United States Patent [19]

Botterman et al.

[11] **3,730,419**

[45] **May 1, 1973**

[54] CARRY-OUT TRAY

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[73] Assignee: **Container Corporation of America,** Chicago, Ill.

[22] Filed: **July 14, 1971**

[21] Appl. No.: **162,534**

[52] **U.S. Cl.** **229/28**

[51] **Int. Cl.** **B65d 5/48**

[58] **Field of Search** ..... 229/27, 28, 30, 37 R; 206/72

[56] **References Cited**

UNITED STATES PATENTS

3,434,649	3/1969	Goings	229/28 R
3,253,766	5/1966	Coe	229/28 R
2,744,675	5/1956	Crame	229/30 X
2,640,589	6/1953	Foster et al.	229/28 R X
3,009,623	11/1961	Wenzel	229/28 R

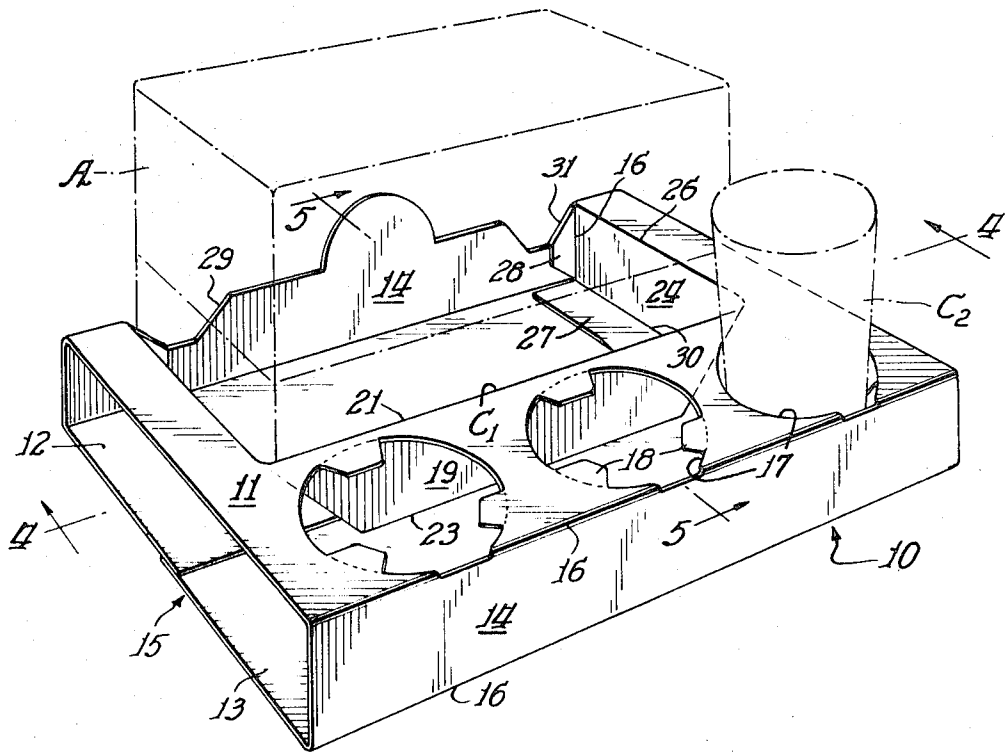
Primary Examiner—Davis T. Moorhead
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[57] **ABSTRACT**

A collapsible compartmented tubular carry-out tray is formed from a cut and scored blank of paperboard and comprises spaced and parallel top and bottom panels hingedly connected to spaced parallel side wall panels to define a tube. Prior to forming of the blank into a tube, the top panel is provided with apertures adapted to receive cups or the like and a single larger aperture for a larger sized article. The formation of said aperture is concomitant with the formation of partition structure extending between the top and bottom panels to give stiffness to the tube in both lateral and longitudinal directions.

The partition structure includes a panel member connected to the top panel along a first fold line parallel to the longitudinal axis of the tube. The panel member has a glue flap foldably connected thereto and glued to the bottom panel. The partition structure also includes a second pair of panel members extending perpendicularly to the axis of the tube and perpendicular to the first panel member, this second pair of panel members having flaps lying along the bottom panel and including means for locking the ends of such flaps to the bottom panel. A gusset fold is provided at an end of the second pair of panel members, the gusset fold being folded from a top panel and urging the distal end of each of the second pair of panel members into the locking aperture.

1 Claim, 5 Drawing Figures



PATENTED MAY 1 1973

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SHEET 1 OF 2

Fig. 1

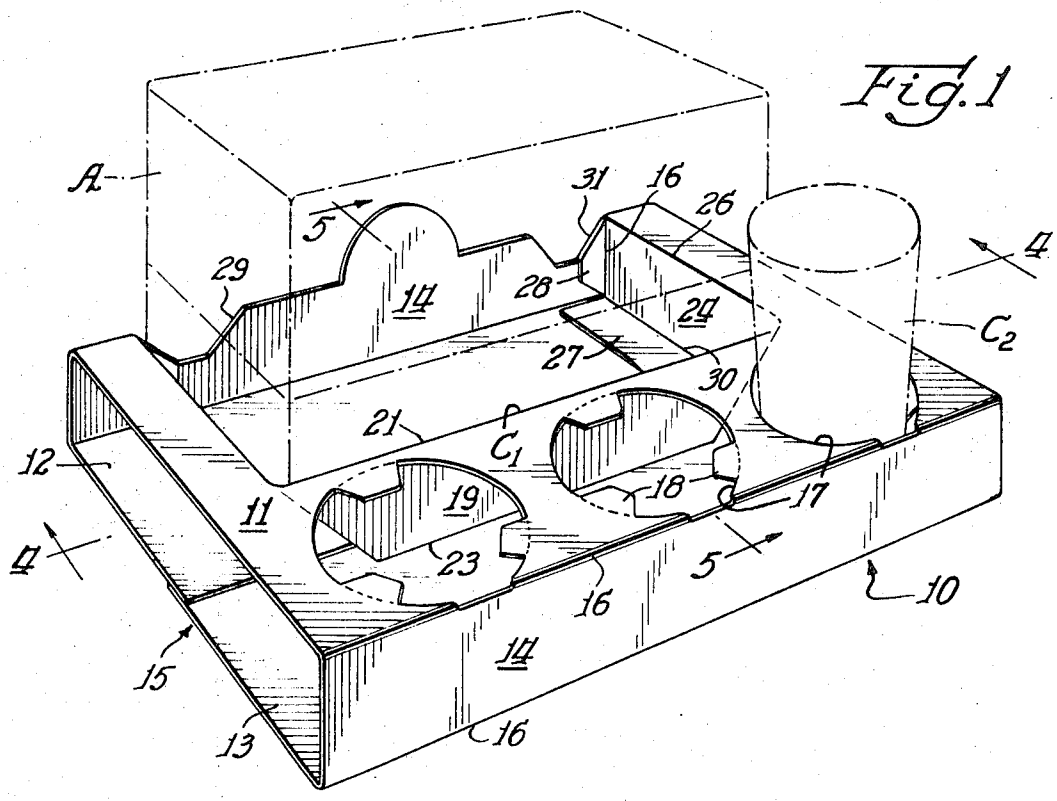


Fig. 4

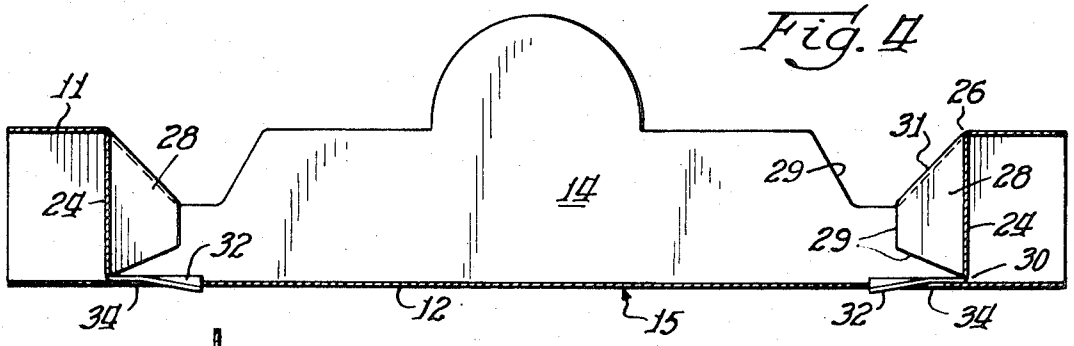
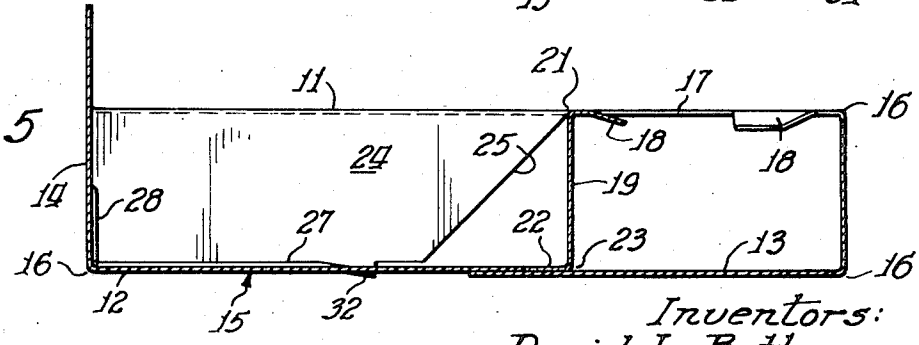


Fig. 5



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Fig. 2

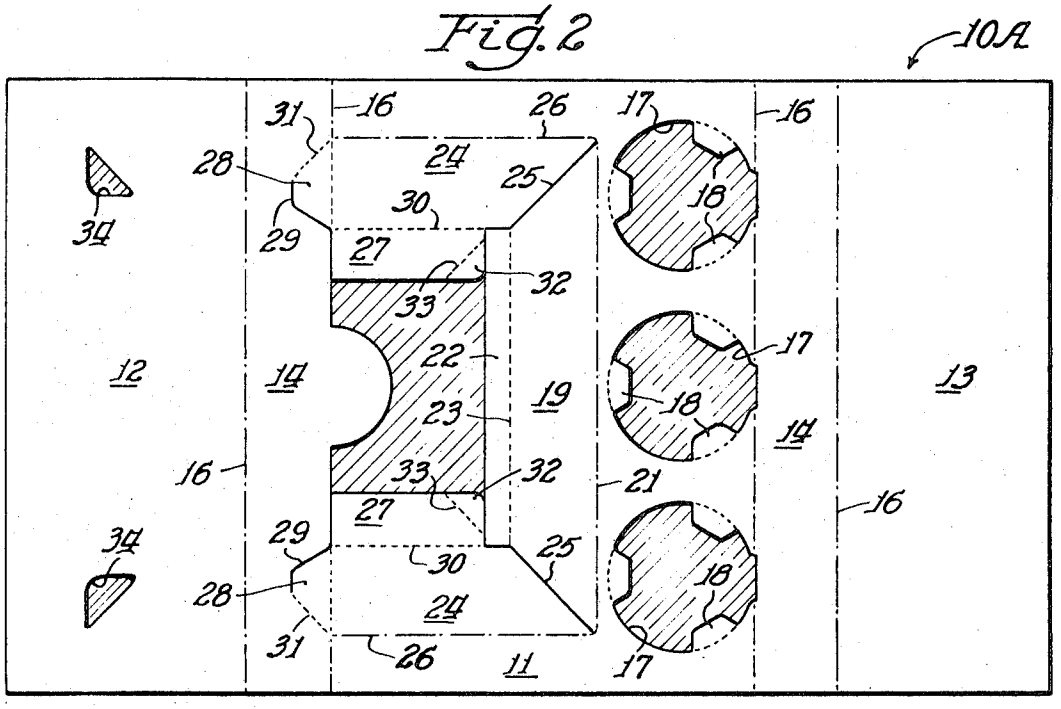
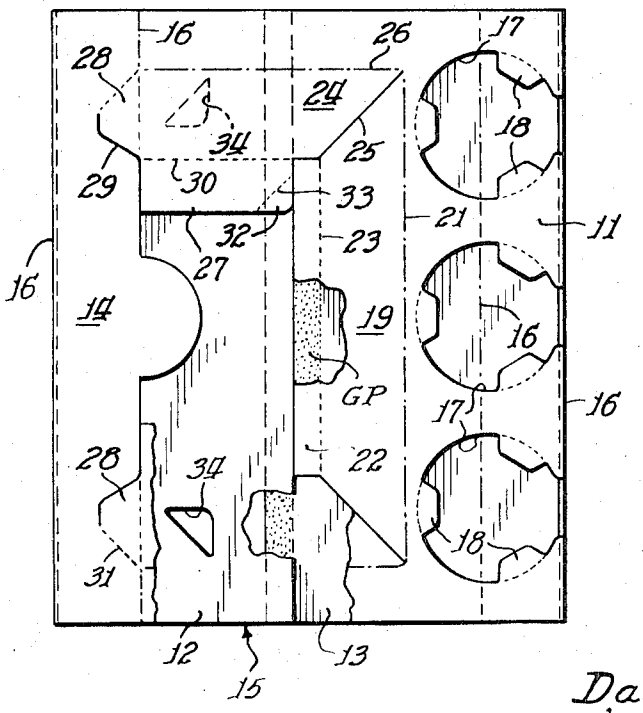


Fig. 3



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CARRY-OUT TRAY

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention relates to service trays and more particularly to collapsible trays formed of paperboard for use in the handling and service of food and beverage at drive-in service establishments, such as out-door theatres, refreshment stands and the like.

2. The Prior Art

The prior art is represented in the following patents:

Brokop	3,201,024	Aug. 17, 1965	229/30
Foster et al.	2,640,589	June 2, 1953	206/72

SUMMARY OF THE INVENTION

The invention relates to improvements in carry-out trays of the class contemplated, and has particular reference to a service tray formed from a cut and scored blank and foldable to define top and bottom panels and a pair of opposed side wall panels, the top panel being suitably cut and scored to provide an article carrying compartment and a partition structure affording rigidity of the tray in directions both parallel to and perpendicular to the longitudinal axis of the container tube.

THE DRAWINGS

FIG. 1 is a perspective view of a carry-out tray having the improvements according to the present invention embodied therein;

FIG. 2 is a plan view of a cut and scored blank for forming the carry-out tray of FIG. 1;

FIG. 3 is a plan view showing the blank of FIG. 1, cut, scored, folded and glued to define a flattened tube;

FIG. 4 is a vertical sectional view looking in the direction of the arrows 4—4 of FIG. 1; and

FIG. 5 is a vertical sectional view perpendicular to that seen in FIG. 4, looking in the direction of the arrows 5—5 of FIG. 1.

The improved carry-out tray according to the present invention is denoted by the reference numeral 10 and is provided with a cavity C_1 for the reception of an article A and a plurality of smaller openings in the top panel thereof, each being adapted to receive a cup C_2. The carry-out tray 10 is formed from a cut and scored blank 10A seen in FIG. 2, which is cut and scored to define a top panel 11 and a pair of bottom panel portions 12 and 13, these being glued together along distal portions thereof to define a bottom panel 15 parallel to the top panel 11.

The blank 10A also includes a pair of parallel side wall panels 14 hingedly attached to the top and bottom panel 11 and 15 along fold lines 16 to define a tube as seen in FIG. 3.

Top panel 11 is blanked as seen by the shaded portions thereof, and a plurality of generally circular apertures 17 are arranged in a row in the top panel 11, each of said apertures having radially inward extending tabs 18 which can be depressed slightly so as to engage frictionally the side walls of a cup C_2 placed into the opening 17.

Top panel 11 is additionally cut and scored to define a partition structure extending between the top and bottom panels 11 and 15 to give stiffness to the tube in both lateral and longitudinal directions. The formation

of said partition structure results in the formation of the cavity C_1 for holding the article A.

The partition structure comprises a panel member 19 connected to the top panel 11 along a first fold line 21. Panel member 19 extends parallel to the longitudinal axis of the tube seen in the several figures to give stiffness thereto in a longitudinal direction. Panel member 19 includes a glue flap 22 foldably connected thereto along a second fold line 23 parallel to the first fold line 21. Glue flap 22 is glued to the bottom wall 15 of the tube at a glue patch GP, and the edge of the glue flap 22 abuts the edge of the bottom panel portion 12, as seen more clearly in FIGS. 3 and 5.

A second pair of panel members 24 extend perpendicularly to the longitudinal axis of the tube and perpendicular to the first panel member 19, panel members 24 being separated from the first panel member 19 along a mitre cut line 25. Each of the second pair of panel members 24 is foldably connected to the top panel 11 along a fold line 26, and each panel member 24 has a flap 27 foldably connected thereto along a fold line 30, the flap 27 lying along the inside of the bottom panel 15.

Structure is provided for locking the flap 27 to the bottom panel portion 12 and the distal end of each flap 27 is provided with a score line 33 defining a corner tab 32 adapted to engage with an aperture 34 in the bottom panel portion 12.

Structure is provided for urging the corner tab 32 into engagement with the aperture 34, and one of the side panels 14 is provided with a mitre score line which intersects with a diagonal cut line 29 also defining in part the proximate end of the flap 27 and defining thereby a gusset panel 28. In folding the panel member to erected position, a fold is made along the fold line 31, as seen particularly in FIG. 1, and the flap 27 is urged thereby into the aperture 34.

We claim:

1. A collapsible compartmented, open-ended tubular carry out tray formed from a cut and scored blank of paperboard or the like and comprising:

a. a pair of spaced, parallel top and bottom panels;

b. a pair of spaced, parallel side wall panels hingedly attached to said top and bottom panels to define a tube;

c. partition structure extending between said bottom and top panels for giving stiffness to said tube in both lateral and longitudinal directions thereof;

d. said partition structure defining a cavity for reception of a transported article and being formed from said top panel;

e. said partition structure comprising:

1. a panel member connected to said top panel along a first fold line parallel to the longitudinal axis of said tube, and including a glue flap foldably connected to said panel along a second fold line parallel to said first fold line and glued to said bottom panel;

2. a second pair of panel members extending perpendicularly to the longitudinal axis of said tube and perpendicular to said first panel member and each being connected to said top panel along a third fold line;

3. structure for locking said pair of panel members to said bottom panel including:

i. a flap foldably connected to each of said second pair of panel members and lying along said bottom panel;

ii. a pair of apertures in said bottom panel each receiving a corner tab located at a distal end of said last named flaps to hold said flaps in position,

and wherein a gusset panel is formed in said top panel adjacent an end of each of said second panel members, said gusset panel urging said distal end of said last named flap into said aperture.

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