

[54] DISPLAY CARTON

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[21] Appl. No.: 402,462

3,347,356 10/1967 Kossnar 229/27
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FOREIGN PATENTS OR APPLICATIONS

108,405 6/1964 Denmark 211/128
233,380 10/1944 Switzerland..... 206/503

Primary Examiner—William I. Price

Assistant Examiner—Bruce H. Bernstein

[52] U.S. Cl. 229/28 R; 206/44.11; 206/44.12;
206/45.31; 206/431; 206/503; 229/28 BC;
229/29 B

[51] Int. Cl. B65d 5/48

[58] Field of Search..... 206/44 R, 44.11, 44.12,
206/45.29, 45.31, 427.1, 429, 431, 503;
211/126, 128; 229/27, 28 R, 28 BC, 29 B, 41
R, 41 B

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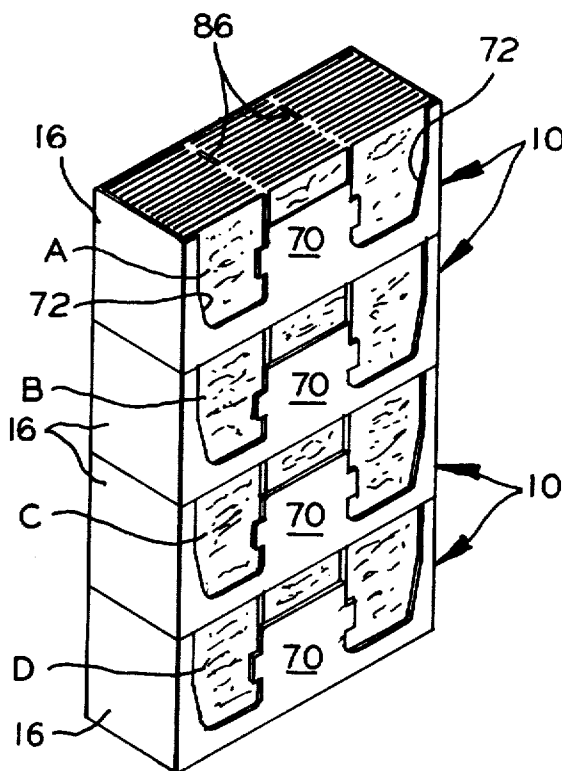
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[57]

ABSTRACT

A multi-celled open top and windowed knock-down rectangular fiberboard carton for the displaying and dispensing of a product carried in the carton, wherein like cartons may be stacked while still permitting the dispensing of the product from the front windows of lower cartons in the stack. One or more partitions are formed from overlapping flaps cut out of the front and back walls, with the cut-outs from the front wall forming the dispensing windows. The back wall, end walls, front-wall corners, and partition are all of uniform height and capable of supporting a like carton stacked on top while keeping its weight from the displayed product in the lower carton.

8 Claims, 5 Drawing Figures



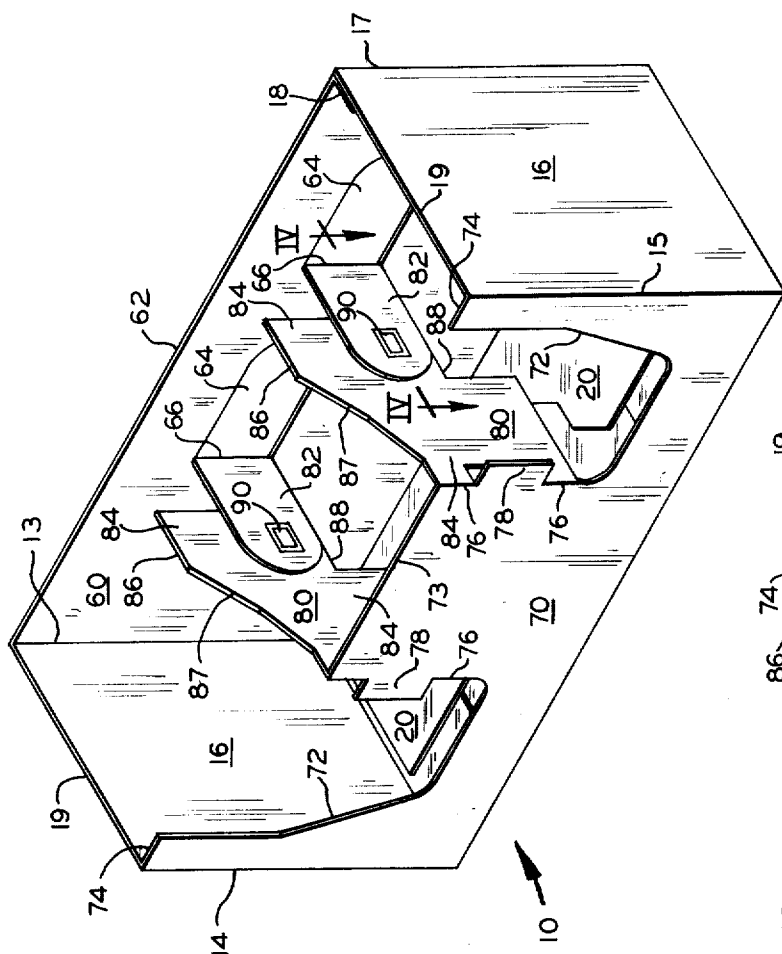


FIG. I

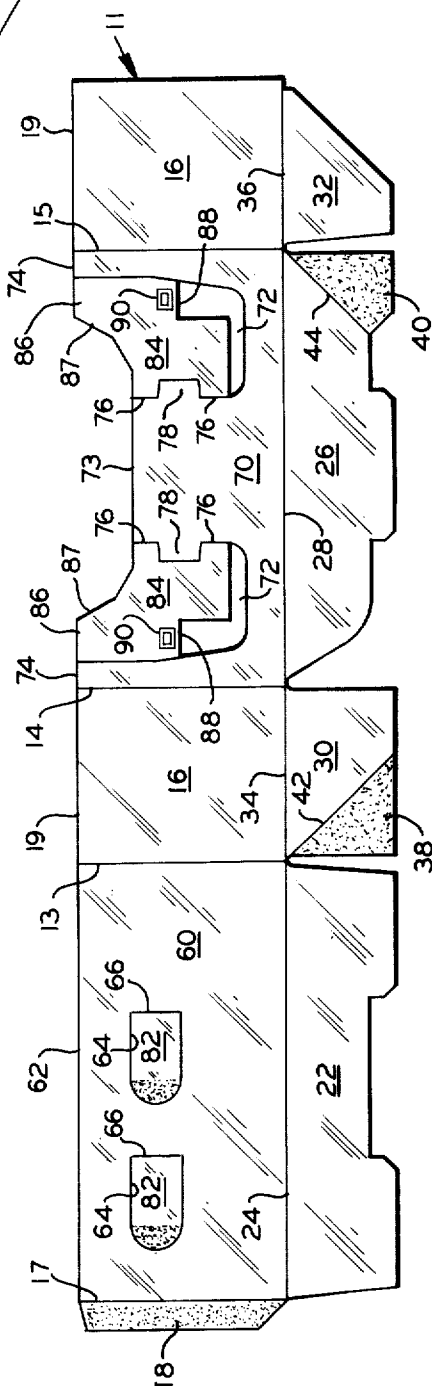


FIG. II

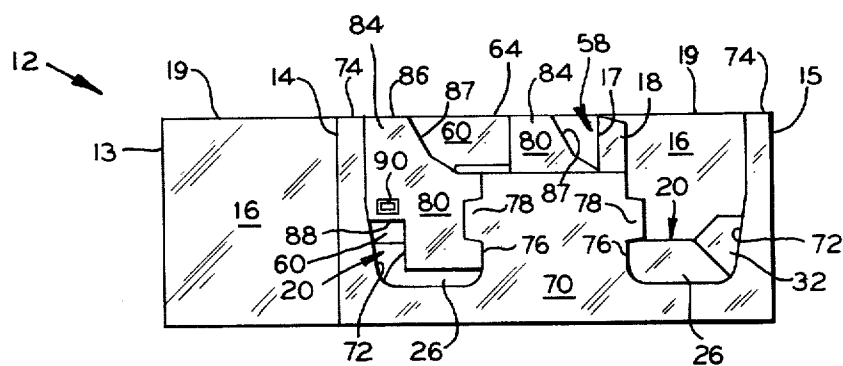


FIG. III

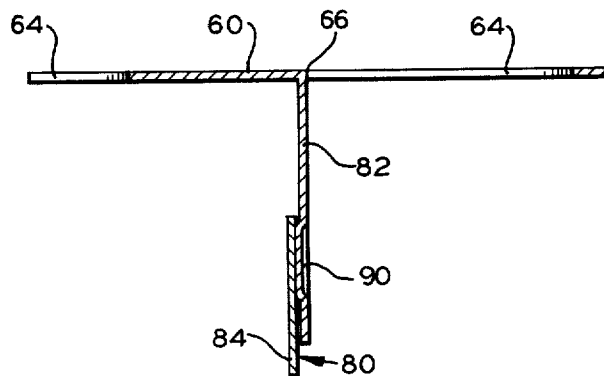


FIG. IV

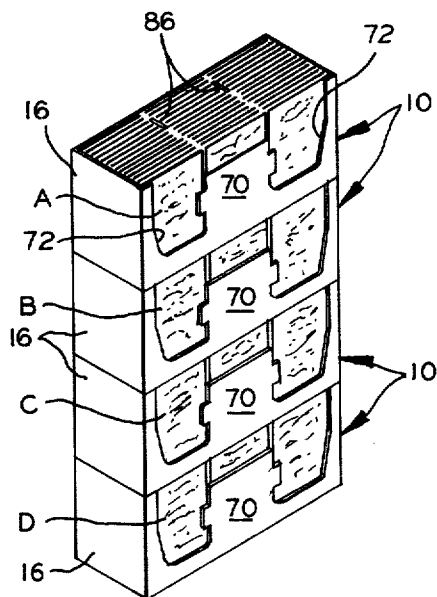


FIG. V

DISPLAY CARTON

BACKGROUND OF THE INVENTION

The fiberboard carton for which this invention is generally used is for displaying and dispensing thin envelopes or packets arranged on edge in the cartons. Products so merchandised include dried seasonings and soup mixes and powdered concentrates for soft drinks, and usually are marketed in a wide variety of flavors. Cartons containing various flavors or mixes are usually stacked upon one another, and the packages are dispensed from the front of the cartons. These packages themselves should not support any weight from an upper carton in order to keep the lower carton from collapsing after removal of a substantial portion of the packages therefrom.

A non-collapsing fiberboard display carton is known in the prior art; see U.S. Pat. No. 3,347,356 issued on Oct. 17, 1967, which provides a header panel which is folded down as a lid to provide a support for an upper carton or cartons. Such a header, however, is usually double thickness and requires a considerable amount of fiberboard, which header when used as a supporting cover is ineffective as a display surface.

SUMMARY OF THE INVENTION

The rectangular open top display carton of this invention comprises an automatic locking bottom, a windowed front wall, a back side wall, two full end walls, and at least one partition, folded and glued from a single fiberboard blank. The bottom wall of the carton comprises four flaps hinged to the lower edges of four adjacent walls of the carton, adjacent pairs of which flaps are glued to each other to define an automatic locking bottom that is inwardly and upwardly foldable into the interior of the carton when the carton is collapsed to a flattened or knocked-down condition. The corners of the front wall and the top edges of the back and end walls and partitions are all equidistant from the bottom wall of the carton, and accordingly define a supporting plane parallel to the bottom wall of the carton.

Each partition consists of a pair of overlapping and glued flaps, the rear flap being cut out from the back wall inside its edges, and the front flap being cut out from the front wall, including part of the top edge thereof to form a top supporting edge on the partition and wall, leaving the front wall with a large cut-away portion or window for removing merchandise or packages from the carton. Each flap cut out from the front wall may have a notch cut from its fold line to leave a tongue or tab in the plane of the front wall which protrudes into the opening or window in the front wall and prevents the displayed packages from falling out of the carton. The lower or bottom edge of the partition is cut away to facilitate the inward folding of the bottom flaps when the carton is in its knocked-down condition, and the subsequent reassembly of the automatic bottom when the carton is set up. Thus the carton can be completely assembled where it is manufactured, shipped in a knockeddown condition, and easily set up just before being filled at its use location. A more reliable gluing process is realized by embossing part of the overlapping portion of one or both of the partition flaps to increase the thickness and thereby help compensate for the additional layers of fiberboard in the bottom when in the knocked-down condition, in that there are as many as

five layers of fiberboard along parts of the bottom edge. Thus the resulting thicker overlapping portion of the partition is more effectively pressed in the pressing roller after gluing.

A plurality of the cartons of this invention can be stacked upon each other for the displaying and dispensing of several flavors or kinds of products. The full height corners on the front wall of each carton supply the necessary additional support to prevent a lower carton in the stack from collapsing from the weight of the upper cartons upon removal of the contents of the lower carton. The elimination of the header panel from designs in the prior art can reduce the amount of material needed by up to 33%, resulting in a less expensive carton that is cheaper to ship since it is smaller and weighs less.

Accordingly it is an object of this invention to produce a simple, efficient, effective, economic, and strong fiberboard display carton from a single substantially rectangular blank.

BRIEF DESCRIPTION OF THE VIEWS

The above mentioned and other features, objects and advantages, and the manner of attaining them are described more specifically below by reference to an embodiment of this invention shown in the accompanying drawings, wherein:

FIG. I shows a perspective view of a preferred embodiment of the display carton according to this invention in its set-up condition ready for loading;

FIG. II is a plan view, as seen from the outside or printed side of the carton, of an unfolded cut and creased fiberboard blank for forming the carton disclosed in FIG. I, with the shaded areas indicating where adhesive is to be applied;

FIG. III is a front elevation showing the assembled or glued carton of FIG. I in its knocked-down condition, with its automatic bottom wall folded upwardly and inwardly into the carton;

FIG. IV is an enlarged sectional view taken along line IV — IV of FIG. I of the overlapping and embossed parts of a partition and part of its adjacent back wall; and

FIG. V is a reduced perspective view of a plurality of like cartons similar to FIG. I, shown in a filled and stacked condition which would be typical of a display situation wherein each carton contains a different flavor of the product.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

The empty set-up display carton 10 shown in FIG. I has two full end walls 16, a bottom wall 20, a rear wall 60, a cut-away or windowed front wall 70, and two similar partitions 80. The interior of this carton is divided into three rectangular compartments by the two partitions 80, each compartment being open at the top and having the front wall 70 substantially cut away. FIG. II discloses the blank 11 for forming the display carton in FIG. I, with the four walls 60, 16, 70, and 16 joined together along fold lines 13, 14, 15, respectively, and with a flap 18 hinged along fold line 17 to one end of the back wall 60 for being glued to end wall 16 on the opposite end of the blank, forming the fourth corner joint of the carton.

The bottom wall structure 20 is an automatic lock bottom type and includes as shown in FIG. II, a rear

bottom panel section or flap 22 hinged along score line 24 to the bottom edge of the rear wall panel 60, a front bottom panel section or flap 26 hinged along score line 28 to the bottom edge of the front wall 70, and end bottom panel sections or flaps 30 and 32 hinged along score lines 34 and 36, respectively, to the bottom edges of the end wall panels 16. Triangular portions 38 and 40, which are hinged to the end bottom panel sections 30 and 26, respectively about score lines 42 and 44, are to be glued to the adjacent ends of rear bottom panel sections 22 and 32, respectively. The areas to be glued are shown shaded in FIG. II. The automatic locking bottom 20 fits within the carton structure in the collapsed position 12, as shown in FIG. III and may be easily opened either manually, or by automatic carton-filling machines.

Each end 16 is rectangular and uncut and has a full upper edge 19. The rear wall or panel 60 has a top edge 62, and openings 64 formed by the cutting out of parts 82 of the partitions 80 that are hinged to the back wall along vertical fold lines 66.

The front wall 70 has openings 72 and 73 formed by the cutting away of parts 84 of the partitions 80, L-shaped holes 72 and a strip 73 (see FIG. II) up to and including most of the top edge 74 of said front wall 70. Along the fold lines 76 of the parts 84, there are tongues 78 cut out of each front partition flap or part 84, which tongues remain in the plane of the front wall 70 and protrude into the openings 72 for the purpose of securing the displayed packages and preventing their falling out from the carton 10.

Each partition 80 has a top edge 86 on its front flap 84 which is cut out from the front wall 70 and notched 87 back from the upper end of its hinged line 76. The lower portions of each front flap 84 are cut away from the lower edge of cut-outs 72 and notched 88 upwardly at its rear or inner end to facilitate easy knock-down and set-up of the carton 10 by providing the inwardly folding back section 22 of the bottom wall 20 with room for folding. The rear flaps 82 are embossed at 90 (see also FIG. IV), which is where the front and rear flaps 84 and 82 are glued together, in order to increase the thickness of the partition 80 at that point and thereby enhance the gluing efficiency. A portion of the knocked-down carton where the bottom is inwardly folded is five layers thick, and the embossed partition is more effectively pressed in the pressing roller after gluing if a corresponding thickness is present at the overlap of the partition parts.

The top edge 19 of the two end walls 16, the top edge 62 of the rear wall 60, the top edges 74 of the corners of the front wall 70, and the top edges 86 of the two partitions 80, are all equidistant from the bottom wall 20; thus a top edge plane parallel to the bottom wall 20 is defined, and its distance from the bottom wall 20 should be slightly greater than the height of the envelope type packages A, B, C and D of different flavors (see FIG. V) which are to be displayed in the carton.

Thus a like carton placed on top of a lower carton will be supported by the top edges 19, 62, 74, and 86 rather than the packages contained therein.

While there is described above the principles of this invention in connection with specific apparatus, it is to be clearly understood that this description is made only by way of example and not as a limitation to the scope of this invention.

I claim:

1. A folding plural-compartment carton having front and back side walls, two end walls, a bottom, and at least one partition parallel to said end walls, each said partition comprising a pair of overlapping and glued flaps cut out from said back and front walls spaced from said end walls to leave full height corners for said carton, all of said walls and partitions having at least a portion of their top edges the same maximum distance from said bottom wall.

2. A carton according to claim 1, wherein both end walls, the rear wall, the central portion of the glued partition, and the ends of the front wall are all equal in height to define a top-edge plane, which is parallel to the bottom wall of the carton, and separated from the bottom wall of the carton by a distance greater than the height of the objects to be displayed in the carton, thereby permitting the weight of stacked display cartons to be borne by said coplanar edges rather than by the objects within the display carton.

3. A carton according to claim 1, wherein the bottom of said carton consists of four bottom wall panels which are hinged to the respective adjacent walls of the carton, and adjacent pairs of which are secured to each other to define an automatic locking bottom, and wherein said bottom is inwardly foldable into the carton to permit collapse to a flattened condition and subsequent reassembly.

4. A carton according to claim 1, wherein the lower edge of said partition is cut away to facilitate folding of an assembled carton and automatic set-up of a knocked-down carton.

5. A carton according to claim 1 wherein at least one of said pair of overlapping and glued flaps of each partition is embossed to facilitate glue application and drying.

6. A plurality of cartons according to claim 1, wherein said cartons are stacked upon each other, and wherein the front wall of each carton has cut-outs removed from its top edge to allow easy access to displayed packages from the front of each carton.

7. A carton according to claim 1, wherein said carton has an open top.

8. A carton according to claim 1, wherein each partition flap cut out from the front wall has a tongue cut from the root section of the flap and remaining in the plane of the front wall, said tongue protruding into the cutout opening of said front wall to prevent displayed packages from falling out of the carton.

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