July 4, 1961 K. T. BUTTERY 2,990,993

PACKAGED CARTON

Filed Nov. 14, 1958 3 Sheets-Sheet 1

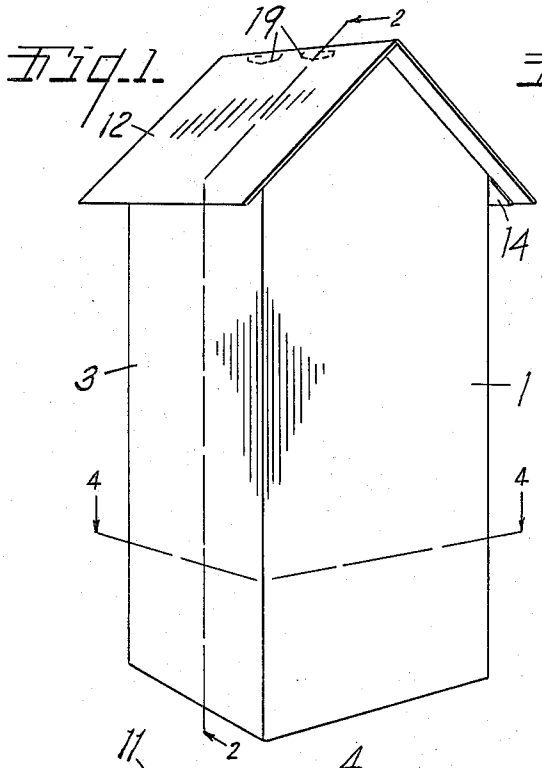


Fig. 1.

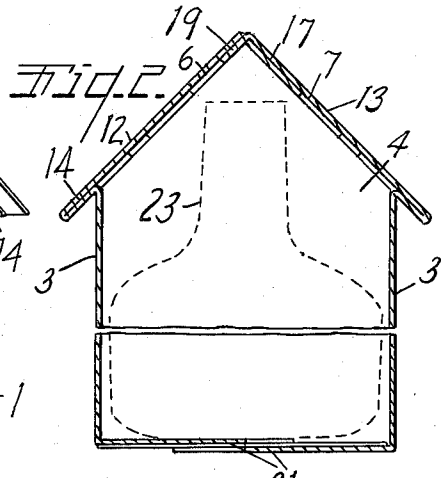


Fig. 2.

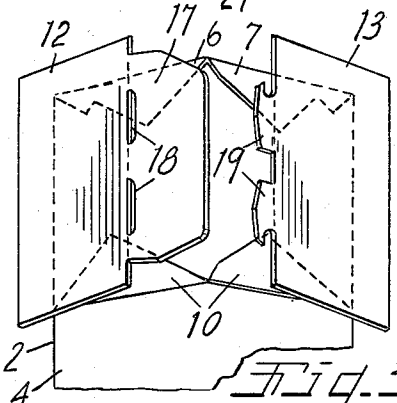


Fig. 3.

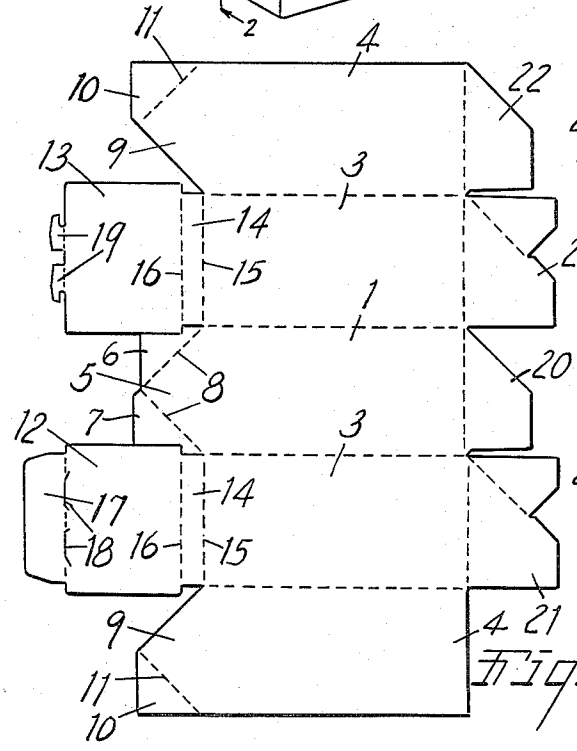


Fig. 5.

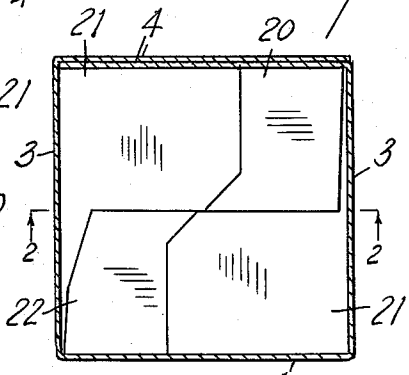


Fig. 4.

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July 4, 1961 K. T. BUTTERY 2,990,993

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Filed Nov. 14, 1958 3 Sheets-Sheet 2

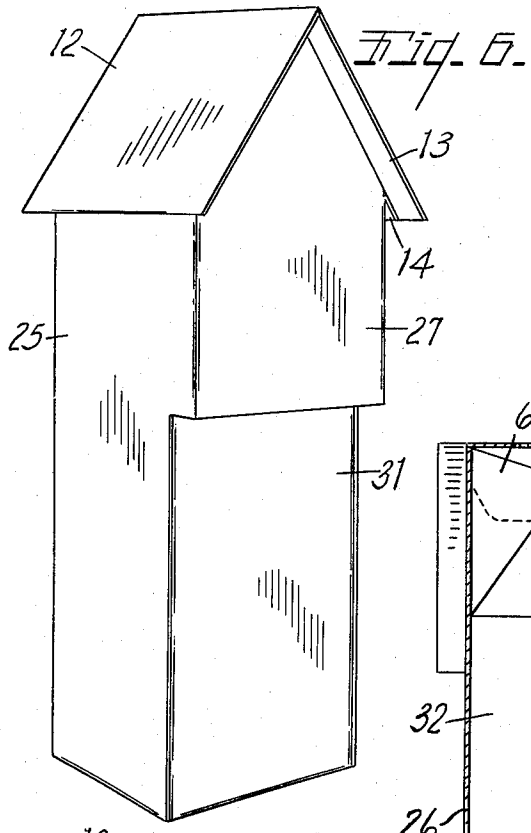


Fig. 6.

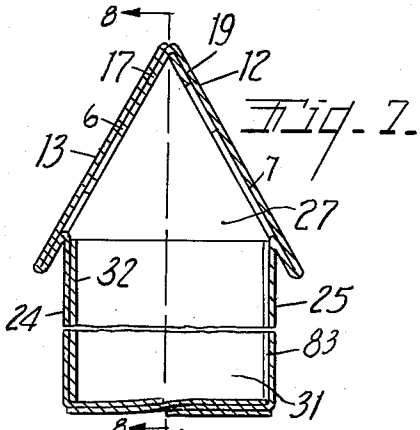


Fig. 7.

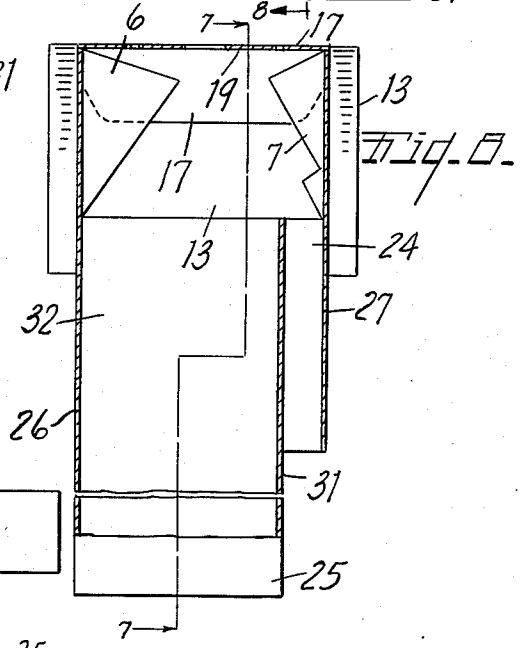


Fig. 8.

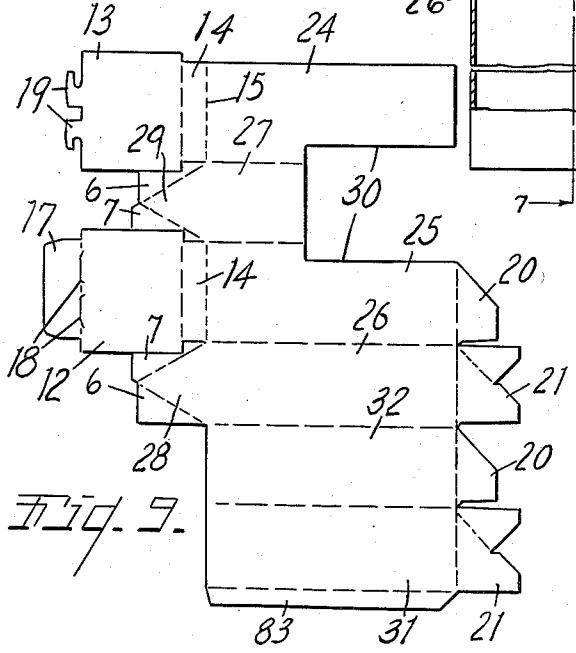


Fig. 9.

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July 4, 1961 K. T. BUTTERY 2,990,993

PACKAGED CARTON

Filed Nov. 14, 1958 3 Sheets-Sheet 3

Fig. 10.

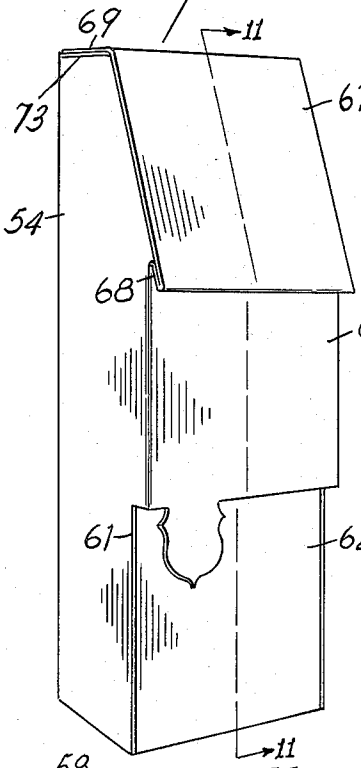
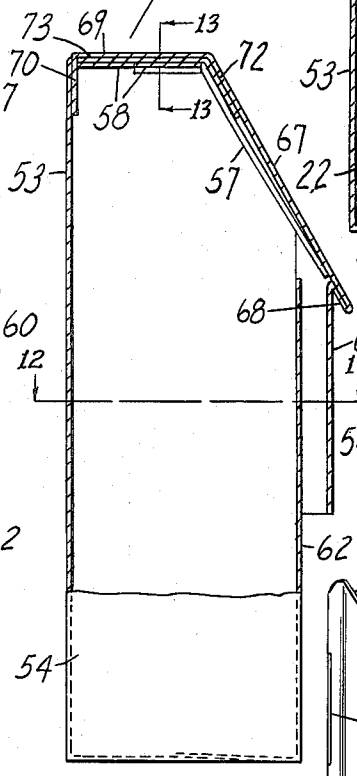


Fig. 11.



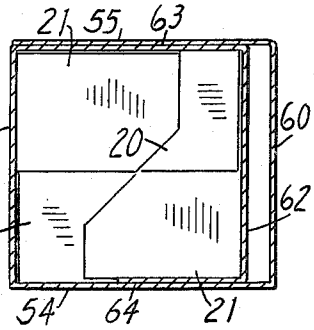


Fig. 12.

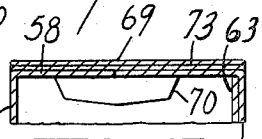


Fig. 13.

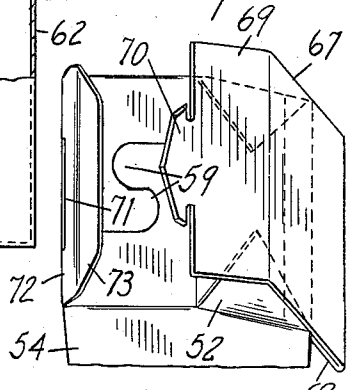


Fig. 14.

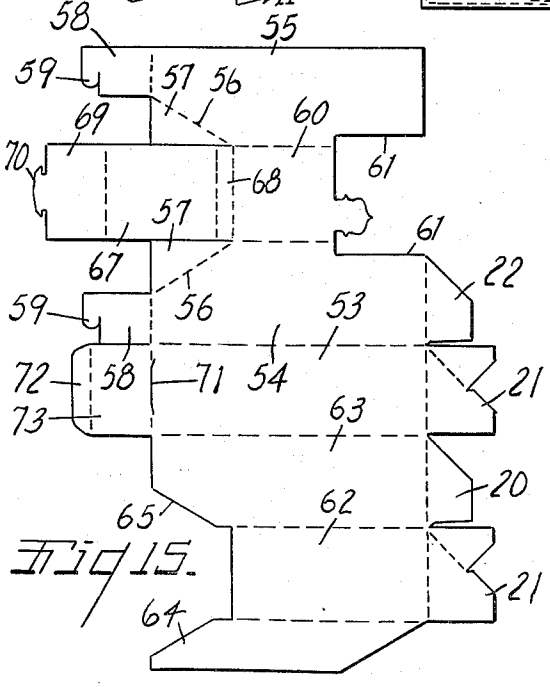


Fig. 15.

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United States Patent Office 2,990,993 Patented July 4, 1961

2,990,993

PACKAGED CARTON

Kenneth T. Buttery, Kalamazoo, Mich., assignor, by mesne assignments, to KVP Sutherland Paper Company, a corporation of Delaware

Filed Nov. 14, 1958, Ser. No. 773,871
7 Claims. (Cl. 229—16)

This invention relates to cartons which are well adapted for packaging of bottles and other elongated articles. The main objects of this invention are,

First, to provide a carton which is well adapted for the packaging of bottles and other elongated articles and which provides effective supports as well as inclosing the packaged article.

Second, to provide a carton top structure which effectively supports and reinforces the upper ends of the walls when the carton is in erected closed position.

Third, to provide a carton having these advantages which which is distinctive and attractive in appearance.

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

A preferred embodiment of the invention is illustrated in the accompanying drawing, in which:

FIG. 1 is a perspective view of an erected carton embodying my invention.

FIG. 2 is a fragmentary vertical section on a line corresponding to line 2—2 of FIGS. 1 and 4.

FIG. 3 is a fragmentary top perspective view of the carton illustrating details of the top panels and certain setting up steps.

FIG. 4 is a horizontal section on a line corresponding to line 4—4 of FIG. 1.

FIG. 5 is a plan view of the blank for the carton illustrated in FIGS. 1, 2 and 3.

FIG. 6 is a perspective view of another embodiment of my invention being substantially that of the embodiment of FIGS. 1 to 5 inclusive except that one of the end walls has a stepped formation.

FIG. 7 is a fragmentary transverse vertical section on a line corresponding to line 7—7 of FIG. 8.

FIG. 8 is a fragmentary vertical section on a line corresponding to line 8—8 of FIG. 7.

FIG. 9 is a plan view of the blank of the embodiment shown in FIGS. 6, 7 and 8.

FIG. 10 is a perspective view of another embodiment of my invention.

FIG. 11 is a view mainly in vertical section on a line corresponding to line 15—15 of FIG. 10.

FIG. 12 is a horizontal section on a line corresponding to line 16—16 of FIG. 11.

FIG. 13 is a fragmentary view in section on a line corresponding to line 17—17 of FIG. 11 showing details of the interlocking features of the top members.

FIG. 14 is a perspective view of the upper end of the carton illustrating the top members in partially closed position.

FIG. 15 is a plan view of the blank of the embodiment illustrated in FIGS. 10 to 14 inclusive.

All of the embodiments of my invention illustrated are of the collapsible type, but I have not illustrated them in collapsed position as it is believed that the collapsing features will be readily understood. The bottoms of the cartons are desirably of the automatically erectable type, that is, the bottoms are automatically erected when the carton walls are thrown to erected position. However, I have not illustrated the connections for these parts as the automatic erection of the bottom forms no part of this invention, and other types of bottoms might be used. The embodiments of the bottom members are illustrated in the blank as a blank would be incomplete without them.

They are substantially that of my Patent No. 2,677,495, issued May 4, 1954, and may if desired be substantially that illustrated in my Patent No. 2,659,526 issued November 17, 1953.

The embodiment of my invention illustrated in FIGS. 1 to 5 inclusive is of rectangular section and comprises opposed end walls 1 and 2 and opposed side walls 3, the end wall 1 being a single panel disposed centrally of the blank as illustrated in FIG. 5. The end wall 2 is formed of two overlapping panels 4. The wall 1 has an upwardly tapered portion 5 at its upper end having inner closure flaps 6 and 7 on its edges bendably or foldably connected thereto by the scored lines 8. The end wall panels 4 have upwardly tapering portions 9 at their upper ends, to the outer edges of which the closure flaps 10 are connected by the score lines 11. The top closure panels 12 and 13 are of a width substantially exceeding the width of the side walls 3 and are connected thereto by the foldable coupling strips 14 which are hingedly connected to the upper ends of the walls 3 by the score lines 15 and to the top panels by the score lines 16. The top panel 12 is provided with a tucking flap 17 on its swinging edge and with slits 18 at the juncture of the tucking flap to the panel. The top panel 13 is provided with oppositely projecting hooked tongues 19 on its swinging edge engageable in the slits 18. The wall 1 is provided with bottom member 20, wall 3 with bottom member 21, and one of the wall panels 4 with a bottom member 22. These are operatively connected in the completed carton so that they are automatically swung to erected position when the carton is erected as is illustrated in FIGS. 2 and 4. As stated, I do not describe the details of the connection of these bottom members in this application as they form no part of this invention, but those illustrated are substantially like my said Patent 2,677,495.

In use, the carton walls are swung to erected position, the bottom being automatically erected, the packaged article inserted and the top closure panels adjusted to closed position, in which position the inner closure flaps 6, 7 and the closure flaps 10 are swung inwardly and the top panels 12 and 13 are swung over the same. The foldable connection 14 therefor to the side walls are swung downwardly with the flap 17 on the under side of the top panel 13 and the tongues 19 inserted through the slits thereof as is shown in FIG. 2. This effectively retains the parts in erected position. The top panels 12 and 13 are inclined downwardly and the lower edges thereof project beyond the side walls and the top panels provide effective bracing for the walls. When the packaged carton is a bottle as indicated by dotted lines 23 in FIG. 2 the upper end of the bottle is supported against lateral movement and its neck is effectively guarded or protected. The resulting closed structure is very distinctive and attractive in appearance.

In the modification shown in FIGS. 6 to 9 inclusive the structure is the same as that of FIGS. 1 to 5 inclusive with the exception that one end wall, which may commonly be regarded as the front wall, is stepped. To accomplish this, the top closure panels and their connections to their respective wall members are the same as that described. The wall panels, however, are differently shaped and arranged in the blank, the purpose being to provide one of the walls with an upper portion thereof overhanging and projecting forwardly of the lower portion thereof. In this embodiment of my invention the side wall 24 is disposed at one end of the blank and is provided with the top panel 13 connected thereto by the foldable strip 14. The other side panel 25 is provided with the top panel 12 connected thereto by the strip 14. The opposed wall panels 26 and 27 are provided with upwardly tapered ends 28 and 29 corresponding generally to the upwardly tapered end portions 5 and 9 of the wall

panels 1 and 4 of the embodiment of FIGS. 1 to 5, and are provided with inner closure flaps 6 and 7 corresponding generally to the inner closure flaps 6, 7 and 10 of the embodiment of FIGS. 1 to 5.

The wall panel 27 terminates in substantially spaced relation to the lower ends of the side walls 24 and 25 which have notch-like recesses 30 in their front edges as viewed in FIG. 6. The lower front wall panel 31 is connected to the wall 26 by the inner wall panel 32 and the panel 31 is provided with a sealing flap 83. The inner wall panel 32 is of less width than the walls 24 and 25 and is secured to the inner side of the adjacent side wall and the sealing flap 83 is secured to the inner side of the opposed wall, as is shown in FIG. 7. This supports the front wall member or panel 32 in inwardly spaced parallel relation to the upper front wall member or panel 27.

In this embodiment the bottom members are on the walls or wall panels 25, 26, 31 and 32, see FIG. 9. The top panels and their connections to the walls and to each other and their relationship to the closure flaps 6 and 7 are the same generally as in the embodiment of FIGS. 1 to 5 inclusive, and so they are not further described.

The embodiment of my invention shown in FIGS. 10 to 15 inclusive incorporates some of the features of the embodiment shown in the other figures. In this embodiment the end wall 53, which for convenience may be referred to as the rear wall, is of the full transverse dimension of the carton. The side walls 54 and 55 have rearwardly inclined forward edge portions 56 which are provided with inner closure flaps 57 on their inclined edges and these walls or wall panels 54 and 55 have top closure members 58 on their upper edges which terminate in coengageable tongues 59. The upper front wall member or panel 60 extends between the front edges of the upper portions of these walls are wall panels 54 and 55 which are notched or recessed at 61. The inner wall 62 is supported by the inner wall panel 63 and the sealing flap 64, see FIG. 12. The inner panel 63 has a beveled edge 65 registering with the inclined edge 56 of the wall against which it is supportedly positioned and secured. The upper top panel 67 is connected to the upper front wall member or panel 60 by the hinged member 68 which may be folded upon the under side of the panel 67, as is illustrated in FIG. 11. At its swinging end the panel 67 is provided with a top closure member 69 terminating in the tongue 70 engageable with the slit 71 at the juncture of the inner top closure member 73 with the wall 53. The top closure member 73 is provided with a closure flap 72 on its swinging end. The closure member 69 is the outer top closure member and folds over the closure member 73 which is disposed with its flap on the inner side of the wall panel 67 when the parts are in erected position and the tongue 70 is inserted in the slit 71, thus securing the parts in erected position and providing a very effective closure.

To facilitate setting up of the embodiments of FIG. 1 to 9 inclusive and FIGS. 10 to 15 inclusive, the top panels and the coupling strips connecting them to the walls are adhesively connected as a factory step so that the cartons may be shipped in the knock-down and readily set up, and the correct positioning of these parts is assured. This also rigidifies the structure and prevents any gap between these parts.

From the foregoing it will clearly appear that while the structural features of the several embodiments result in a distinctive appearance of the cartons, they also serve to provide cartons which may be economically produced, quickly set up from the collapsed form, and are very strong and rigid in erected form.

What is claimed as new is:

1. A carton comprising a rear wall having a top closure member at its upper end, side walls having rearwardly inclined front edge portions at their upper ends provided with closure flaps, the front edges of the lower portions of said side walls being inwardly offset relative to the upper portions thereof, a lower front wall panel extending between the front edges of said side wall portions of reduced width, an upper front wall panel connecting the front edges of said side wall portions of reduced width, an upper front wall panel connecting the front edges of said side walls above said portions thereof of reduced width with its lower edge in overhanging outwardly spaced relation to the upper end of said lower front wall panel, the upper edge of said upper front wall panel terminating approximately in alignment with the lower edges of said inclined edge portions of said side walls, and a top panel of a width substantially exceeding the spacing of the side wall and connected to the upper edge of said upper front wall panel by a coupling strip hingedly connected thereto and to said top panel and foldable inwardly over the top panel when it is in erected position with its lower edge projecting downwardly and forwardly of the upper end of the front wall panel, said top panel having a closure flap on its swinging end retainingly engageable with said closure flap of the rear wall.

2. A carton comprising a rear wall having a top closure member at its upper end, side walls having rearwardly inclined front edge portions at their upper ends provided with closure flaps, the front edges of the lower portions of said side walls being inwardly offset relative to the upper portions thereof, a lower front wall panel extending between the front edges of said side wall portions of reduced width, an upper front wall panel connecting the front edges of said side walls above said portions thereof of reduced width with its lower edge in overhanging outwardly spaced relation to the upper end of said lower front wall panel, the upper edge of said upper front wall panel terminating approximately in alignment with the lower edges of said inclined edge portions of said side walls, and a top panel connected to the upper edge of said upper front wall panel, said top panel having a closure flap on its swinging end retainingly engageable with said closure flap of the rear wall.

3. A carton comprising a rear wall, side walls having rearwardly inclined front edge portions at their upper ends, the front edges of the lower portions of said side walls being inwardly offset relative to the upper portions thereof, a lower front wall panel extending between the front edges of said side wall portions of reduced width, an upper front wall panel connecting the front edges of said side walls above said portions thereof of reduced width with its lower edge in overhanging outwardly spaced relation to the upper end of said lower front wall panel, the upper edge of said upper front wall panel terminating approximately in alignment with the lower edges of said inclined edge portions of said side walls, and a top panel connected to the upper edge of said upper front wall panel.

4. A carton formed of substantially rigid material and comprising four walls of substantially rigid material, one opposed pair of the walls being parallel and having upper portions with parallel inwardly inclined edges having closure flaps thereon, one of the other pair of walls terminating at its upper end at the lower ends of said inclined edges on said opposed walls, and a top panel hingedly connected to the upper edge of said wall terminating at the lower ends of said inclined edges of said opposed pair of walls to overlappingly engage said closure flaps when the carton is erected, said top panel being of a width corresponding to the width of the opposed wall and having a securing flap on its swinging end, the wall opposed to the one to which said top panel is connected having an inwardly projecting portion at its upper end with which the securing flap of said top panel is retainingly engaged when the carton is erected.

5. A carton formed of substantially rigid material and comprising four walls of substantially rigid material, one

opposed pair of the walls being parallel and having upper portions with parallel inwardly inclined edges, one of the other pair of walls terminating at its upper end at the lower ends of said inclined edges on said opposed walls, and a top panel hingedly connected to the upper edge of said wall terminating at the lower ends of said inclined edges of said opposed pair of walls, said top panel being of a width corresponding to the width of the opposed wall and having a securing flap on its swinging end, the wall opposed to the one to which said top panel is connected having an inwardly projecting portion at its upper end with which the securing flap of said top panel is retainingly engaged when the carton is erected.

6. A carton formed of substantially rigid material comprising four walls of substantially rigid material, one pair of opposed walls having inwardly inclined parallel edge portions at their upper ends, one of the other pair of walls terminating at the lower ends of said inclined edges, a top panel hingedly connected to the upper edge of the wall so terminating, said top panel being of a width corresponding to the width of the wall opposed thereto and having a securing flap on its upper edge, the wall opposed to the wall having said top panel connected thereto having an inwardly projecting member on its upper edge with which said securing flap is retainingly engageable.

7. A carton formed of substantially rigid material comprising four walls of substantially rigid material, one pair of opposed walls having upwardly tapering portions

of substantial length at their upper ends, one of the other pair of walls terminating at the lower ends of said upwardly tapered upper end portions, and a top panel hingedly connected to the upper edge of the wall so terminating and being of a width corresponding to the width of the wall opposed thereto and being provided with a securing flap on its swinging edge, the wall opposed to said top panel having an inwardly projecting member on its upper edge with which said securing flap on said top panel is retainingly engageable when the walls are in erected position with said top panel in supported engagement with the inwardly inclined edge portions of said opposed walls.

References Cited in the file of this patent

UNITED STATES PATENTS

1,130,818	Herman	Mar. 9, 1915
1,690,178	Reeves	Nov. 6, 1928
1,950,104	Ewers	Mar. 6, 1934
2,138,718	Wheeler	Nov. 29, 1938
2,345,646	Williamson	Apr. 4, 1944
2,417,104	Cope	Mar. 11, 1947
2,659,526	Buttery	Nov. 17, 1953
2,762,552	Hickin	Sept. 11, 1956
2,764,337	Bolding	Sept. 25, 1956

FOREIGN PATENTS

1,105,428	France	June 29, 1955