Dec. 15, 1953 K. T. BUTTERY 2,662,683

COLLAPSIBLE PARTITIONED CARTON

Filed Oct. 13, 1952 3 Sheets-Sheet 1

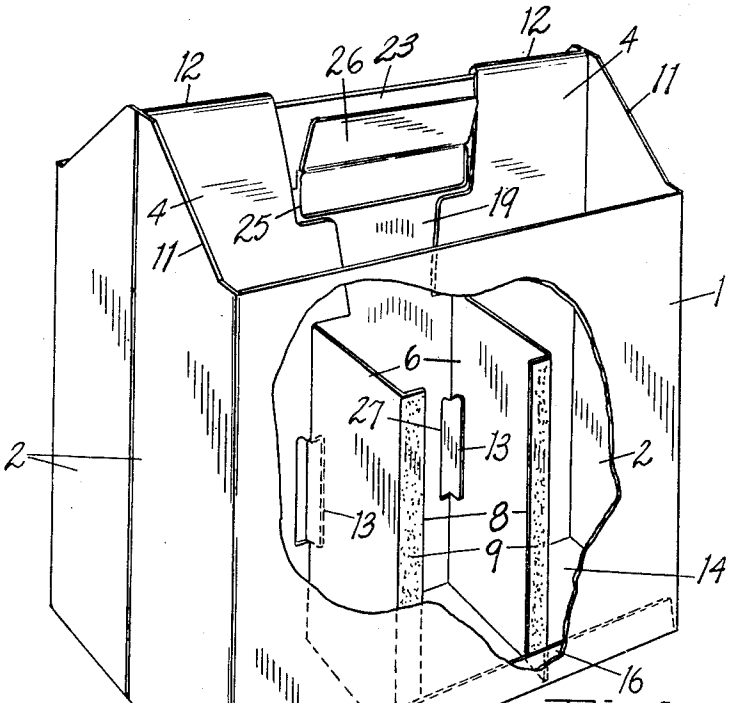


Fig. 1.

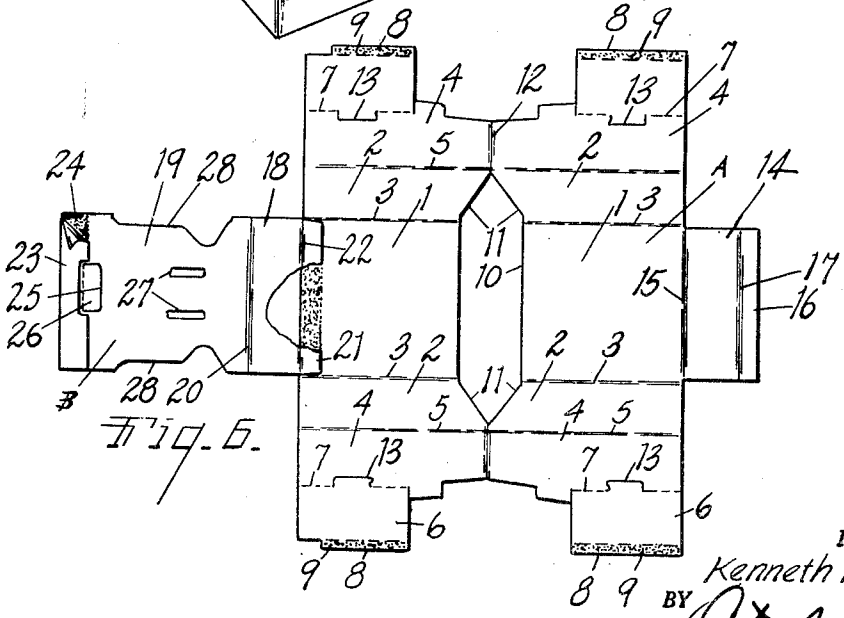


Fig. 6.

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Dec. 15, 1953 K. T. BUTTERY 2,662,683

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Filed Oct. 13, 1952 3 Sheets-Sheet 2

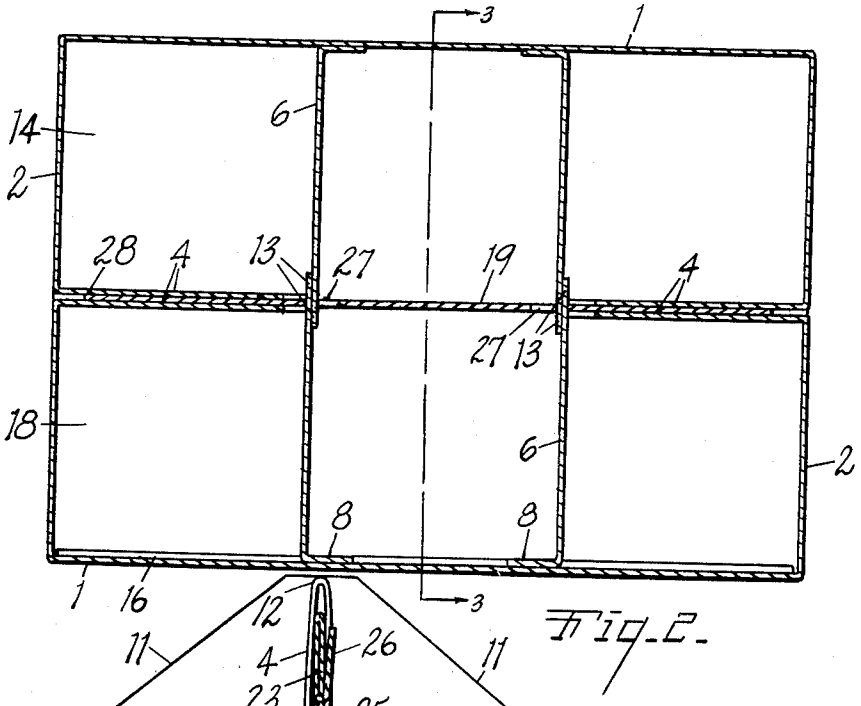


Fig. 2.

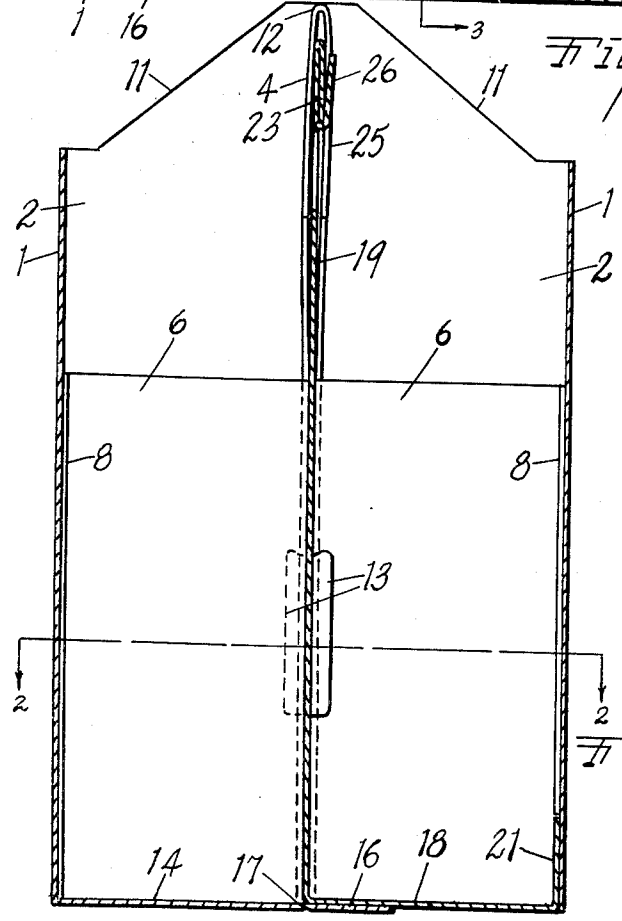


Fig. 3.

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Filed Oct. 13, 1952 3 Sheets-Sheet 3

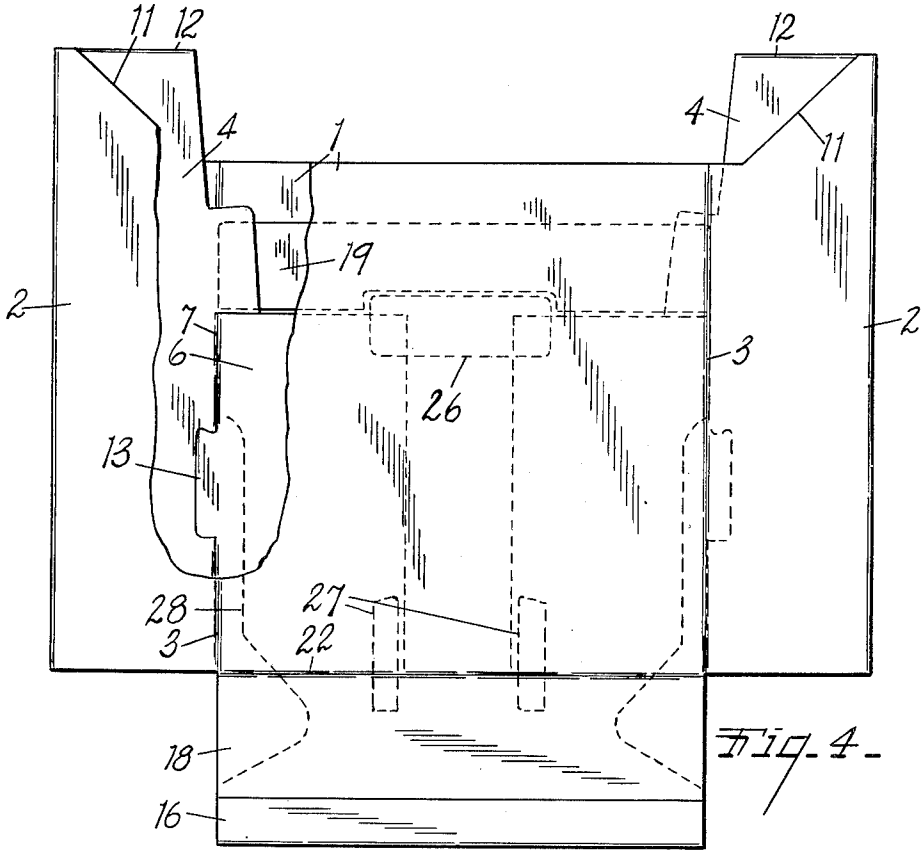


Fig. 4.

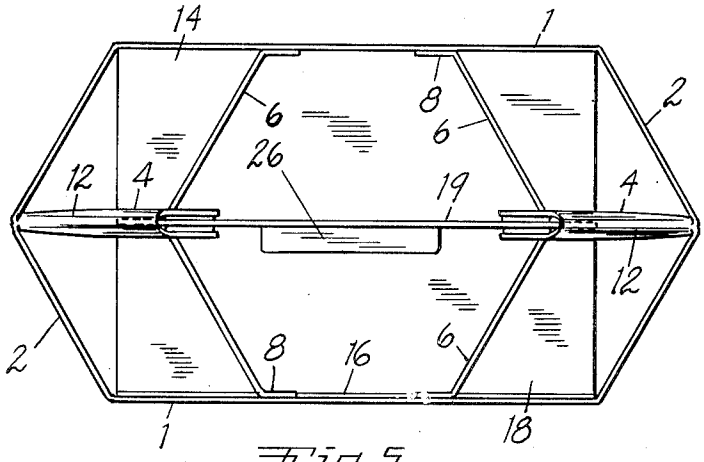


Fig. 5.

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UNITED STATES PATENT OFFICE

2,662,683

COLLAPSIBLE PARTITIONED CARTON

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Application October 13, 1952, Serial No. 314,425

7 Claims. (Cl. 229—28)

1

This invention relates to improvements in collapsible partitioned cartons.

The main objects of the invention are:

First, to provide a collapsible partitioned carton of the bottle carrying type which in the main may be formed of relatively inexpensive stock and at the same time is strong and capable of carrying loads such as liquid filled bottles.

Second, to provide a carton having these advantages which may be shipped and stored in the knockdown and quickly and easily set up by the user, and one in which the parts are securely retained in erected position.

Third, to provide a structure having these advantages and including a handle well adapted to sustain the loads.

Objects relating to details and economies of the invention will appear from the description to follow. The invention is defined in the claims.

A structure which embodies the features of the invention is clearly illustrated in the accompanying drawing, in which:

Fig. 1 is a perspective view of a carton embodying the invention in erected position, portions of the wall being broken away to disclose structural details.

Fig. 2 is a horizontal section of the erected carton on a line corresponding to line 2—2 of Fig. 3.

Fig. 3 is a vertical transverse section on a line corresponding to line 3—3 of Fig. 2.

Fig. 4 is a plan view of a collapsed carton, portions being broken away to show structural details.

Fig. 5 is a top view illustrating one position of the parts in the process of erecting the carton.

Fig. 6 is a plan view of the parts in the flat or extended form, adhesive being conventionally illustrated and parts being broken away and turned back to illustrate details.

It should be understood that in the specification and claims the terms "side walls" and "end walls" or "end wall members" are used for convenience in designating the parts and not as limitations as to size or shape as the cartons may be of any desired shape or dimensions.

The present invention is in some respects an adaptation of and is an improvement upon the structure of the Buttery and Vander Lugt, Jr., application filed November 13, 1951, Serial No. 256,046.

The carton of the present invention is formed of two blanks designated A and B. The blank A is formed of a relatively inexpensive grade of carton board stock while the blank B is formed

2

of a relatively higher grade and relatively stronger stock. The purpose of this will be apparent as the description proceeds.

The carton comprises side walls 1, 1 and complementary end wall members 2, 2 hingedly connected at 3 to the end edges of the side walls. Pairs of an end longitudinal members 4, 4 are hingedly connected to the inner edges of the side wall members 2 at 5. Transverse partition members 6, 6 are hingedly connected at 7 to the inner edges of the end longitudinal partition members, these transverse partition members 6 having sealing flaps 8 on their outer edges and being adhesively secured to the inner sides of the side walls in properly spaced relation. Adhesive is indicated at 9 in Fig. 6.

In the embodiment of the invention illustrated the side walls are of less height than the end walls to facilitate grasping of the carton and to expose a part of the contents. To obtain this result the carton blank A has a longitudinally extending cutout 10 between the side walls, the end edges of the cutout or opening converging and extending between the end wall members. This results in providing outwardly inclined edges 11 for the end wall members. The longitudinal partition members are connected at 12 and this also provides a connection for the end wall members 2 at their upper edges. The transverse partition members are provided with tongues 13 on their inner edges.

The bottom member 14 is integral with the blank A and is hingedly connected to the bottom edge of one side wall at 15. This bottom member is provided with a sealing flap 16 hingedly connected thereto at 17. The blank B includes a bottom member 18 and an intermediate longitudinal partition member 19 hingedly connected to the bottom member 18 at 20. The bottom member 18 is provided with a sealing flap 21 which is adhesively connected to the inner side of the other side wall, that is, the side wall opposite that to which the bottom member 14 is connected. The sealing flap 21 is hingedly connected to the bottom member 18 at 22. The upper edge 23 of the longitudinal partition member is folded upon itself and adhesively secured at 24. This provides a reinforcement for the longitudinal member which constitutes the handle of the carton and is provided with a hand grip opening 25. This opening is formed by a U-shaped slit leaving a tongue portion 26 which may be turned upwardly to provide a good gripping edge. It also constitutes a reinforcement above the opening.

When the carton is in erected position the upper edge of the longitudinal partition member 19 is in supporting engagement with the hinging connection 12 for the end longitudinal partition members. The intermediate longitudinal partition member 19 has vertical slots 27 therein receiving the tongues 13 when the carton is in fully erected position. These tongues serve as load carrying connections between the intermediate longitudinal partition member and the end longitudinal partition members, inasmuch as the transverse partition members are hingedly connected to the inner edges of the longitudinal partition members. The sealing flap 16 of the bottom member 14 is adhesively secured to the under side of the bottom 18 so that there is a direct load carrying connection for the intermediate longitudinal partition member 19 to both bottom members, and in carrying a loaded carton the load is sustained by the intermediate longitudinal partition member which, as stated, is formed of a stronger grade of stock than that of the other parts. This results in a substantial saving in cost and at the same time the structure is strong enough for the purpose intended.

In erecting the carton from the collapsed position shown in Fig. 4 it is only necessary to press on the opposite ends of the collapsed carton. To insure the complete erection the end edges of the intermediate longitudinal partition member are recessed at 28 so that they do not protrude from the portions of the end wall members to which pressure would be applied, even though the end wall members are pressed somewhat inwardly of their normal erected position. This permits the intermediate partition member at the top and bottom thereof to be equal in width to the width of the side walls.

I have illustrated and described the invention in a commercially practical embodiment thereof. I have not attempted to illustrate or describe other embodiments or adaptations which I contemplate as it is believed this disclosure will enable the adaptation of the invention as may be desired.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. A collapsible partitioned carton comprising side walls, complementary end wall members hingedly connected to the ends of the side walls, pairs of end longitudinal partition members hingedly connected to the inner edges of said end wall members and hingedly connected to each other at their upper edges, the inner edges of the longitudinal partition members being spaced when the carton is in fully erected position, transverse partition members hingedly connected to the inner edges of said longitudinal partition members and having sealing flaps on their outer edges adhesively secured to the inner sides of the side walls, a first bottom member integral with and hingedly secured to the bottom edge of one side wall and provided with a hinged sealing flap on its inner edge, and an integral combined second bottom member and intermediate longitudinal partition and handle member formed of stock of relatively greater strength than that of the aforesaid parts, said second bottom member being hingedly secured to the inner side of the other side wall at the bottom thereof, said intermediate partition member being hingedly connected to said second bottom member, said first bottom member flap being connected to the outer side of said second bottom member, the width of the intermediate longitudinal partition member being approximately that of the width of the side walls, the side edges of said intermediate longitudinal member being recessed so that the central portions thereof do not protrude from between the end longitudinal members when erecting the carton, the upper edge of the intermediate longitudinal partition member being in supporting engagement with the connections for the pairs of end longitudinal partition members when the carton is in fully erected position, said intermediate longitudinal member having a handhold between said end longitudinal partition members.

2. A collapsible partitioned carton comprising side walls, complementary end wall members hingedly connected to the ends of the side walls, pairs of end longitudinal partition members hingedly connected to the inner edges of said end wall members and hingedly connected to each other at their upper edges, the inner edges of the longitudinal partition members being spaced when the carton is in fully erected position, transverse partition members hingedly connected to the inner edges of said longitudinal partition members and having sealing flaps on their outer edges adhesively secured to the inner sides of the side walls, a first bottom member integral with and hingedly secured to the bottom edge of one side wall and provided with a hinged sealing flap on its inner edge, and an integral combined second bottom member and intermediate longitudinal partition and handle member formed of stock of relatively greater strength than that of the aforesaid parts, said second bottom member being hingedly secured to the inner side of the other side wall at the bottom thereof, said intermediate partition member being hingedly connected to said second bottom member, said first bottom member flap being connected to the outer side of said second bottom member, the upper edge of the intermediate longitudinal partition member being in supporting engagement with the connections for the pairs of end longitudinal partition members when the carton is in fully erected position, said intermediate longitudinal member having a handhold between said end longitudinal partition members.

3. A collapsible partitioned carton comprising side walls, complementary end wall members hingedly connected to the ends of the side walls, pairs of end longitudinal partition members hingedly connected to the inner edges of said end wall members and hingedly connected to each other at their upper edges, the inner edges of the longitudinal partition members being spaced when the carton is in fully erected position, transverse partition members hingedly connected to the inner edges of said longitudinal partition members and having sealing flaps on their outer edges adhesively secured to the inner sides of the side walls and having tongues on their inner edges, a first bottom member integral with and hingedly secured to the bottom edge of one side wall and provided with a hinged sealing flap on its inner edge, and an integral combined second bottom member and intermediate longitudinal partition and handle member formed of stock of relatively greater strength than that of the aforesaid parts, said second bottom member being hingedly secured to the inner side of the other side wall at the bottom thereof, said intermediate partition member being hingedly connected to said second bottom member, said first

bottom member flap being connected to the outer side of said second bottom member, said intermediate partition member having vertical slots therein receiving said tongues on said transverse partition members when the parts are in erected position, the upper edge of the intermediate longitudinal partition member being in supporting engagement with the connections for the pairs of end longitudinal partition members when the carton is in fully erected position, said intermediate longitudinal member having a handhold between said end longitudinal partition members.

4. A collapsible partitioned carton comprising side walls, complementary end wall members hingedly connected to the ends of the side walls, pairs of end longitudinal partition members hingedly connected to the inner edges of said end wall members and hingedly connected to each other at their upper edges, transverse partition members hingedly connected at their inner edges to said longitudinal partition members and at their outer edges to said side walls, a first bottom member hingedly secured to the bottom edge of one side wall, and a combined second bottom member and intermediate longitudinal partition member formed of stock of relatively greater strength than that of the aforesaid parts, said second bottom member being hingedly secured to the bottom edge of the other side wall, said intermediate partition member being hingedly connected to said second bottom member, said first bottom member being hingedly connected to said second bottom member, the width of the intermediate longitudinal partition member being approximately that of the width of the side walls, the side edges of said intermediate longitudinal member being recessed so that the central portions thereof do not protrude from between the end longitudinal members when erecting the carton.

5. A collapsible partitioned carton comprising side walls, complementary end wall members hingedly connected to the ends of the side walls, pairs of end longitudinal partition members hingedly connected to the inner edges of said end wall members and hingedly connected to each other at their upper edges, transverse partition members hingedly connected at their inner edges to said longitudinal partition members and at their outer edges to said side walls, a first bottom member hingedly secured to the bottom edge of one side wall, and a combined second bottom member and intermediate longitudinal partition member formed of stock of relatively greater strength than that of the aforesaid parts, said second bottom member being hingedly secured to the bottom edge of the other side wall,

said intermediate partition member being hingedly connected to said second bottom member, said first bottom member being hingedly connected to said second bottom member.

6. A collapsible partitioned carton comprising side walls, complementary end wall members hingedly connected to the ends of the side walls, pairs of end longitudinal partition members hingedly connected to each other at their upper edges, transverse partition members hingedly connected at their inner edges to said longitudinal partition members and at their outer edges to said side walls, a first bottom member hingedly secured to the bottom edge of one side wall, and a combined second bottom member and intermediate longitudinal partition member formed of stock of relatively greater strength than that of the aforesaid parts, said second bottom member being hingedly secured to the bottom edge of the other side wall, said intermediate partition member being hingedly connected to said second bottom member, said first bottom member being hingedly connected to said second bottom member, the upper edge of the intermediate longitudinal partition member being folded upon itself and being in supporting engagement with the hinging connections for the pairs of end longitudinal partition members when the carton is in fully erected position.

7. A collapsible partitioned carton comprising side walls, complementary end wall members hingedly connected to the ends of the side walls, pairs of end longitudinal partition members hingedly connected to the inner edges of said end wall members and hingedly connected to each other at their upper edges, transverse partition members hingedly connected at their inner edges to said longitudinal partition members and at their outer edges to said side walls and having tongues on their inner edges, a first bottom member hingedly secured to the bottom edge of one side wall, and a combined second bottom member and intermediate longitudinal partition member formed of stock of relatively greater strength than that of the aforesaid parts, said second bottom member being hingedly secured to the bottom edge of the other side wall, said intermediate partition member being hingedly connected to said second bottom member, said first bottom member being hingedly connected to said second bottom member, said intermediate partition member having vertical slots therein receiving said tongues on said transverse partition members when the parts are in erected position.

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No references cited.