June 15, 1965 H. F. WISCHUSEN 3,189,247

PAPERBOARD SERVING TRAY

Filed March 17, 1964 2 Sheets-Sheet 1

Fig. 1.

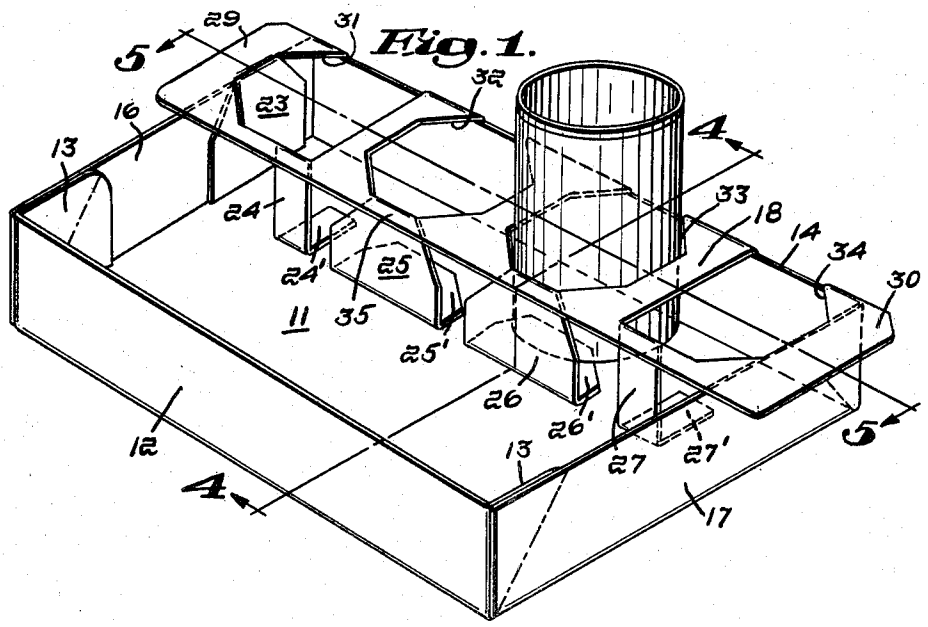
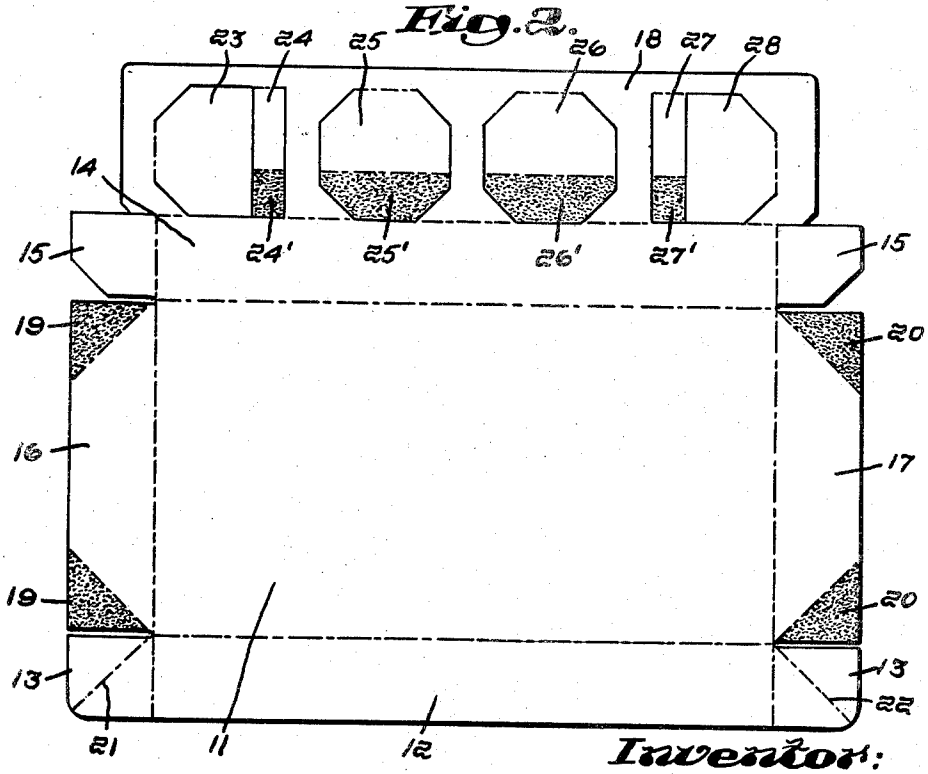


Fig. 2.



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Filed March 17, 1964 2 Sheets-Sheet 2

Fig. 3.

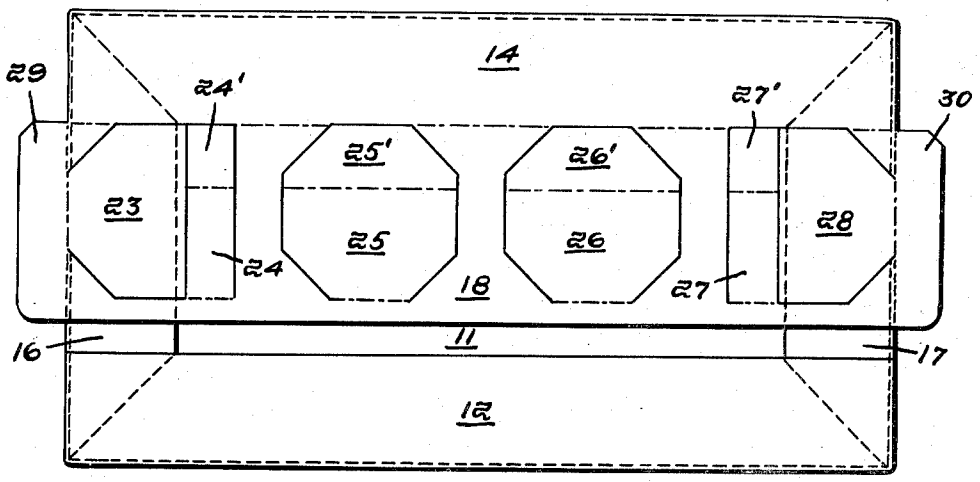


Fig. 4.

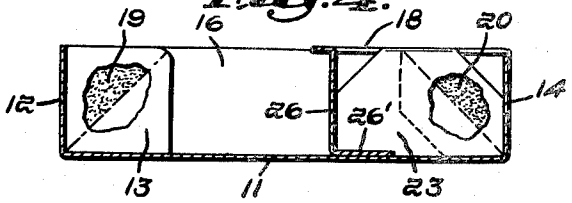
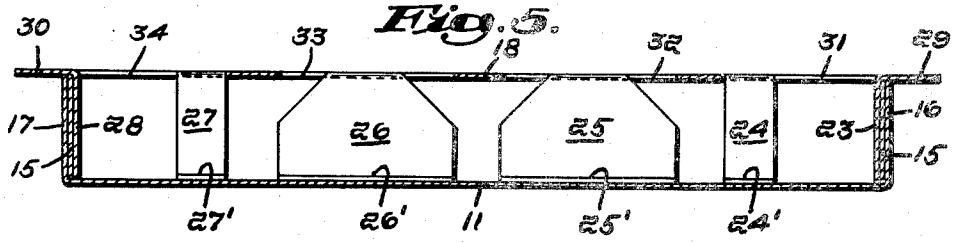


Fig. 5.



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3,189,247

PAPERBOARD SERVING TRAY

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3 Claims. (Cl. 229—28)

This invention relates to serving trays made of cardboard or paperboard, and pertains more particularly to set up, carry-out trays customarily used at drive-in theatres and roadside stands for carrying foods and beverages from a service counter to an automobile where the food and beverage is consumed by an occupant.

Serving trays of this type customarily comprise a set up, box-like body having an open area for holding sandwiches or other foods and an apertured panel area in which beverage cups are supported in the cup holes of the elevated panel, as shown, for example, in Patents No. 2,512,963 and Re. 24,233.

The principal purpose of the present invention is to provide a paperboard serving tray in which the panel portion is so constructed that the cup holes are automatically opened when the tray is set up, so that cups can be inserted without breaking down divided tabs or flaps which normally close the holes or apertures of the panel, and so that the automatically deflected tabs provide supporting struts for the inner margin of the panel.

As compared with trays of the character disclosed in Re. 24,233, the improved carry-out tray requires less paperboard and is accordingly less expensive to manufacture and weighs less in shipment; the opened cup holes insure speedier service and greater convenience; and the absence of a continuous wall along the inner edge of the elevated panel renders the tray substantially pilfer proof by preventing a food product from being hidden under the panel.

Other advantages of the improved tray will become apparent from the following description of the recommended embodiment of the invention illustrated on the accompanying drawings, in which:

FIG. 1 is a perspective view of the improved serving tray;

FIG. 2 is a plan view of a paperboard blank from which the tray is formed;

FIG. 3 is a plan view of the formed, but flattened tray, before it is set up in the position of FIG. 1;

FIG. 4 is a transverse section on line 4—4 of FIG. 1; and

FIG. 5 is a longitudinal section on line 5—5 of FIG. 1.

The one-piece blank from which the improved tray is formed comprises a bottom portion 11, a front wall 12 having end tabs 13, a rear wall 14 having end tabs 15, end walls 16 and 17 and a panel section 18 contiguous to the rear wall; the several parts being defined by score lines, as shown in FIG. 2, on which the parts are foldable with relation to adjacent parts or sections of the blank. The corners of the end walls are also foldable on similar score lines, and are coated with adhesive as indicated at 19 and 20, respectively. The tabs 13 of front wall 12 are similarly scored diagonally, at 21 and 22, so that the coated triangular areas of the adjacent ends of the end walls may be cemented to the foldable triangular flaps of the tabs 13. The coated triangular areas of the opposite ends of the end walls are similarly cemented to the adjacent tabs 15 of the front wall 14.

The body of the box-like tray, when thus cemented, is of the well-known Beers type or style, as shown, for example, in Patent No. 2,160,643, and provides a tray body whose side and end walls may be flattened down

upon the bottom portion 11, as in FIG. 3, or erected upright from the bottom, as in FIG. 1.

The panel section 18 is formed with a number of partially cut flaps, 23, 24, 25, 26, 27 and 28 which are foldable on the broken hinge lines of FIG. 2. Flaps 24, 25, 26 and 27 are also foldable upon themselves and provide free end portions which are coated with adhesive, as indicated at 24', 25', 26' and 27'. When the tray is initially formed, the said coated end portions are cemented to the bottom 11, as indicated in FIG. 1, after the panel section 18 has been infolded relative to rear wall 14 and the flaps have been folded downwardly from the panel, so that the main flap portions 24, 25, 26 and 27 provide supporting struts or braces for the inner margin of the panel, with open spaces between the struts.

It will be appreciated that the cemented flap ends 24', 25', 26' and 27' may extend rearwardly of the struts, as shown in FIG. 1, or forwardly thereof if desired, and that the external configuration of the flaps 23, 24, 25, 26, 27 and 28, is subject to variation. When the tray is formed and in set up position (FIG. 1) the endmost flaps 23 and 28 of the panel are folded downwardly against the end walls 16 and 17, respectively, to engage the bottom 11, thereby providing additional braces for the panel, and also holding the tray in set up position. In that position, the end margins 29 and 30 of the panel section extend outwardly beyond the end walls 16 and 17, respectively on which they rest, so that the end walls also support the panel.

The Beers style of the tray body and the hinged connections of the panel and its supporting flaps or struts permits the formed tray to be collapsed, with the side and end walls and the panel section infolded onto the tray bottom, as shown in FIG. 3, where the panel flaps are restored to their position within the cup holes formed by their displacement. It will be understood that the improved trays are packed and shipped in such flattened condition, and may be quickly erected when they are to receive food or beverages, by lifting the free margins of the front wall 12 and panel 18, or by lifting the free, exposed margins of the end walls 16 and 17.

The erection of the tray automatically opens the cup holes 31, 32, 33 and 34, as in FIG. 1, so that paper cups, or other beverage receptacles may be quickly placed in the cup holes of the panel 18. However, the flaps 23 and 28 of the endmost cup holes should be pressed downwardly against the inner surfaces of the end walls 16 and 17 whereby said flaps serve as a brace to support the end portions of the panel, and tend to prevent collapse of the end walls, as aforesaid. It will be noted that the fold or hinge lines of flaps 24, 25, 26 and 27 are disposed in alignment and in spaced parallel relation to the inner edge of the panel 18, thereby providing an overhanging marginal ledge 35.

A serving tray designed and constructed as herein illustrated and described may be made of paperboard having its grain running longitudinally of the finished tray, thereby affording greater carrying strength. As previously mentioned, the improved tray requires less paperboard stock than prior serving trays of the same exterior dimensions, affording economies in manufacture and in shipment; the beverage cups or receptacles may be inserted in the open cup holes without breaking down tabs or flaps which normally close the holes of prior trays; and the cup openings and the spaces between the panel supporting struts obviate the possibility that food packages may be hidden under the panel.

I claim:

1. A serving tray formed from a blank of paperboard and comprising a bottom, a front wall, a rear wall and a pair of end walls, providing a tray body, the end por-

tions of the front, rear and end walls being adhesively connected so that said walls may be collapsed onto the bottom or swung upright relative to said bottom when the body is set up, a panel hingedly connected to the upper edge of the rear wall and foldable inwardly onto the erected body, the panel having a plurality of partially cut-out flaps hinged thereto and foldable downwardly to form cup holes in the panel, certain of said flaps having foldable end portions cemented to the tray bottom intermediate the front and rear walls, said last-named flaps constituting spaced struts supporting the free margin of the panel in parallel relation to said bottom, said panel and said struts being collapsible onto the bottom and the collapsed walls, and the cup holes being automatically opened when the tray is set up, the panel having opposite end portions extending outwardly beyond the respective end walls and resting thereon.

2. A serving tray as described in claim 1, said flaps

being hinged to the panel in a line disposed in spaced parallel relation to the free inner edge of the panel.

3. A serving tray as described in claim 2, certain flaps adjacent the end portions of the panel being folded downwardly and outwardly against said end walls, and edges of said flaps being in engagement with the tray bottom, said flaps bracing the panel ends and tending to prevent collapse of the end walls of the set up box.

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