

Sept. 13, 1966

D. BENDERSKY ET AL

3,272,425

GABLE TOP CONTAINER

Filed March 16, 1965

2 Sheets-Sheet 1

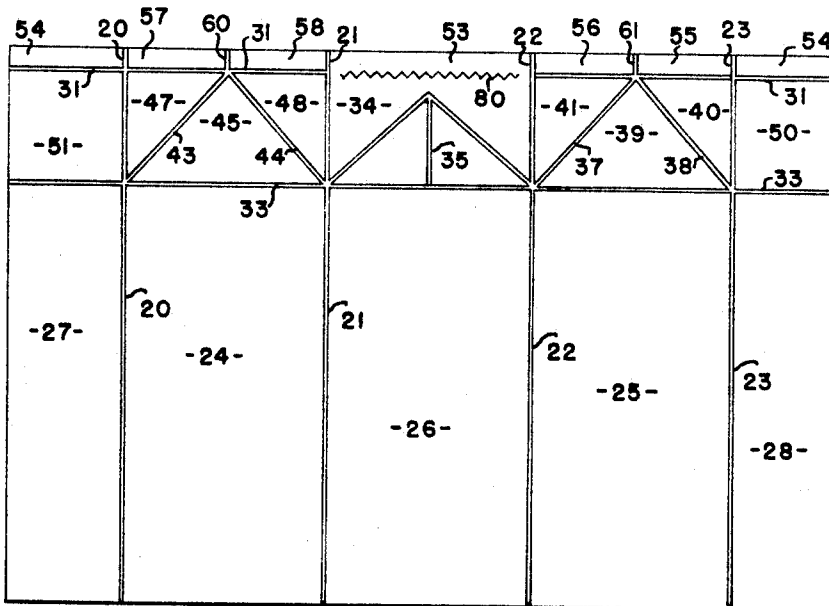


FIG. 2

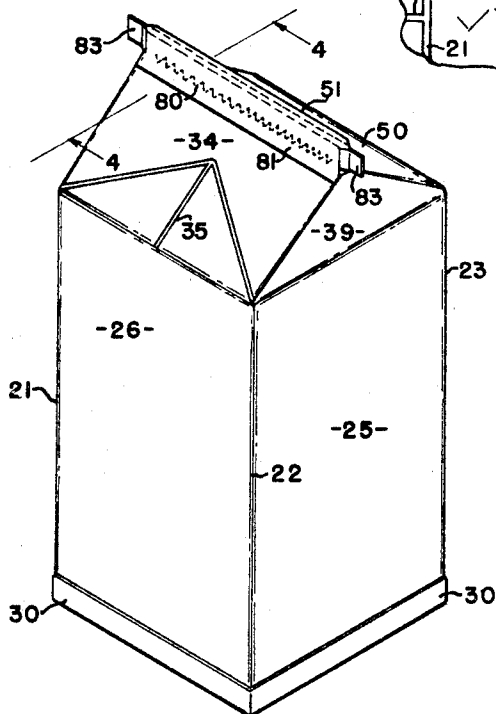


FIG. 1

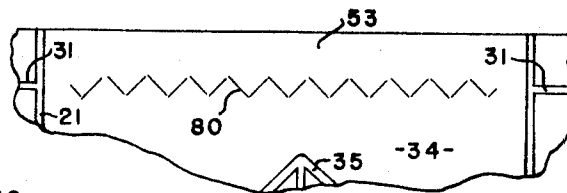


FIG. 3

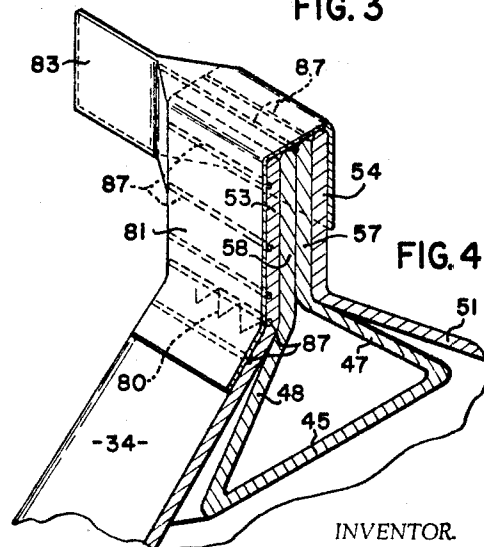


FIG. 4

INVENTOR.
DAVID BENDERSKY
BY DANIEL J. KLOS
D. Emmett Thompson
ATTORNEY.

Sept. 13, 1966

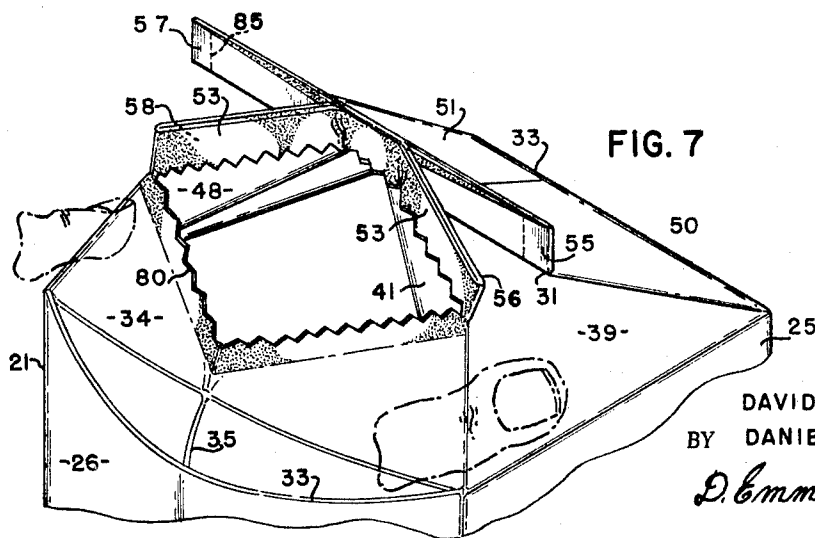
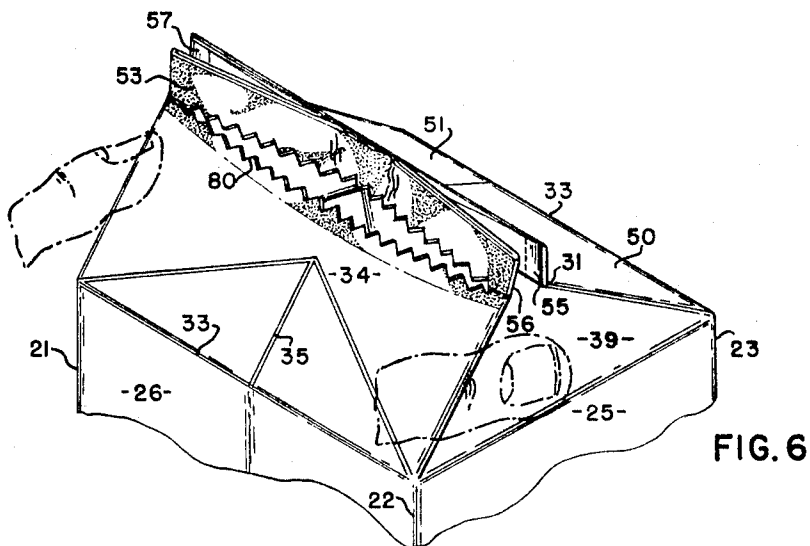
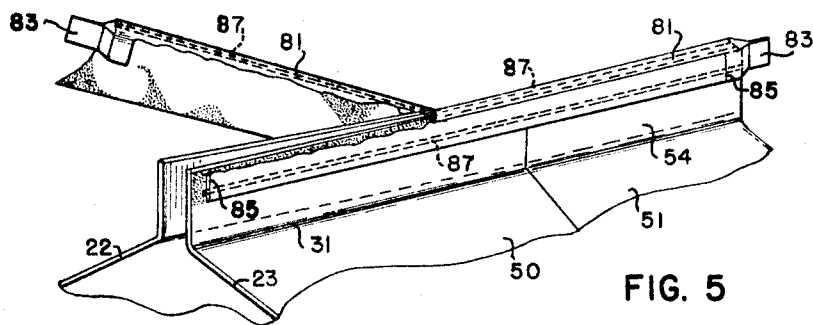
D. BENDERSKY ET AL

3,272,425

GABLE TOP CONTAINER

Filed March 16, 1965

2 Sheets-Sheet 2



INVENTOR.
DAVID BENDERSKY
BY DANIEL J. KLOS
D. Emmett Thompson
ATTORNEY.

1

3,272,425

GABLE TOP CONTAINER

David Bendersky, Overland Park, and Daniel J. Klos,
Mission, Kans., assignors to Phillips Petroleum Com-
pany, a corporation of Delaware

Filed Mar. 16, 1965, Ser. No. 440,192

3 Claims. (Cl. 229-17)

This invention has to do with containers rectangular in cross section and formed of paperboard or the like, and being provided with top closure panels foldable into gable top form.

The invention has as an object a gable top container embodying a top closure structure which is particularly convenient to open.

The invention consists in the novel features and in the combinations and constructions hereinafter set forth and claimed.

In describing this invention, reference is had to the accompanying drawings in which like characters designate corresponding parts in all the views.

In the drawings:

FIGURE 1 is a perspective view of a closed container embodying our invention.

FIGURE 2 is a plan view of the paperboard blank from which the container body and top closure is formed.

FIGURE 3 is an enlarged view of the upper portion of the front roof panel.

FIGURE 4 is a sectional view taken on line 4-4, FIGURE 1.

FIGURE 5 is an enlarged view, in perspective, of the gable ridge with the sealing tape partially removed therefrom.

FIGURE 6 is a perspective view of the upper portion of the carton, with the sealing tape removed, and the pouring spout partially moved to extended condition.

FIGURE 7 is a perspective view of the top portion of the container showing the pouring spout expanded to full open position.

The body and top closure of the container is formed from the flat blank shown in FIGURE 2. The blank is scored in conventional manner to provide the gable top closure arrangement. There are vertically disposed scores 20, 21, 22, 23, extending from the lower edge of the blank up to the top edge thereof, defining end wall panels 24, 25, and a front side wall panel 26. The score lines 20, 23, provide panels 27, 28, which form the rear side wall panel when the blank is bent on the scores 20-23, to square tubular form. The free edges of the panels 27, 28, overlap and are secured together to form a side wall seam. The tubular body is provided with a suitable bottom closure 30. There is a score line 31 extending in spaced parallel relationship to the top edge of the blank. A score line 33 extends in spaced parallel relationship to the score line 31.

The score lines 21, 22, and the score lines 31, 33, define a front roof closure panel 34 which is provided with a score line 35 extending upwardly from the score line 33, medial of the scores lines 21, 22, and terminating at its upper end in downwardly spaced relation to the score line 31.

The extension of the score lines 22, 23, and the score line 33 defines an area above the end panel 25, which area is provided with converging score lines 37, 38. These score lines, in conjunction with the score line 33, define an end closure panel 39 of triangular form. The score lines 23, 31 and 38, define a triangular fold-back panel 40, and the score lines 22, 31, 37, define a fold-back panel 41. The triangular shaped fold-back panels 40, 41, accordingly are integral with the end panel 39. In like manner, the area above the end wall panel 24 is

2

provided with upwardly converging score lines 43, 44, which, in conjunction with the score line 33, form a triangular end panel 45. Score lines 20, 31, 43, define a fold-back panel 47, and the score lines 21, 31, 44, define a fold-back panel 48.

The area above the panel 28 provides a section 50, and the area above the panel 27 provides an area 51. In the formed containers, the areas 50, 51, form the rear gable roof panel. All of the gable roof forming panels just described are surmounted by ridge panels. The front roof panel 34 has a ridge panel 53. The rear roof panel, composed of sections 50, 51, is surmounted by ridge panels 54. The fold-back panels 40, 41, are provided with ridge panels 55, 56, and the fold-back panels 47, 48, are provided with ridge panels 57, 58, which are joined by a hinged score line 60. The ridge panels 55, 56, are joined by a hinge score line 61.

The container is closed by folding the front roof panel 34 and the rear roof panels 50, 51, inwardly, and simultaneously moving the end panels 39, 45, inwardly between the front and rear roof panels. During this operation, the fold-back panels 40, 41, and 47, 48, assume a position against the under sides of the front and rear roof panels in conventional gable top arrangement. The ridge panels 53, 54, 55, 56, 57, 58, assume a vertical position to form the laminated ridge portion of the closure.

The entire area of the reverse side of the blank, shown in FIGURE 2, that is the side of the blank forming the inner surface of the erected container, is coated with thermoplastic material. The side of the blank, as shown in FIGURE 2, forming the exterior surface of the container is also coated with thermoplastic material, with the exception of the ridge panels 55, 56, 57 and 58. These areas are not provided with thermoplastic coating, or such areas are provided with a non-sealing, or release coating.

When the top closure panels have been folded to closed position, the uncoated sides of the panels 55, 56, are moved into confronting or face to face engagement. In like manner, the uncoated sides of the ridge panels 57, 58, are moved into face to face engagement. Upon the application of heat and pressure to the ridge structure, these confronting surfaces of the panels 55, 56, 57, 58, are accordingly not sealed. The ridge panel 53, surmounting the front roof panel 34, is moved into engagement with the reverse side of the panels 56, 58, and is sealed thereto. In like manner, the ridge panels 54 are moved into engagement with the reverse sides of the panels 55, 57, and are sealed thereto.

The front roof panel is formed with a weakened line of severance, indicated at 80. This line of severance, in the panel 34, extends in registration with the score line 31. A tape 81 is positioned on the laminated ridge. A portion of this tape depends from the top edge of the ridge and overlies the upper portion of the ridge panels 54 surmounting the rear roof panel. The tape 81 extends over the top edge of the ridge and downwardly over the ridge panel 53 surmounting the front roof panel 34. The tape continues downwardly and overlies the area about the weakened line of severance 80. Upon application of heat and pressure to the ridge structure, the tape is heat-sealed to the ridge panels 53, 54, and to the front roof panel 34 in the area about the weakened line of severance. This tape serves to maintain the ridge panels in tight contacting relation.

The tape 81 has end portions 83 extending laterally from the ends of the laminated ridge, see FIGURE 1. These extending end portions are preferably sealed together.

The container is opened by grasping one of the end portions 83 of the tape and stripping the tape from the

ridge panel 53 and the front roof panel 34. In this operation, the end portion 83, consisting of an extension of that portion of the tape overlying the panels 54, will tear up the end edge of the ridge structure and thereafter, the tape will sever along the top of the ridge structure, as illustrated in FIGURE 5, delaminating the outer surface of the board in the area of the weakened line of severance 80, see FIGURE 6. The rear portion of the tape, adhered to the ridge panels 54, may be provided with cuts 85, see FIGURE 5, in order that the finger grip portions 83 may more readily sever from the rear portion of the tape.

In order to provide for even severance of the front side of the tape from the rear side thereof along the top edge of the ridge, the tape may be provided in its under side with one or more strands 87, one of which is positioned in the area of the under surface of the tape immediately above the top edge of the ridge. It will be apparent that upon removal of the front side of the tape, the line of severance 80 is uncovered, permitting the front roof panel 34 to be moved outwardly from the ridge structure to form a pouring spout. Due to the fact that the contacting surfaces of the ridge panels 55, 56, 57, 58, are unsecured, see FIGURE 7, the fold-back panels 41, 48, may be swung forwardly by grasping the side edges of the front roof panel 34, see FIGURES 6 and 7, and by simultaneously applying a squeezing pressure to the front roof panel it, and the fold-back panels 41, 48, move outwardly to form a pouring spout for the removal of the contents from the container.

What we claim is:

1. A gable top container formed of paperboard or the like, comprising a tubular body rectangular in cross section and having four side wall panels, said body having a bottom closure affixed thereto, front and rear roof closure panels extending upwardly from opposite side wall panels and being inclined toward each other, a pair of opposed end closure panels extending upwardly from the remaining opposite side wall panels and being inclined toward each other between said roof closure panels, a pair of triangular fold-back panels integral with each end closure panel and being folded against the under sides of said roof closure panels, a ridge panel surmounting each of said roof panels, and said fold-back panels, all of said ridge panels being disposed vertically in contacting relation to form a laminated ridge, the contacting surfaces of the ridge panels surmounting said roof panels and fold-back panels being sealed together by a permanent adhesive bond, the outer major portions of the confronting contacting surfaces of each pair of ridge panels surmounting said fold-back panels and extending inwardly from the ends of said laminated ridge being unsecured, said front roof panel being formed with a weakened line of severance extending transversely of said roof panel in proximity to the joinder of the ridge panel thereto, a tape overlying the area about said weakened line of severance and being permanently bonded to said front roof panel, the ridge panel surmounting the same and extending upwardly over the top edge of said laminated ridge and downwardly and being bonded to

the ridge panel surmounting said rear roof panel, a tear cord underlying the area of said tape extending along the top edge of said ridge, the ends of said tape extending laterally beyond the ends of said ridge, said tape serving to maintain the unsecured portions of said pairs of ridge panels in liquid tight relation.

2. A gable top container as defined in claim 1, wherein that portion of said tape bonded to the ridge panel surmounting said rear roof panel is provided with an incision spaced inwardly from each end of said ridge, said incisions extending from the lower edge of said tape portion to the top edge of said ridge.

3. A gable top container formed of paperboard or the like, comprising a tubular body rectangular in cross section and having four side wall panels, said body having a bottom closure affixed thereto, front and rear roof closure panels extending upwardly from opposite side wall panels and being inclined toward each other, a pair of opposed end closure panels extending upwardly from the remaining opposite side wall panels and being inclined toward each other between said roof closure panels, a pair of triangular fold-back panels integral with each end closure panel and being folded against the under sides of said roof closure panels, a ridge panel surmounting each of said roof panels, and said fold-back panels, all of said ridge panels being disposed vertically in contacting relation to form a laminated ridge, the contacting surfaces of the ridge panels surmounting said roof panels and fold-back panels being sealed together by a permanent adhesive bond, the outer major portions of the confronting contacting surfaces of each pair of ridge panels surmounting said fold-back panels and extending inwardly from the ends of said laminated ridge being unsecured, the remaining inner minor portions of said panels of each pair being sealed together by a permanent adhesive bond, said front roof panel being formed with a weakened line of severance extending transversely of said roof panel in proximity to the joinder of the ridge panel thereto, a tape overlying the area about said weakened line of severance and being permanently bonded to said front roof panel, the ridge panel surmounting the same and extending upwardly over the top edge of said laminated ridge and downwardly and being bonded to the ridge panel surmounting said rear roof panel, a tear cord underlying the area of said tape extending along the top edge of said ridge, the ends of said tape extending laterally beyond the ends of said ridge, said tape serving to maintain the unsecured portions of said pairs of ridge panels in liquid tight relation.

References Cited by the Examiner

UNITED STATES PATENTS

2,360,439	10/1944	Monroe	229—17
2,362,862	11/1944	Sidebotham	229—37
2,687,840	8/1954	Innes	229—51
2,751,137	6/1956	Alden	229—17
3,204,850	9/1965	Wilcox	229—17
3,217,966	11/1965	Kelly	229—17

60 GEORGE O. RALSTON, *Primary Examiner*.