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(54) **DISPLAY TRAY HAVING A TRANSPARENT LIP**

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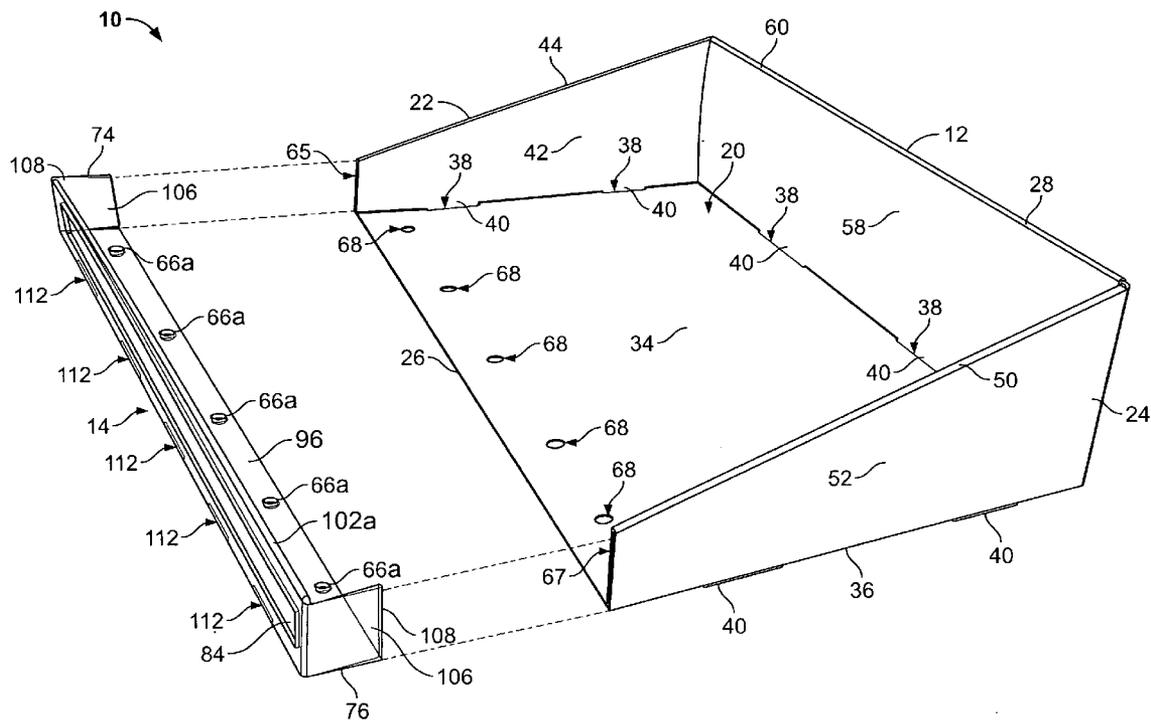
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(57) **ABSTRACT**

Disclosed herein is a display tray for receiving, securely transporting, and allowing for visual inspection of rectangular greeting card boxes. The display tray includes a cardboard body that has a plurality of side walls defining an open space with a seating surface for reception of the boxes. The tray further includes a transparent lip that removably attaches to the body. The transparent lip allows for visual inspection of the greeting card boxes from a front view of the tray.

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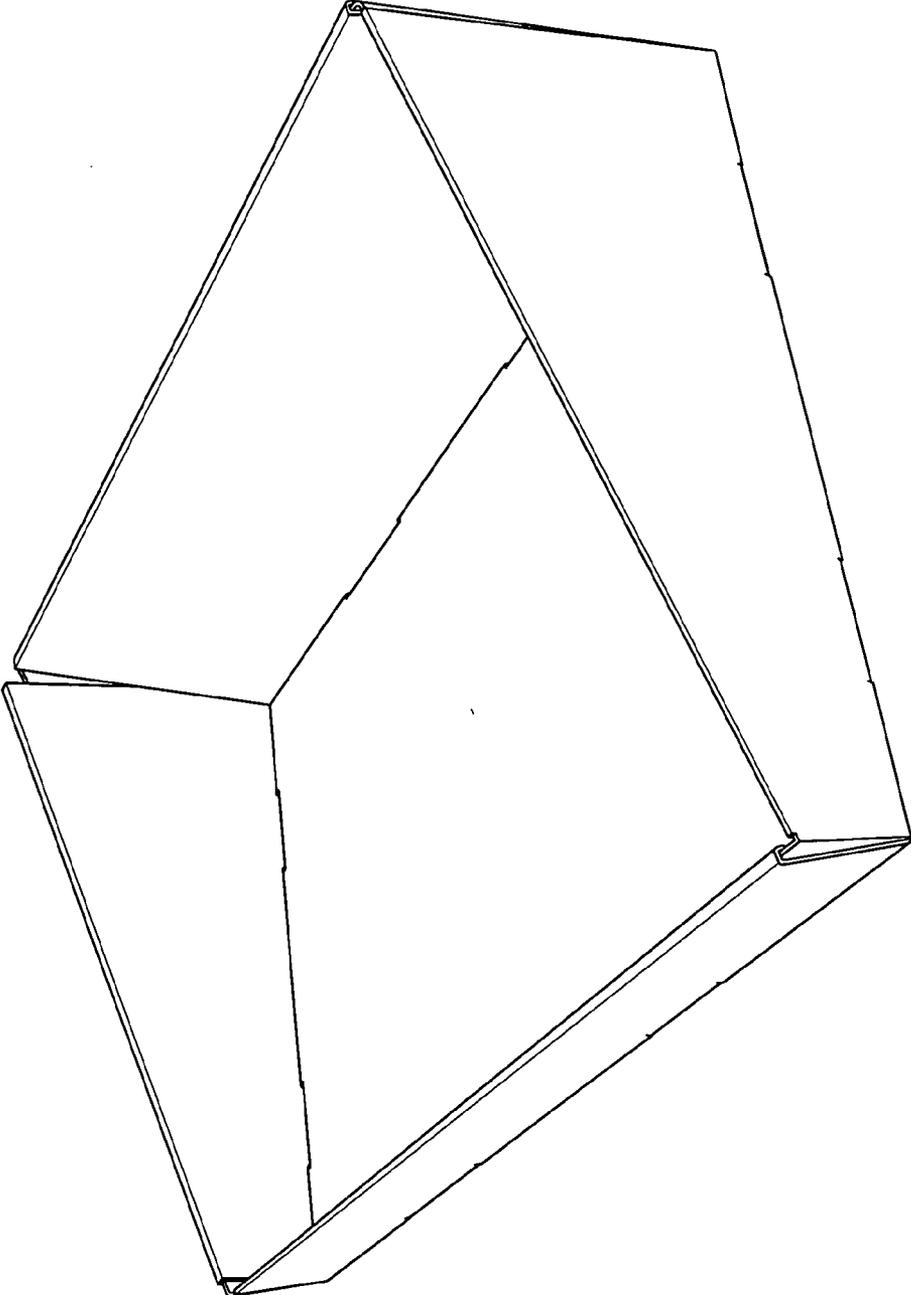


FIG. 1A  
(Prior Art)

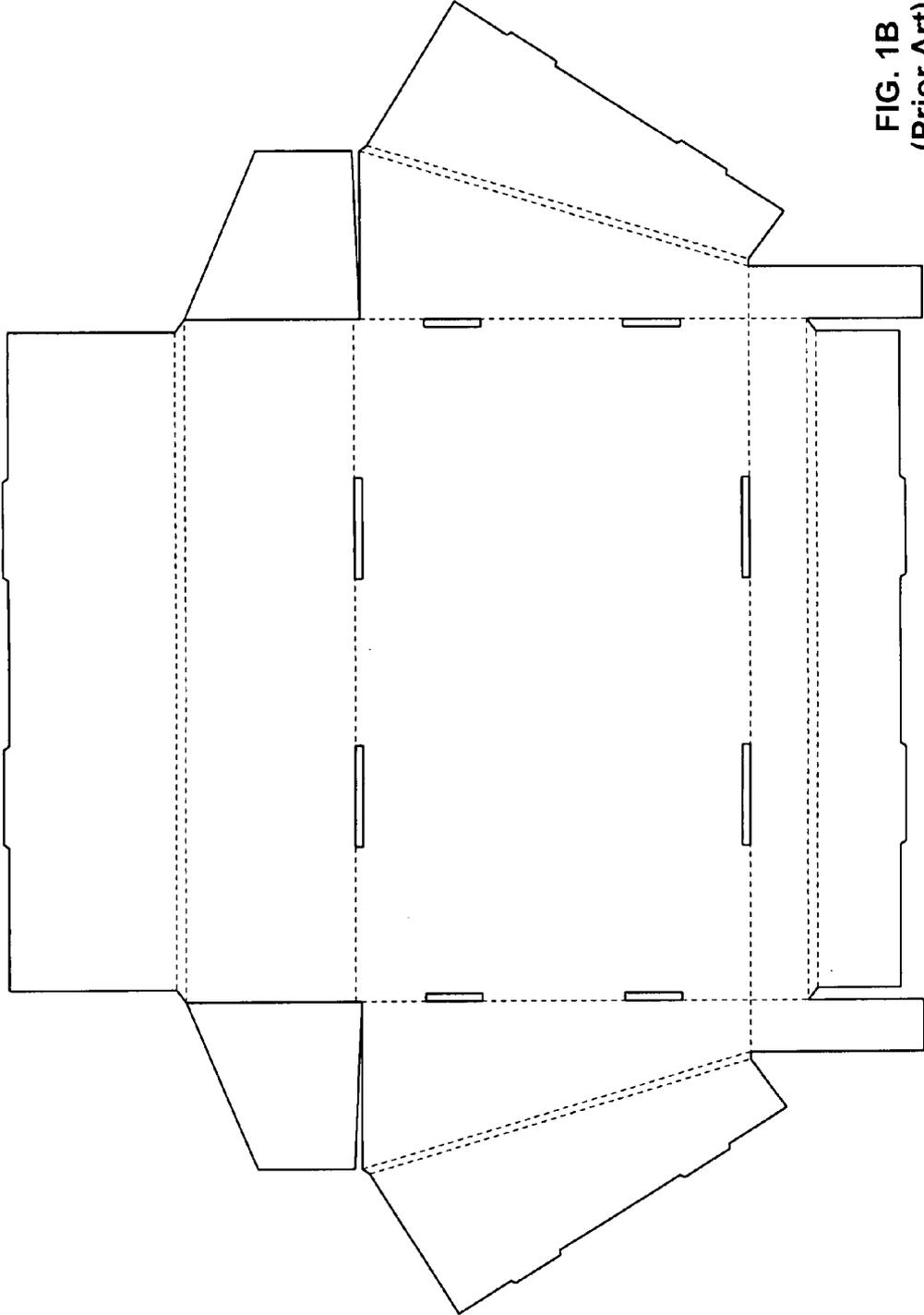


FIG. 1B  
(Prior Art)

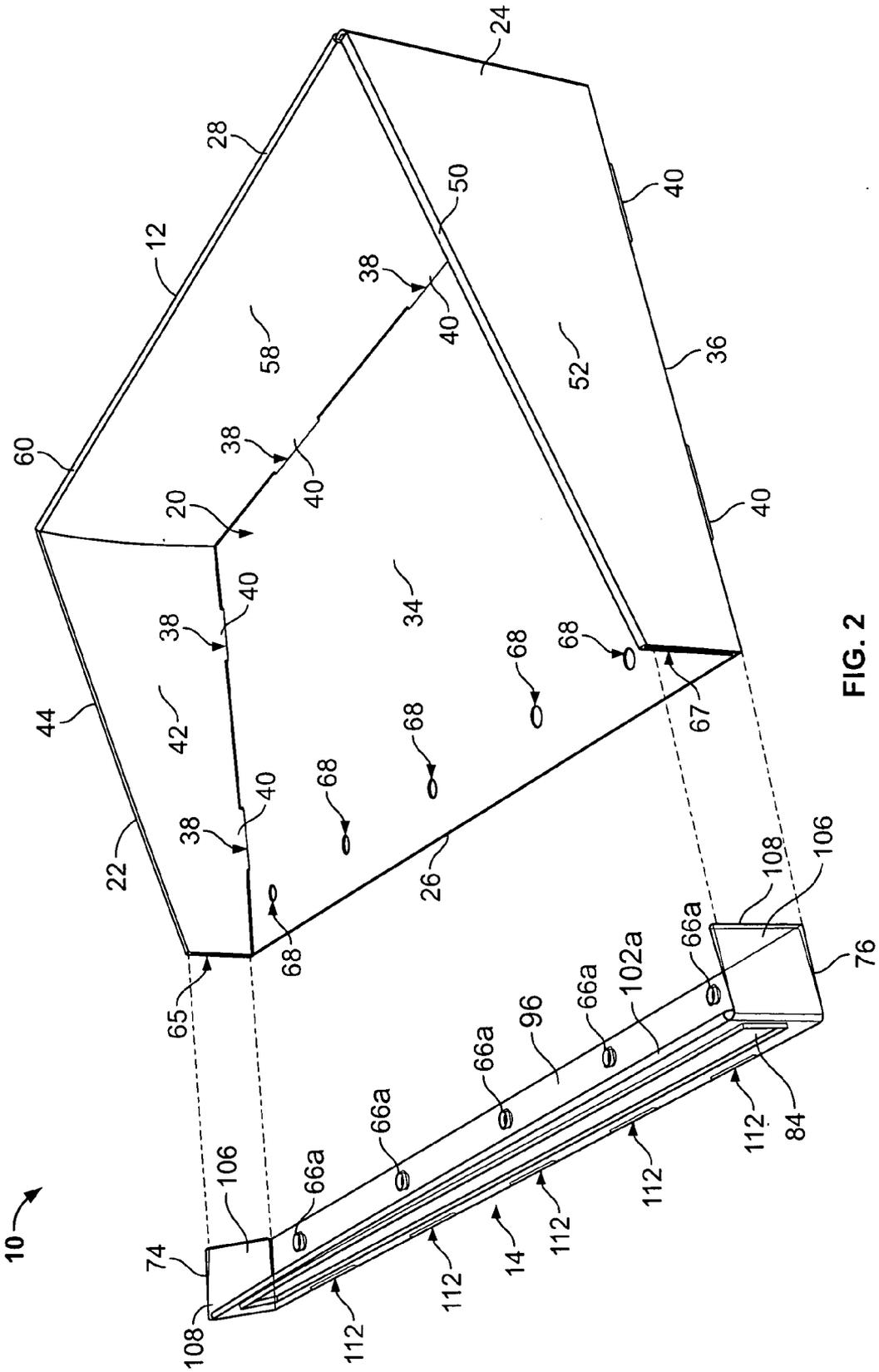


FIG. 2

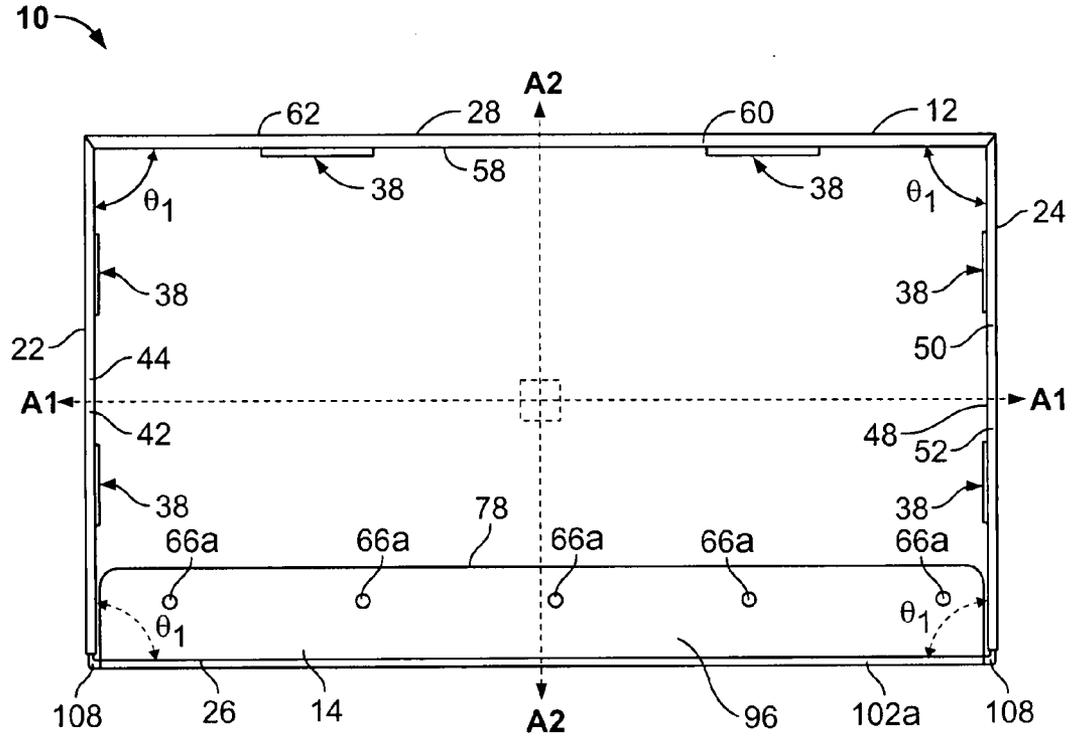


FIG. 3

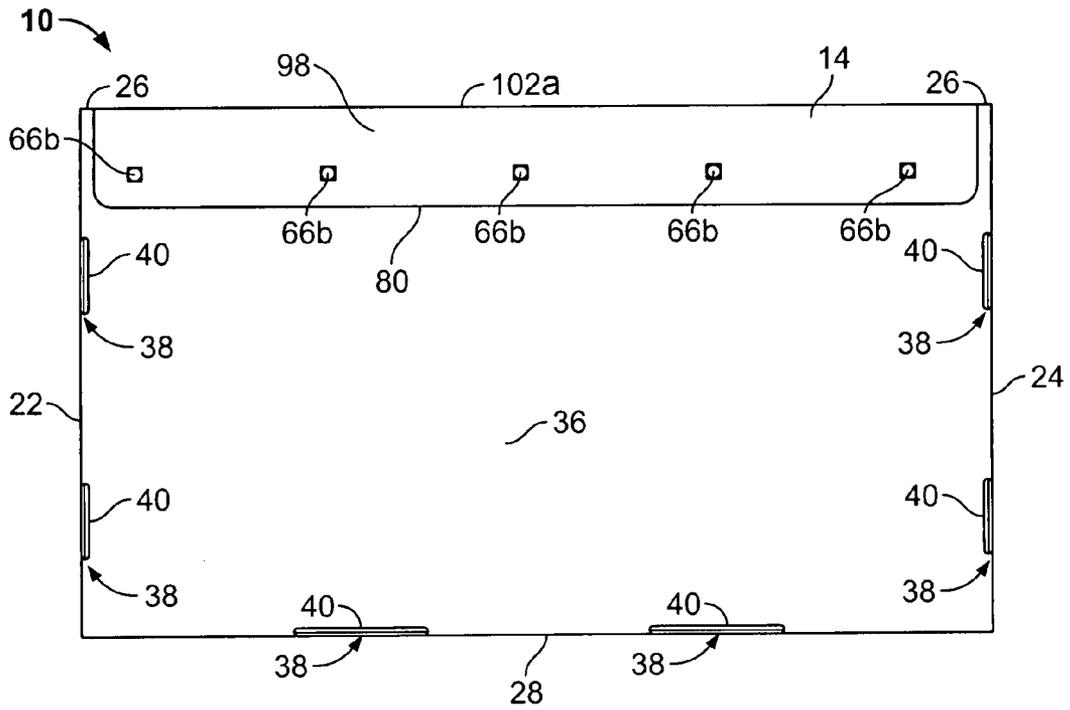


FIG. 4

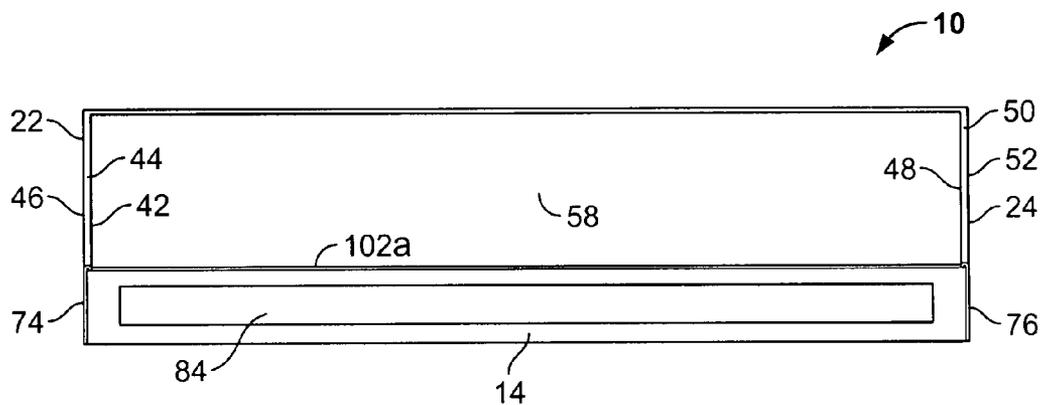


FIG. 5

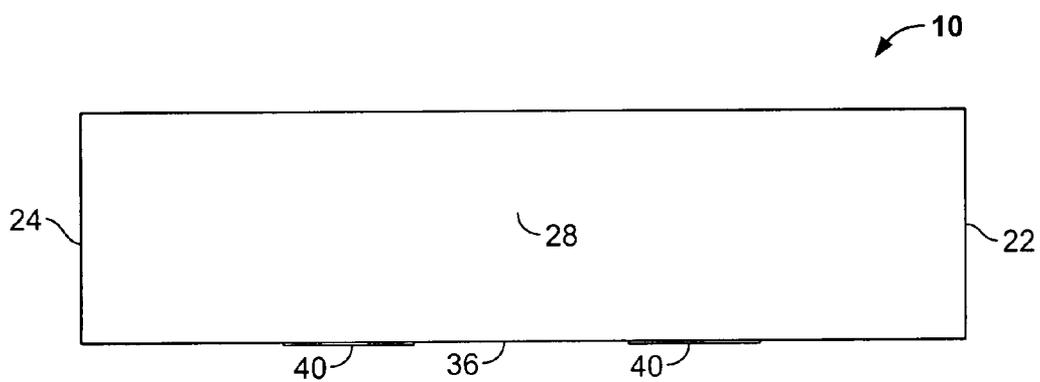


FIG. 6

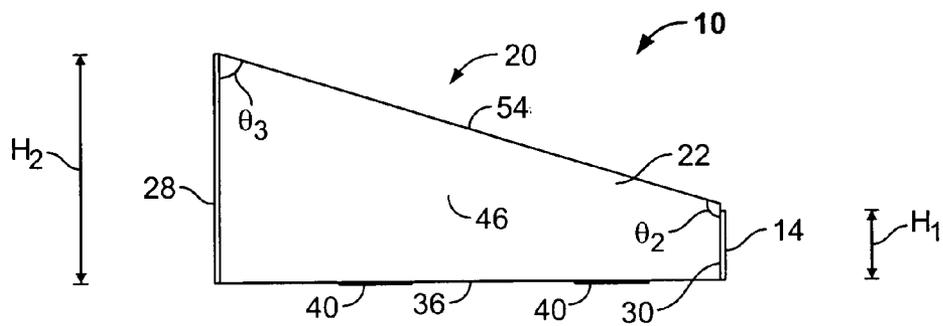


FIG. 7

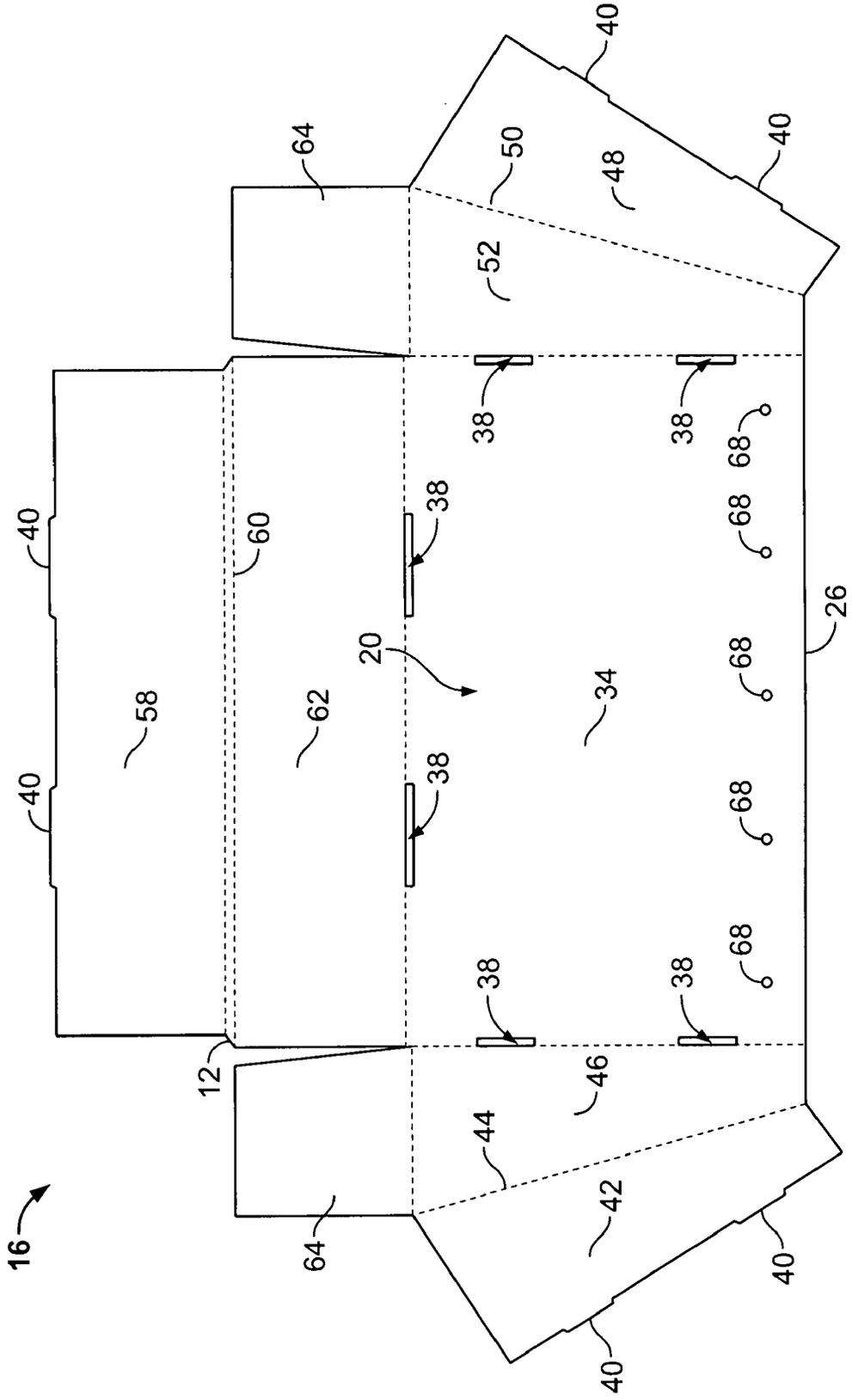


FIG. 8

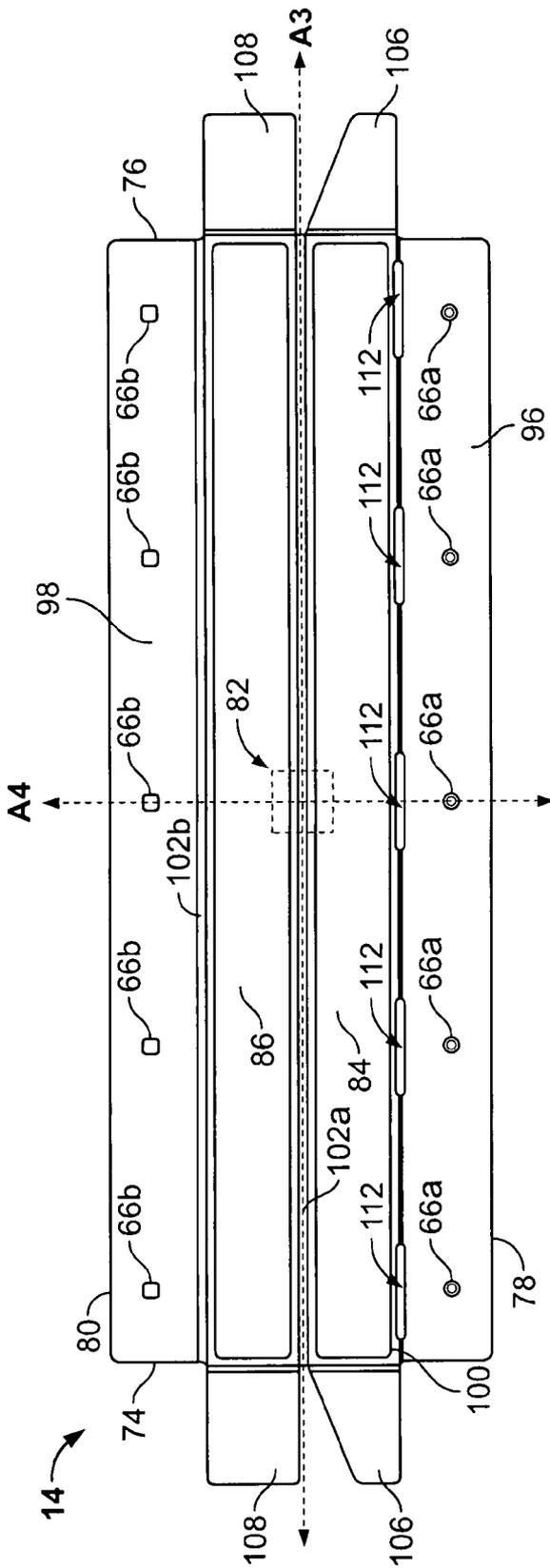


FIG. 9

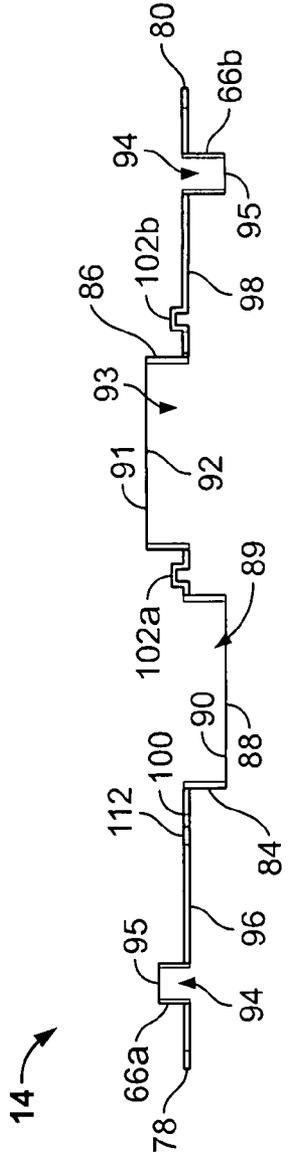


FIG. 10

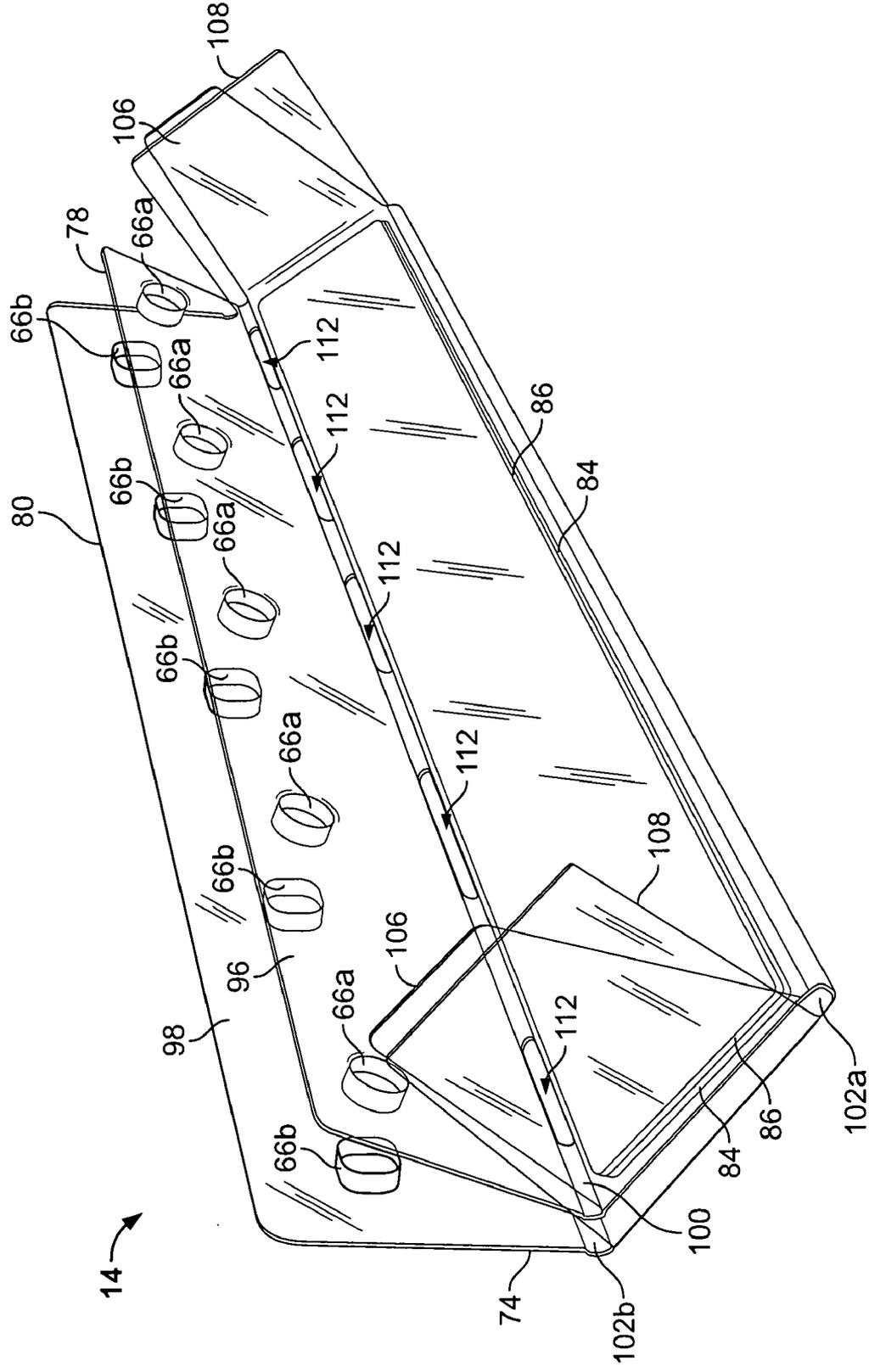


FIG. 11

**DISPLAY TRAY HAVING A TRANSPARENT LIP**

**FIELD OF THE INVENTION**

[0001] The present invention relates to a display tray for shipping and displaying product. More specifically, the present invention relates to a tray for shipping packaged material, such as greeting card boxes, to a store for display at a point of sale thereof.

**BACKGROUND OF THE INVENTION**

[0002] Greeting cards are typically packaged and shipped to a point of sale within conventional, rectangularly-shaped boxes, and such boxes can be removably positioned within a cardboard tray for shipment to the point of sale. However, a conventional cardboard tray, such as the prior art tray shown in FIGS. 1A and 1B, includes four corrugated cardboard side walls. Being that cardboard is opaque, however, the prior art tray of FIGS. 1A and 1B obscures a front view of those greeting card boxes that are positioned within the prior art tray. It is desirable to provide a tray that has the structural integrity of corrugated cardboard, while providing a user with an unobstructed frontal view of those greeting cards boxes positioned within the tray.

**SUMMARY OF THE INVENTION**

[0003] The present invention overcomes the disadvantages and shortcomings of the problems of the prior art by providing a display tray having a transparent lip for packaging and transporting a plurality of greeting card boxes in an orderly arranged manner while allowing for visual inspection of the boxes through the transparent lip. In an exemplary embodiment of the invention, the tray includes a corrugated cardboard body and a transparent plastic lip removably secured to the cardboard body such that greeting card boxes contained within the tray are visually-perceptible through the lip from a front view of the tray.

[0004] In the exemplary embodiment of the invention, the body is formed of a unitary folded sheet of cardboard. The body includes a plurality of side walls that define an open perimeter of the tray and a planar center region for removable reception of boxes of greeting cards. In the exemplary embodiment, the lip is formed of a unitary folded sheet of plastic. The lip is secured to the front of the body to define a sturdy, transparent, front wall of the tray.

[0005] Additional features, functions and benefits of the display tray will be apparent from the detailed description which follows, particularly when read in conjunction with the accompanying figures.

**BRIEF DESCRIPTION OF THE DRAWINGS**

[0006] For a more complete understanding of the present invention, reference is made to the following detailed description of exemplary embodiment(s) considered in conjunction with the accompanying drawings, in which:

[0007] FIG. 1A is a perspective view of a prior art cardboard tray in folded form;

[0008] FIG. 1B is a top plan view of the prior art cardboard tray of FIG. 1A in an unfolded form;

[0009] FIG. 2 is an exploded perspective view of a display tray constructed in accordance with an exemplary embodiment of the present invention, the tray including an opaque cardboard body and a transparent plastic lip;

[0010] FIG. 3 is a top plan view of the display tray shown in FIG. 2;

[0011] FIG. 4 is a bottom plan view of the display tray shown in FIG. 2;

[0012] FIG. 5 is a front elevational view of the display tray shown in FIG. 2;

[0013] FIG. 6 is a rear elevational view of the display tray shown in FIG. 2;

[0014] FIG. 7 is a left side elevational view of the display tray shown in FIG. 2, a right side elevational view being a mirror image thereof;

[0015] FIG. 8 is a plan view of the cardboard body of FIG. 2 in an unfolded form;

[0016] FIG. 9 is a plan view of the plastic lip of FIG. 2 in an unfolded form;

[0017] FIG. 10 is a right side elevational view of the plastic lip of FIGS. 2 and 9 in the unfolded form, a left side elevational view being a mirror image thereof; and

[0018] FIG. 11 is a perspective view of the plastic lip of FIGS. 2, 9 and 10 in a partially-folded form.

**DETAILED DESCRIPTION OF THE EXEMPLARY EMBODIMENT**

[0019] Referring to FIG. 2, a tray 10 constructed in accordance with an exemplary embodiment of the present invention is shown to include a cardboard body 12 and a transparent lip 14 formed of plastic, such as polyvinyl chloride (PVC). The tray 10 is adapted to contain one or more products, such as greeting card boxes, during shipment of the product to a point of sale. The tray 10 is further adapted to allow for visual inspection of the products from a front view thereof by virtue of the transparent lip 14.

[0020] Referring to FIGS. 2-7, the body 12, when folded defines a center area 20. The center area 20 extends from a first perimeter wall 22 along a first axis A1 to a second perimeter wall 24 that is substantially parallel to the first perimeter wall 22. The center area 20 also extends along a second axis A2, perpendicular to the first axis A1, from a front edge 26 to a third perimeter wall 28 that is substantially perpendicular to the first perimeter wall 22 and the second perimeter wall 24. The transparent lip 14, when folded, defines a fourth perimeter wall 30 at a front edge 26.

[0021] The tray 10 includes a seating surface 34 that is substantially planar and rectangular in surface area. The tray 10 further includes a planar underside surface 36 opposite thereto. As shown in FIG. 3, the corners of the seating surface 34 (and the walls 22, 24, 28 and 30) each form an angle  $\Theta_1$  that is substantially equal to about ninety degrees (90°). The seating surface 34 has slots 38 formed therein, which, when the body 12 is folded, receive tabs 40.

[0022] Referring to FIGS. 2 and 8, a unitary carton blank 16 is shown of which the body 12 is formed. The first perimeter wall 22 is formed of a first wall inner flap 42 folded along its respective fold line 44 over a first perimeter wall outer flap 46, such that tabs 40 are received by respective slots 38.

[0023] The second perimeter wall 24 is formed in a similar manner. More particularly, a second inner flap 48 is folded along its respective fold line 50 over a second perimeter wall outer flap 52 and corresponding tabs 40 are received by respective slots. When assembled, spaces 65, 67 are thereby formed within the first and second perimeter walls 22, 24, respectively. When the inner and outer wall flaps 42, 46, 48, 52 are folded and the tabs 40 are received by the slots 38, the

first and second perimeter walls 22, 24 extend substantially perpendicularly with respect to the seating surface 34.

[0024] The third perimeter wall 28 is formed of a third perimeter wall inner flap 58 folded along its respective fold line 60 over the third perimeter wall outer flap 62, such that respective tabs 40 are received by corresponding slots 38. A third wall space (not designated) is formed between the third wall inner and outer flaps 58, 62. Third wall insert tabs 64 extend from the first and second perimeter wall outer flaps 46, 52 and are received by the third perimeter wall 28 within the space formed between the flaps 58, 62. Holes, referenced herein as snap holes 68, are formed through the seating and underside surfaces 34, 36.

[0025] Referring to FIG. 7, the fourth perimeter wall 30, which is defined by the lip 14, defines a first elevation H1. An angle  $\theta_2$  is formed between an outer edge 54 of the first perimeter wall 22 and the fourth perimeter wall 30, and the angle  $\theta_2$  is preferably greater than ninety degrees (90°) and less than one hundred and eighty degrees (180°). Accordingly, the outer edge 54 meets the third perimeter wall 28, forming an angle  $\theta_3$ . The value of angles  $\theta_2, \theta_3$ , when added together, is equal to a about one hundred eighty degrees (180°). A second elevation H2 is defined by the third perimeter wall and is greater than the first elevation H1 defined by the fourth perimeter wall 30. As shown, the first perimeter wall 22 preferably has a trapezoidal surface shape. Similarly, the second perimeter wall 24 has a trapezoidal surface (the right side elevational view of the tray 10 is preferably a mirror image of the left side elevational view of the tray 10).

[0026] Referring to FIGS. 9-11, the lip 14 is formed of a unitary piece of transparent plastic material. When unfolded, the lip 14 extends longitudinally along an axis A3 from a first side 74 to a second side 76 and perpendicularly thereto along an axis A4 from a third side 78 to a fourth side 80.

[0027] The lip 14 includes a center area 82 having a first channel 84 and a second channel 86 that extends parallel to the axis A3 from the first end 74 to the second end 76. Referring to FIG. 10, the side elevational view shows that the channels 84, 86 are formed to be complementary, such that the channel 84 protrudes in a first direction and the second channel 86 protrudes in a second direction opposite the first direction. The first channel 84 has an underside surface 88 and a seating surface 90 opposite thereto that forms a recess 89. The second channel 86 has an underside surface 91 and a seating surface 92 opposite thereto that forms a recess 93. When the lip 14 is folded, the first channel 84 nests with the second channel 86, such that the recess 89 of the first channel 84 receives the underside surface 91 of the second channel 86 to form a sturdy double layer of transparent plastic defining the fourth perimeter wall 30 of the tray. Tray body 12 defines a series of lip slots 112 along the seam of the first snap flap 96 that extend from the first edge 74 to the second edge 76 parallel to Axis A3. The lip slots 112 facilitate easy folding, as there is less material along the seam to be folded.

[0028] To facilitate securing the lip 14 to the body 12, the lip 14 includes securing means, such as a series of integrally formed snaps 66a, 66b. The snaps 66a, 66b are advantageously positioned in series proximal the third and fourth ends 78, 80, respectively, and are integrally formed on first and second snap flaps 96, 98 for interaction with the snap holes 68 of the cardboard body 12. Each one of the snaps 66a, 66b has a male surface 95 defining a female recess 94 opposite thereto.

[0029] The lip 14 is folded and assembled along preformed fold lines 100, 102a-b for attachment to the cardboard body 12. The lip 14 is folded along the fold line 102a so that the third edge 78 is rotated toward the fourth edge 80. The recess 89 of the first channel 84 engages the outer surface 91 of the second channel 86, such that the recess seating surface 90 of the first channel 84 lies adjacent to the outer surface 91 of the second channel 86 with the recess space 93 and recess seating surface 92 of the second channel opposite thereto. Lip insert flaps 106 and 108 press together on opposite sides of the lip 14.

[0030] The lip 14 is positioned adjacent the front edge 26 of the tray body 12 and the lip insert flaps, 106, 108 are received within the spaces 65, 67 formed between the first and second perimeter walls 22, 24. The first snap flap 96 is positioned over the cardboard tray 12 proximal the front edge 26 and the respective snaps 66a are received through the snap holes 68. The second snap flap 98 of the lip 14 is positioned along the underside surface 36 of the tray body 12. The female recesses 94 of snaps 66b on the second flap 98 receive the male surfaces 95 of the snaps 66a that extend through the snap holes 68.

[0031] It will be understood that that a person skilled in the art may make many variations and modifications without departing from the spirit and the scope of the present invention. For example, the display tray 10 can display products other than greeting card boxes. The lip 14 can be fastened to the cardboard body 12 using a variety of adhesives and/or other securing means in addition to (or as an alternative to) snaps 66a, 66b. All such variations and modifications, including those discussed above, are intended to be included within the scope of the present invention as defined in the appended claims.

What is claimed is:

1. A display tray for receiving rectangular boxes, comprising a cardboard body having a seating surface, a first side wall extending therefrom, a second side wall extending from said seating surface parallel with respect to said first side wall, and a third side wall extending from said seating surface perpendicular with respect to said first side wall and said second side wall; and a transparent lip defining a fourth side wall opposite said third side wall.

2. The display tray of claim 1, wherein said transparent lip includes snaps secured to said cardboard body.

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