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3,300,117

DOMED COVER TWO PIECE CARTON

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2 Sheets-Sheet 1

Fig. 3

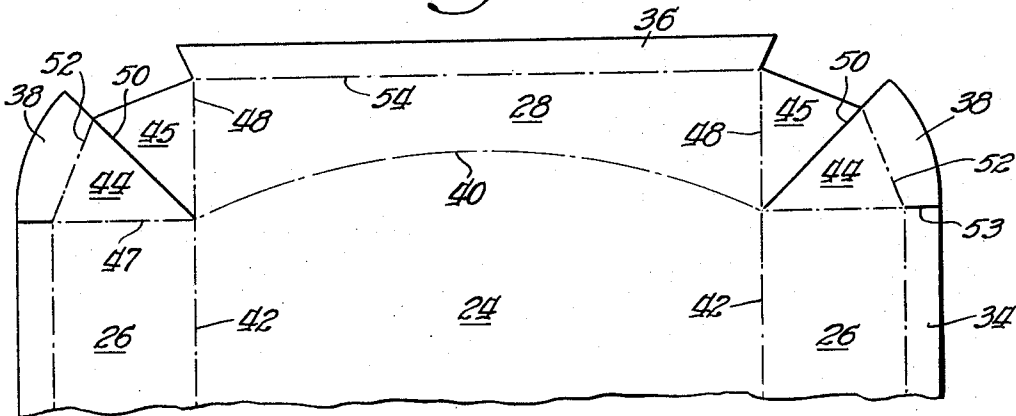


Fig. 2

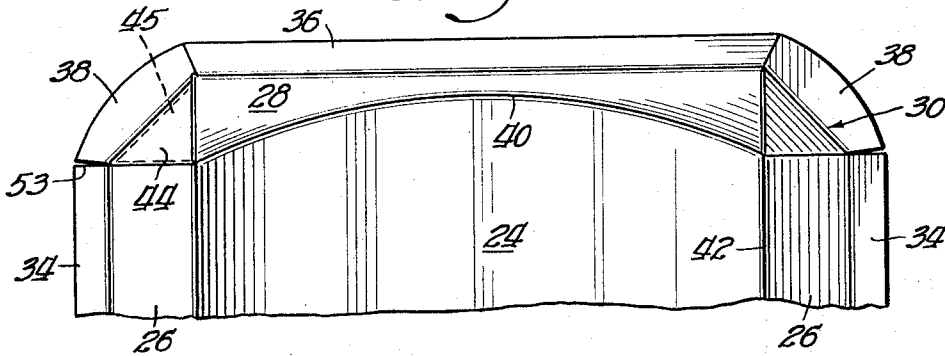
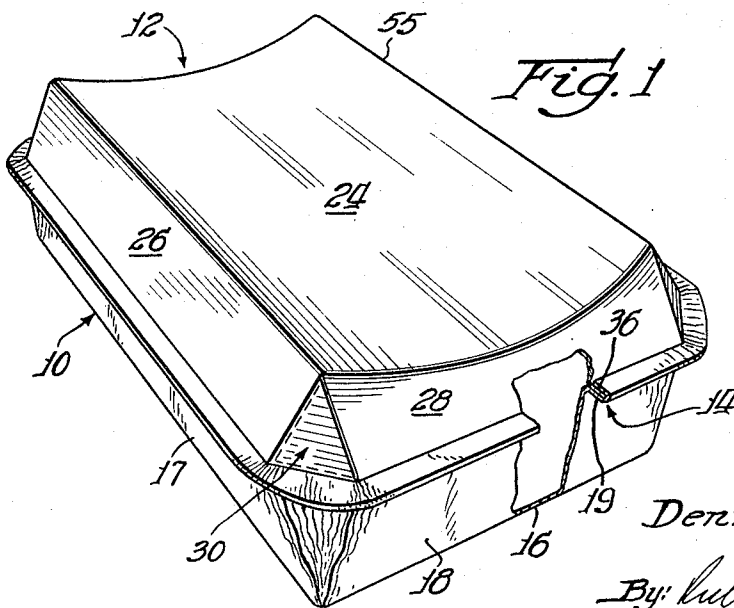


Fig. 1



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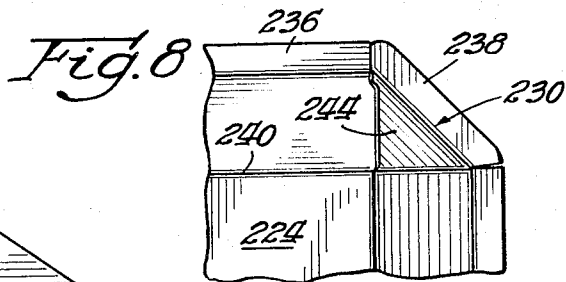
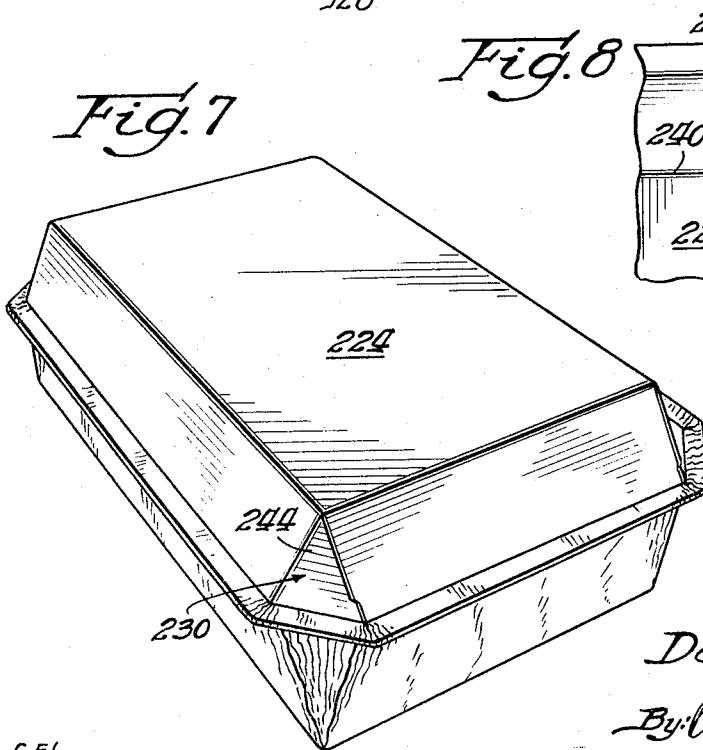
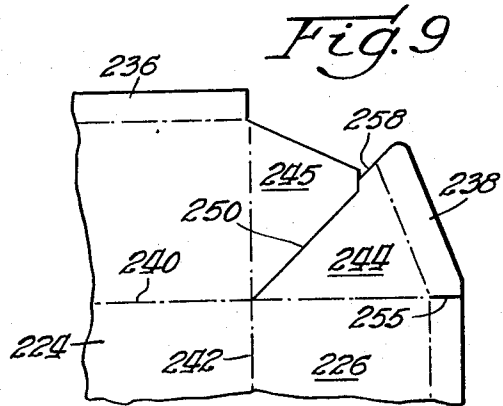
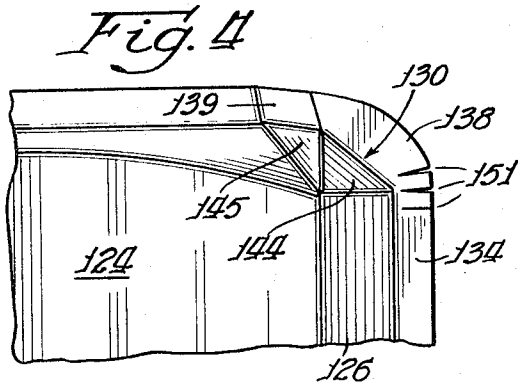
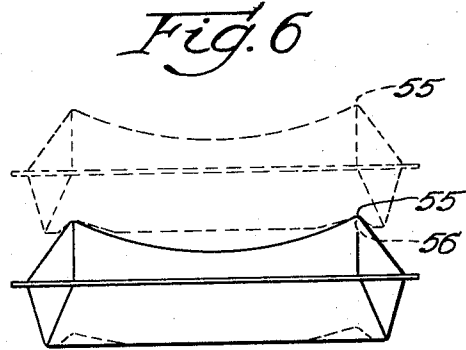
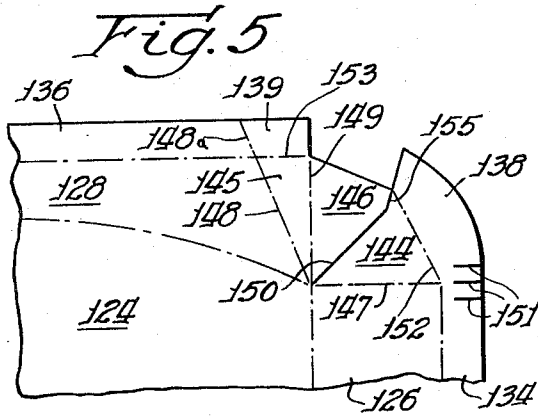
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DOMED COVER TWO PIECE CARTON

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2 Sheets-Sheet 2



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1

3,300,117

## DOMED COVER TWO PIECE CARTON

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5 Claims. (Cl. 229—32)

This invention relates to a two piece carton formed of flanged tray and cover sections, and more particularly, to a carton having an improved cover section that is domed above the flange connection between the tray and cover sections.

Many food products, such as cakes or biscuits, have been packaged in cartons of the type having an aluminum foil, flanged tray and a flat paperboard cover or lid resting on and being secured by the tray flange. With the flat cover, the height of product that can be packaged is limited by the depth of the tray, which in turn, is limited by the maximum economical height of the tray side walls suitable for rigid tray construction. Also, the flat cover reduces the readily visible advertising print space on the carton. Furthermore, in stacking cartons of this type, the flat base of one carton complements the flat cover of a second carton to hinder the free circulation of air about the cartons that is required for effective refrigeration.

Accordingly, an object of this invention is to provide a carton having a flanged tray and a domed cover securable thereto at the flange and having side and central panels spaced above the flange.

Another object of this invention is to provide a cover section construction wherein the central panel can be concave to define elevated longitudinal edges suitable for supporting in a stacked arrangement the flat base of a like second carton while still providing free air circulating space between the cartons.

These and other objects will be more fully appreciated after reviewing the following specification and the accompanying drawings, wherein:

FIG. 1 is a perspective view, partially broken away and in section, of a first embodiment of a carton disclosing the subject invention;

FIG. 2 is a partial plan view of the cover section of the carton shown in FIG. 1;

FIG. 3 is a partial plan view of a blank suitably scored to form the cover section of FIG. 2;

FIGS. 4 and 5 are partial plan views similar, respectively, to FIGS. 2 and 3 but of a second embodiment of a carton disclosing the subject invention;

FIG. 6 is a typical end elevational view of cartons of the type disclosed in the previous figures in a stacked arrangement;

FIG. 7 is a perspective view of a third embodiment of a carton disclosing the subject invention; and

FIGS. 8 and 9 are partial plan views similar, respectively, to FIGS. 2 and 3 but of the cover section disclosed in FIG. 7.

The carton in FIG. 1 includes a tray section 10 and a cover or lid section 12 secured together at a flange connection 14. The tray 10 is of conventional foil aluminum, and includes a bottom wall 16 and peripheral side walls 17 and 18 upstanding therefrom and terminating at tray flange 19. The cover section 12 includes a central or top wall 24, opposed pairs of side walls 26 and 28 hinged to the edges of the central wall, corner walls 30 hinged between the adjacent side walls, and flanges 34, 36 and 38 hinged to the lower ends of the side and corner walls. The cover flanges lie in a common plane, and are confined between the upper and lower sections of tray flange 19.

2

Referring now to FIG. 3, the blank is shown from which the domed cover of FIGS. 1 and 2 is made. The blank consists of top and side panels, numbered the same as the wall construction of the finished cover, separated by the hinge lines 40 and 42 at the perimeter of the top panel. The corner walls 30 are formed by triangular panels 44 and 45 integral, respectively across hinge lines 47 and 48, with the side panels 26 and 28. Each pair of triangular panels is separated from one another by diverging cut line 50 extending to the intersection of the hinge lines 47 and 48. The flange section 38 is formed as a panel integral across hinge line 52 with triangular panel 44 and is separated from flange 34 by cut line 53. Flange 36 is hinged to panel 28 on hinge line 54, the end edges of the flange diverging to give a longer edge dimension of the flange than at the hinge line. Thus, in the set up condition of the cover section the flanges 36 and 37 contact one another to define an almost continuous flange section and improve the sealing ability of the subject cover.

The cover is formed by overlapping the triangular panels 44 and 45 and bonding them together by means of adhesive or the like. Preferably, panel 44 having the flange 38 is positioned over the panel 45. When the cover is set up, the flanges are folded at sharp angles to the side walls to form a generally continuous flange section disposed in a common plane at the lower edge of the side walls.

By curving the hinge lines 40 between the top panel and the side walls 28, the top wall curves concave as can be seen in FIGS. 1 and 6. This concave top panel offers aesthetic appeal and it additionally has elevated edges 55 to support a like carton with clearance between the carton (FIG. 6). In this regard, the tray can have longitudinal recesses 56 in the bottom wall 16 to receive and interlock with the upper edges of the cover, thereby giving lateral stability to the stacked packages.

FIGS. 4 and 5 show an alternate embodiment of a cover section having generally similar top wall 124, side walls 126 and 128, and flanges 134 and 136. Each corner section 130 has three triangular panels 144, 145 and 146. Panels 144 and 145 are integral across hinge lines 147 and 148, respectively, with the side walls 126 and 128, and the panel 146 is hinged from the triangular panel 145 on hinge line 149. Flanges 138 and 139 fold about hinge lines 152 and 153, respectively, from triangular panels 144 and 145. Cut lines 151 extend only part way across the juncture of flanges 134 and 138 in line with hinge line 147, and hinge line 148a between flanges 136 and 139 is but an extension of hinge line 148.

The corner panels 144 and 146 are separated from one another by cut line 150 diverging straight from the intersection of hinge lines 147, 148 and 149 partially across the panels until curving at 155 across the remainder of the panels in a direction away from hinge line 147 for panel 144. This provides for greater free edge widths of the panel 144 and flange 138. Upon overlapping and bonding panel 144 on panel 146, the flanges 138 and 139 provide a continuous flange section for good sealing between the tray and cover sections.

FIGS. 7 through 9 show a third embodiment of carton construction wherein the transverse hinge line 240 is straight and disposed at right angles to the longitudinal hinge line 242. As such, the top wall 224 remains flat in the set up condition (note FIG. 7). In addition to cut lines 250 and 255 between adjacent triangular panels 244 and 245, the free edge at 258 of the panel 244 and flange 238 is cut offset from but parallel to cut 250 to provide for a longer flange and outer panel edge dimensions. As such, flanges 236 and 238 on the corner section 230 provide a smooth continuous flange section.

3

While only specific embodiments have been disclosed, it is understood that the invention claims should be limited only by the scope of the claims following.

What is claimed is:

1. A carton, comprising in combination:
  - (a) opposing dish-shaped tray and cover members joined together medially of the carton by a flanged connection;
  - (b) the tray member having
    - (i) a bottom wall and a peripheral side wall upstanding therefrom;
    - (ii) a peripheral flange section at the upper edge of the side wall extending parallel to the bottom wall;
  - (c) the cover member including:
    - (i) a top panel;
    - (ii) side panels hinged to the top panel about the periphery thereof and folded at a sharp angle thereto;
    - (iii) overlapping inner and outer triangular corner panels hinged to the end edges of the side panels along corresponding edges meeting at a common point at the top panel;
    - (iv) a flange section coextensive with the peripheral flange section of the tray and including:
      - (1) a flange hinged to the lower edge of each of the side panels and folded at a sharp angle thereto;
      - (2) a flange hinged along the edge of each outer triangular panel opposite the top panel thereof;
    - (v) the triangular panels being separated from each other in the flattened blank by a continuous cut line diverging from the common point at the corner of the top panel;
  - (d) means for securing the flanged sections together.
2. A carton, comprising a combination:
  - (a) opposing dish-shaped tray and cover members joined together medially of the carton by a flanged connection;
  - (b) the tray member having
    - (i) a bottom wall and a peripheral side wall upstanding therefrom;
    - (ii) a peripheral flange section at the upper edge of the side wall extending parallel to the bottom wall;
  - (c) the cover member including:
    - (i) a top panel;
    - (ii) opposed pairs of side panels hinged to the top panel on respective hinge lines that define the periphery of the top panel;
    - (iii) overlapping inner and outer triangular corner panels hinged to the end edges of the side panels along corresponding edges meeting at a common point at the top panel;
    - (iv) a flange section coextensive with the peripheral flange section of the tray and including:
      - (1) a flange hinged to the lower edge of each of the side panels and folded at a sharp angle thereto;

4

- (2) a flange hinged along the edge of each outer triangular panel opposite the top panel thereof;
  - (v) the hinge lines of one pair of side panels curving as a smooth arc concave in the direction toward the center of the top panel to curve the top panel concave;
  - (d) means for securing the flanged sections together.
3. A carton according to claim 2, wherein the triangular panels are separated from each other in the flattened blank by a continuous cut line diverging from the common point at the corner of the top panel initially in a straight path and then bending transversely thereto in the direction away from the hinge line of the outer triangular panel to increase thereby the widths of the opposite edge of the outer triangular panel and the flange panel hinged thereto.
4. A two piece carton having tray and cover sections connected together at a medial flanged connection, the cover section being formed from a single cut and scored blank of foldable paperboard and comprising:
- (a) a generally rectangular central wall, opposed pairs of peripheral side walls hinged to edges of the central wall, corner walls hinged to and interposed between adjacent side walls, and narrow panels hinged to the side and corner walls;
  - (b) the side and corner walls extending at sharp, almost right, angles from the central wall and the narrow panels extending at sharp, almost right, angles from the side and corner walls to present a continuous peripheral flange section disposed in a common plane generally parallel to the central wall;
  - (c) each of the corner walls being formed by overlapping triangular panels bonded together and hinged to the adjacent side wall on hinge lines diverging from a common point at a corner of the central wall;
  - (d) one of the overlapping panels having a narrow panel hinged thereto to define that portion of the flange section;
  - (e) the triangular panels being separated from each other in the prefolded condition of the blank by a continuous cut line diverging from the common point of the top panel initially in a straight path and then bending transversely thereto in the direction away from the hinge line of the one panel to increase thereby the widths of the remote edge of the one panel and the flange panel hinged thereto.
5. A carton according to claim 4, wherein the hinged connections, between one pair of the side walls and the central wall are made on curved hinge lines each curving concave in the direction toward the middle of the central wall.

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