8. The inner ply is indicated at 9, the same being integrally connected to the outer ply 8 along the longitudinal fold line 10. It is to be noted that the inner ply 9 is of less depth than the outer ply 8, said inner ply thus terminating at the longitudinal fold line 11. Extending from the fold line 11 is a strip portion 12, having a free longitudinal edge 13. In the finished carton, the outer and inner plies 8 and 9 respectively, of each side wall 6 and 7 are adhesively and intimately united, which adhesive securement extends from the fold line 10, defining the upper edge of each of the side walls, to the fold line 11. This allows for the provision of the free strip portion 12 which is connected to the side wall only at the junction of the strip portion 12 with the inner ply 9 along the fold line 11. Thus, each of the strip portions 12 constitutes a free "floating" flap or a ledge, the two ledges forming a false bottom overlying the bottom wall 2. Since these free strip sections 12 are connected to the side walls only along the lines 11, said strip portions are flexibly movable and act to "floatingly" support goods placed within the carton and rested on these strip portions, the same tending to materially absorb shocks and prevent damage or bruising of the carton contents. It is to be noted also that these flexible, springy strip portions are free at their opposite ends 14, so that they may readily flex as required to not only accommodate themselves to the goods, but to springily support the same.

Toward the ends of the blank 1 are provided the transverse score lines 15, beyond which are located the outer end walls 16, transversely scored at 17 to provide the flaps 18. The inner end walls are formed by the overlapping side flaps 19, 20, which are scored as indicated at 21 and are connected by the webs 22 to the side walls and outer end walls. These webs are angularly scored as shown at 23.

From the foregoing, the construction and operation of the improved carton will be apparent. The blank 1 is folded on the parallel score lines 4 and 5 to bring the flaps 19 and 20 into overlying relation, which flaps are adhesively united in such relation by means of the glue borne by one of each of them as indicated at 25. The plies 8 and 9 of the side walls 6 and 7 are adhesively united, and the blank thereupon assumes the condition shown in Fig. 2 in which it is delivered to the consumer. The carton is erected by folding the opposite ends of the blank upright along the score lines 15, which brings not only the end walls but the side walls erect by means of the folding of the webs 22 on the angular score lines 23. Portions of the flaps 19 and 20 are folded down into the carton on score lines 20, behind the ends 14 of the flaps 12 as shown in Figs. 3 and 5, which flaps prevent raising movement of the flaps 19 and 20. The flaps 19 and 20 can also be maintained in such downward or locking position either by frictional engagement of their side edges with the walls of the carton or by a tongue and slit engagement known and widely employed in this art, but retention behind the ends 14 of flaps 12 is all that is usually necessary.

When the box is erected, as shown in Figs. 3 and 5, the two ply walls 6 and 7 will be found to be of exceptional stiffness and strength, and from the lower ends of the inner ply 9 of each of these side walls, the strip portions 12 extend inwardly within the carton, with their free longitudinal edges directed toward one another. These free-end portions 12 thus overlie the bottom wall of the carton, and in fact, form a false bottom of spaced, flexible ledges upon which the goods are rested and are springily supported. Thus while the open

bottom of the carton presents an aperture through which the goods are visible for inspection, the lower portions of the goods are springily held by the strips **12** spaced away from the bottom wall **2** and are prevented from projection thereto and resultant possible damage. At the same time, while these flexible strip portions **12** form a springy support for the goods, they also lend stiffness and rigidity to the carton as a whole and they co-operate with the two-ply side walls in forming a carton of exceptional strength and durability.

Having described a single embodiment of the invention, it is obvious that the same is not to be restricted thereto, but is broad enough to cover all structures coming within the scope of the annexed claims.

What I claim is:

1. A carton having a bottom provided with a rectangular centrally-located aperture, upstanding side walls and end walls, each of the side walls consisting of two plies with the innermost ply of each side wall terminating at a point above the bottom, each of said innermost plies being at its lower end provided with an integral, inwardly-projecting free-end flap, said two flaps projecting toward one another and each terminating at an edge of the aperture in the bottom, the inner end of each of said flaps being freely positioned from and spaced above the bottom, said flaps forming flap-like supporting ledges for the goods in the box to hold the goods above the bottom yet permit inspection of the goods through the aperture in the bottom, the end walls including downturned flaps engaged behind the ends of the goods-supporting flaps and maintained against raising movement by such engagement.

2. A carton having a bottom, upstanding side walls and end walls, the side walls each consisting of two plies, the innermost ply of each side wall terminating short of the lower juncture of the outer ply with the bottom, said innermost ply being provided with a lateral strip extension projecting inwardly from its lowermost terminal at a point above the bottom, said strip extension having a free inner edge elevated above and normally free from contact with the bottom, the two strip extensions projecting inwardly to overlie the bottom but elevated above the same, which strip extensions cooperate in the formation of a flexible, false, merchandise-supporting bottom for the carton, end walls on the carton including folded-down flaps, said flaps being extended behind the ends of the strip extensions and being maintained in their folded-down positions by such flap extensions.

3. In a carton as provided for in claim 2, wherein the two plies of the side walls are adhesively secured together above the strip extensions, the bottom being provided with a central, elongated, merchandise-inspection aperture, with the strip extensions having free edges located substantially at and above the edges which define the sides of the aperture.

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