

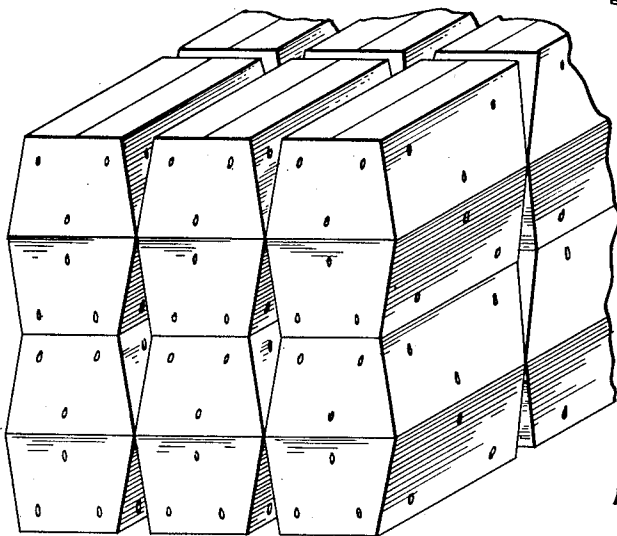
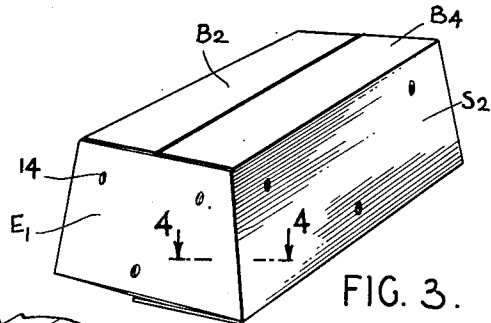
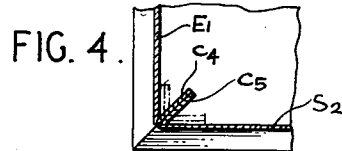
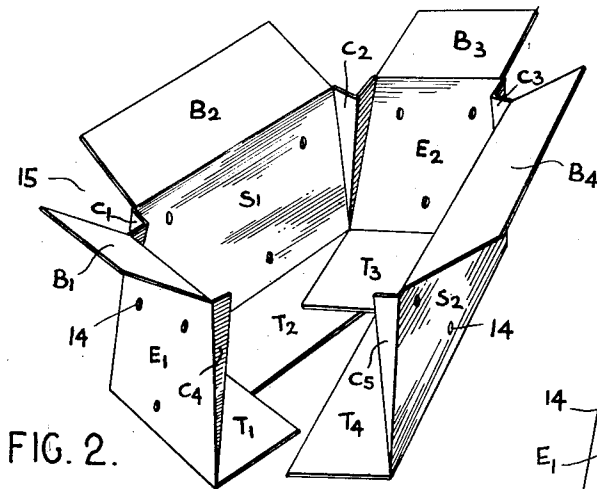
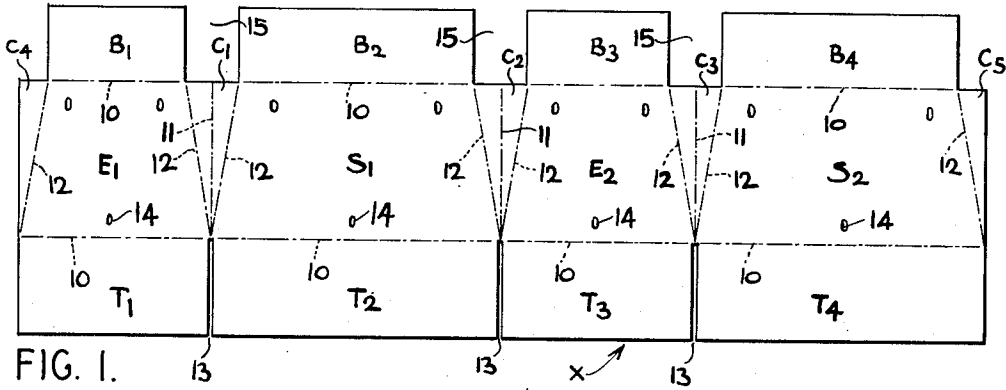
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2,572,610

CARTON AND CARTON BLANK

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CARTON AND CARTON BLANK

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This invention relates to a new and improved carton or receptacle, and to a new and improved one-piece blank from which said carton can be assembled.

The principal object of this invention is to provide a carton of novel construction formed from a single blank of paper-board material, the carton being particularly suitable for the safe shipping of fruits, vegetables, meats, fowl, fish, etc. The improved cartons, when stacked, form spaces therebetween, thereby permitting ready access of air to all sides of the cartons while in such stacked arrangement. In this manner, perishable contents of the cartons are properly ventilated, thereby preventing spoilage.

Other objects of this invention are as follows:

(a) To provide a carton which can be manufactured at low cost;

(b) To provide a carton which can be shipped and stored in collapsed condition and quickly set up whenever needed; and

(c) To provide a carton blank having a minimum number of fold lines, so that the sturdiness of the set-up carton will not be in the least affected.

Additional objects of the invention will be stated in the annexed description and drawing which illustrate a preferred embodiment thereof.

Fig. 1 is a plan view of the new and improved blank, which is folded or assembled in order to form the improved carton. In order to more advantageously illustrate the invention herein, the said blank is shown in inverted position;

Fig. 2 is a perspective view of the carton in partly assembled condition, the carton being in inverted position.

Fig. 3 is a perspective view of the carton when fully assembled or set-up, the carton being shown in inverted position;

Fig. 4 is a sectional view on the line 4—4 of Fig. 3; and

Fig. 5 is a perspective view of a number of the cartons shown in stacked arrangement.

The blank has been generally designated by the reference letter X. It consists of a single piece of corrugated board, cardboard, paper-board or other suitable material, and it is creased or scored at the dotted lines 10, longitudinally; at the dotted lines 11, transversely; and the dotted lines 12, obliquely; so as to facilitate the folding of its various parts at these lines in setting up the carton. Blank X is cut through-and-through at 13. In order to more advantageously illustrate the invention, the said blank has been shown in an inverted position.

Blank X comprises the following foldable parts, namely, opposed side walls S1 and S2; opposed

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end walls E1 and E2; rectangular spaced bottom flaps B1, B2, B3 and B4; rectangular spaced top flaps T1, T2, T3 and T4; triangular lateral fold sections C1, C2 and C3; and triangular end sections C4 and C5.

Each lateral fold section C1, C2 and C3 comprises two complementary triangular portions. Said three sections C1, C2 and C3 are integral with and connect side walls S1 and S2 with end walls E1 and E2. The said triangular sections C1, C2 and C3 are defined by the oblique fold lines 12 and the two triangular portions that comprise each said lateral section are defined by the oblique fold lines 12 and the vertical fold lines 11.

Each of the end walls E1 and E2 is provided with integral bottom flaps B1 and B3 respectively, and with integral top flaps T1 and T3 respectively, the said flaps being respectively hinged to said end sections along score lines 10. Each of side walls S1 and S2 is provided with integral bottom flaps B2 and B4 respectively, and with integral top flaps T2 and T4 respectively, the said flaps being respectively hinged to said side walls along score lines 10. Flaps B1, B2, B3 and B4 form the bottom wall section of the carton, and flaps T1, T2, T3 and T4 form the top wall section thereof. Flaps T1 to T4 are spaced from each other by the cuts 13, and flaps B1 to B4 are spaced from each other by the cut-outs 15.

Side wall S1 is located intermediate end walls E1 and E2, the said end walls being hingedly connected to the said side wall along the vertical score lines 11. On its opposite side, end wall E2 is hingedly connected to side wall S2 along the vertical score line 11. End wall E1 is identical in size and configuration with end wall E2, each carrying the same integral and foldable top and bottom flap members. The same is true with respect to side walls S1 and S2. They too are identical in all respects, and carry the same integral and foldable top and bottom flap members.

In order to assemble the carton from blank X, the blank is first folded along the vertical fold lines 11. Lateral sections C1, C2 and C3 are then folded inwardly, the two portions comprising each said section being superposed on each other. Flaps T1, T2, T3 and T4 are then all folded inwardly along the longitudinal fold lines 10 until the carton body is in the partly assembled condition shown in Fig. 2. Triangular end sections C4 and C5 are then connected to each other by a muslin or other strip of tape (not shown), or they may be otherwise connected to each other by stitching or stapling.

The important feature of the invention herein

resides in the provision of the integral lateral fold sections C1, C2, C3 and end sections C4 and C5. It will be noted from Figs. 2 and 4 that the said sections are folded inwardly and are always located within the body of the carton or container. The two portions that comprise each of the said sections are in face to face abutment, with the common fold line 11 serving as the junction edge thereof. The said inwardly folded projecting sections can be moved into abutment with either of the adjacent end or side walls in order to provide additional packing space and also to prevent injury to the food products packed therein, as shown in dotted lines in Fig. 4.

To close the carton, flaps B1, B2, B3 and B4 are folded inwardly along the longitudinal fold lines 10, resulting in the fully assembled carton shown in Fig. 3. In this figure, the assembled carton is shown in its inverted position. It will be noted that longitudinal flaps B2 and B4 overlap flaps B1 and B3, and that longitudinal flaps T2 and T4 overlap or overlie flaps T1 and T3.

It will be noted that in the non-assembled form side walls S1 and S2 and end walls E1 and E2 are rectangular in configuration. However, in the assembled position, the said side and end walls are trapezoid in configuration. In such assembled form, the said side and end walls slope towards each other.

Optionally, the carton may be provided with air openings or vents 14 in the side walls S1 and S2 and in the end walls E1 and E2.

Fig. 5 shows a plurality of the improved cartons in stacked position. By stacking each pair of cartons so that their respective top walls are in abutment, it will be noted that ample space is provided for the ready access of air to the side and end walls in order to properly ventilate the carton contents, thereby preventing spoilage.

In addition, when the cartons are arranged or stacked in the manner shown in Fig. 5, the contents thereof may be frozen right in the carton.

The invention herein is not to be limited to a one-piece blank; nor to any specific proportions, size and configuration of the blank and carton.

What is claimed is:

1. A carton-blank, said blank having opposite side wall panels and opposite end wall panels arranged in linear succession with alternate panels of similar dimensions forming opposite walls and adjacent panels forming walls angular to each other, said panels being bendable relative to each other with the respective ends of the linear arrangement adapted to be secured together to provide the body of the carton, each of said end and side wall panels having top and bottom flaps integral therewith, said flaps being bendable relative to said end and side wall panels to provide the top and bottom sections for said carton, lateral fold sections integral with and connecting said side and end wall panels, each of said lateral fold sections comprising foldable triangular portions, said lateral fold sections being bendable inwardly relative to the end and side wall panels, the foldable triangular portions of each said lateral fold section being in abutment when said sections are folded inwardly to form the carton.

2. A collapsible carton formed from a single blank of paper-board material comprising a pair of side walls and end walls hingedly connected to each other and arranged in linear succession with alternate walls of similar dimensions to form opposite walls with adjacent walls forming walls angular to each other, each of said end and side walls having top and bottom flaps hingedly con-

nected thereto, said flaps forming the top and bottom wall sections of the carton, lateral folded sections integral with and connecting said side and end walls, each of said sections comprising a pair of folded and abutting triangular wings, each of said lateral folded sections extending inwardly into the body of the carton and being movable into abutment with either of the adjacent end or side walls.

3. A blank for forming cartons of the trapezoidal type, said blank having a pair of side wall panels and a pair of end wall panels arranged in linear succession with alternate panels of similar shape and dimensions for forming opposite walls and with adjacent panels extending angular to each other, said panels being bendable relative to one another at the respective ends of the panels with the free ends of the outer panels adapted to be secured together to form the body portion of the carton, the end zones of the several panels each having an additional folding line extending angular to the bending line between adjacent panels with the folding line extending throughout the depth of the panel to thereby present in each end zone a triangular formation, the vertical side of which is provided by the bendable line, and with the hypotenuse provided by the folding line with the angularity thereof such as to provide the greatest width of the formation at the bottom of the panel, the hypotenuse of adjacent connected formations extending at complementary angles, said formations being foldable inwardly of the carton with the shape of the exposed angular sides of a panel determined by the angularity of the hypotenuse of the respective triangular formations with adjacent formations combined to produce a corner zone of the body portion of the carton, each panel additionally having foldable flaps at both top and bottom sides of the panel, with each flap of rectangular contour with the length of the panel equal to the distance between the respective hypotenuse ends carried by the opposite end zones of the panel, the width dimension of the flaps differing as between the top and bottom flaps, with the flap width at the top greater than that at the bottom side of the panel and with the width dimensions equal on all of the panels of the same one of such sides.

4. A collapsible carton for fruit-carrying and storage service and formed from the carton blank of claim 3 characterized in that the top and bottom of a carton extend in substantial parallelism with the side and end exposed panels each of trapezoid form and each carrying a plurality of ventilating openings, whereby a plurality of cartons are positionable in vertical similar tiers with contacting carton faces of similar dimensions and with the carton depth of sides and ends substantially free from contact to permit air circulation through the assembled cartons.

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