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(54) Blank and associated container

(57) A container blank (2) comprising a plurality of side wall panels (4, 6, 8, 10, 12) disposed side by side and connected across wall panel fold lines (14), a partially cut or perforated line (18) extending across the side wall panels and intersecting the wall panel fold lines (14), thereby defining on opposite sides of the partially cut or perforated line (18) a base part (22) and a lid part (20) and dividing each side wall panel (4, 6, 8, 10, 12) into a respective base wall panel (4b - 12b) and a lid wall panel (4c - 12c), a plurality of top flaps (28) being connected to the lid wall panels (41 - 121) across fold lines (30) for forming a container top, a plurality of bottom flaps (24) being connected to the side wall panels (4, 6, 8, 10, 12) across fold lines (26) for forming a container bottom, and cut out areas (32, 34) being provided at intersections between the partially cut or perforated line (18) and the wall panel fold lines (14), whereby in assembly of the blank (2), the cut out areas (32, 34) enable the lid wall panels (41 - 121) to be fitted over the base wall panels (4b - 12b).

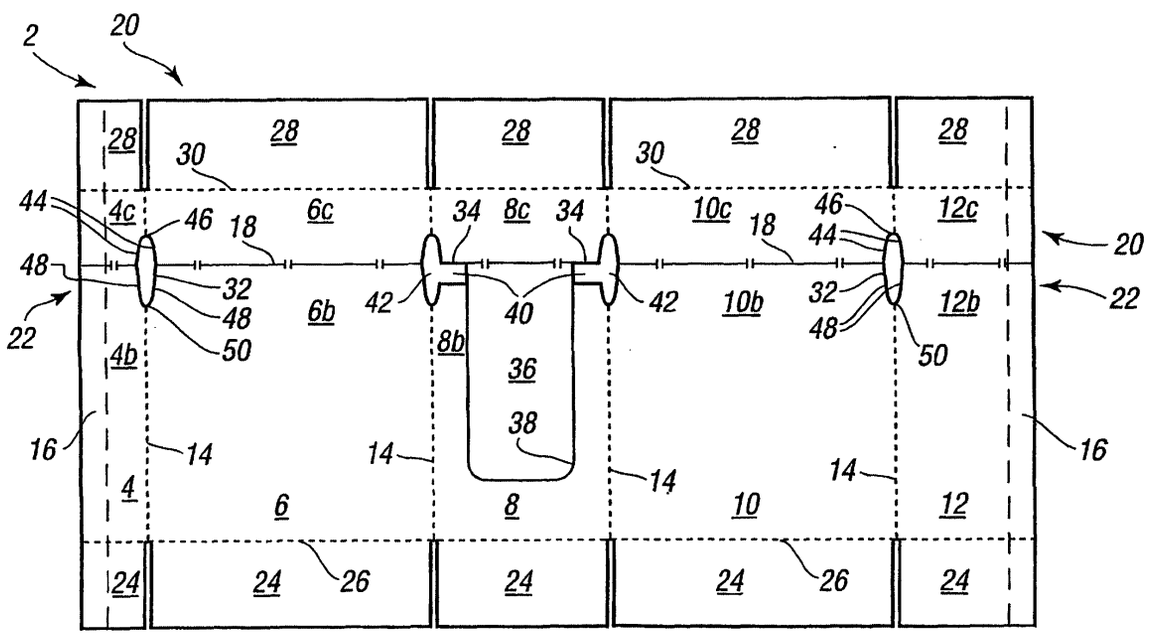

FIG. 1

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Description

[0001] This invention relates to a container, and to a blank for forming the container, for use in the storage, transportation and display of a product.

[0002] Such containers are typically formed of a cardboard material. It is known to provide such a container with a separable lid and base, formed from a single blank. It is desirable that such containers can be assembled quickly and efficiently. It is also desirable that such containers be supplied to users in quantities, ensuring that equal quantities of lids and bases are provided. Further improvements in these criteria are desirable.

[0003] The invention provides in a first aspect, a container blank comprising a plurality of side wall panels disposed side by side and connected across wall panel fold lines, a partially cut or perforated line extending across the side wall panels and intersecting said wall panel fold lines, whereby to define on opposite sides of the partially cut line a base part and a lid part, and to divide each said side wall panel into a respective base wall panel and a lid wall panel, a plurality of top flaps being connected to the lid wall panels across fold lines for forming a container top, a plurality of bottom flaps being connected to the lid wall panels across fold lines for forming a container bottom, and cut out areas being provided at intersections between the partially cut line and said wall panel fold lines, whereby in assembly of the blank, the cut out areas enable the lid wall panels to be fitted over the base wall panels.

[0004] By reason of the lid part being formed in the same blank as the base part, it is ensured that a user is provided with equal quantities of lids and bases.

[0005] Said cut out areas enable the edges of the lid wall panels to be moved outwards, and the edges of the base wall panels to be moved inwards, so that the lid can be conveniently fitted onto the base. As preferred, the height of the cut out areas along the wall panel fold lines is equal to the height of the lid wall panels along the fold lines, for reasons hereinafter appearing.

[0006] The blank may be supplied to the user in a partially assembled condition, wherein the blank is folded flat in a doubled over condition about wall panel fold lines. The free edges of the plurality of wall panels are affixed together, by adhesive, staples, etc. In addition, the lid part is separated from the base part along the partially cut line, and the lid wall panels are then fitted over the base wall panels. The lid wall panels are slid over the base wall panels until, at the folded fold lines, the upper edges of the cut out areas in the lid part abut against the lower edges of the cut out areas in the base part. By jamming such upper and lower edges together, the lid part is held in engagement with the base part sufficiently securely for handling and transportation. To assemble the container from this partially assembled state,all that is necessary is for the side wall panels to be opened to a rectangular configuration, and for the top flaps to be affixed together, and for the bottom flaps to be affixed together.

[0007] In a second aspect, the invention provides a container formed from a blank, the container being in a partially assembled condition, and the container comprising a base part and a lid part, the base part comprising a plurality of base wall panels connected to one another across fold lines, and a plurality of bottom flaps connected to the base wall panels across fold lines, the lid part comprising a plurality of lid wall panels connected to one another across fold lines, and a plurality of top flaps connected to the lid wall panels across fold lines, wherein both the base and the lid are in a folded flat configuration and the lid wall panels are positioned so as to embrace the base wall panels, and cut out areas being provided at the lower edge of the lid wall panels and at the upper edge of the base wall panels, and intersecting said fold lines, wherein the lid is positioned on the base so that the tops of cut out areas of the lid engage the bottoms of cut out areas of the base, to retain the lid in position on the base.

[0008] By reason of the lid part being retained to the the base part, it is ensured that a user is provided with equal quantities of lids and bases.

[0009] With the lid in such position on the base, when the container is fully assembled, the top edge of the base wall panels abut against the underside of the lid top, whereby to provide extra structural rigidity for the container.

[0010] In a third aspect, the invention provides a container formed from a blank, the container comprising a base and a lid, the base comprising base wall panels connected to one another across base wall panel fold lines, and a bottom comprising bottom flaps connected to the base wall panels across fold lines, the top edge of the base having cut out areas at the intersections with said base wall panel fold lines, and the lid comprising lid wall panels connected to one another across lid wall panel fold lines, and a top comprising top flaps connected to the lid wall panels across fold lines, the bottom edge of the lid having cut out areas at the intersections with said lid wall panel fold lines, and wherein the lid is fitted over the base with the top edge of the base abutting against the lid top, and the cut out areas of the base and lid interengage wherein the top edge of a lid cut out area engages against the bottom edge of a base cut out area.

[0011] In order that the blank and the associated container in accordance with the invention may be more fully understood, a preferred embodiment thereof will now be described by way of example and with reference to the following drawings in which:

Figure 1 is a plan view of the embodiment of a container blank in accordance with the invention;

Figures 2A and 2B are plan views of the blank of Figure 1 in partially container erected conditions; and

Figure 3 is a schematic perspective view of a container erected from the blank of Figure 1.

[0012] Referring to Figure 1, a blank 2 is formed of cardboard that has continuous outer card layers with an interior of corrugated card. The blank has side wall panels 4, 6, 8, 10, 12 connected to each other across side wall fold lines 14. Side wall panels 4 and 12 can be glued together at 16 along their free edges. A partially cut or deeply perforated line 18 traverses the side wall panels to define a lid blank part 20, and a base blank part 22; each side wall panel is divided into a respective lid wall panel 4l - 12l and a respective base wall panel 4b - 12b. Bottom flaps 24 extend from base wall panels 4b - 12b along fold lines 26. Top flaps 28 extend from lid wall panels 4l - 12l along fold lines 30.

[0013] Cut out areas 32, 34 are provided at the intersections of fold lines 14 and cut line 18. A display flap 36 is provided by perforated line 38 in base wall panel 8b. Each cut out portion 34 has a rectangular portion 40 which extends up to perforated line 38, and a portion 42 which extends over the intersection point of cut line 18 and fold lines 14. Portion 42 is essentially similar in shape to cut out areas 32. Cut out areas 32 each have a shape that is roughly polygonal, with lid edges 44 tapering away from cut line 14 to terminate in a rounded top edge 46, and with base edges 48 tapering away from cut line 14 to terminate in a rounded bottom edge 50. The total height of the cut out area 32 along the fold line 14 is equal to the height of a lid wall panel along fold line 14.

[0014] The blank as shown in Figure 1 may be supplied to a customer as shown in a completely flat condition. Alternatively and as preferred the blank may be supplied as a container in a partially assembled condition, from which a user may very easily assemble fully the container. To partially assemble the container, the first step is to glue together side wall panels 4, 12 along strips 16. The blank is then folded flat in a doubled over configuration as shown in Figure 2A, being folded about two of the fold lines 14. The blank may be supplied to a customer in such condition, but, as preferred, the blank is further erected into a partially assembled container as shown in Figure 2B.

[0015] In Figure 2B, the lid part 20 is broken from the base part 22, the cut line 18 being sufficiently deep that the breaking operation requires little effort. The lid wall panels 4l - 12l are then opened somewhat, and are pushed over the tops of base wall panels 4b - 12b in the doubled over configuration. The cut out areas enable an extra amount of flexibility at the edges of the wall panels to permit this operation. The lid wall panels 4l - 12l are pushed so that the upper cut out edges 46 abut against the lower cut out edges 50 at the two folded fold lines 14. The edges 46, 50 are jammed against one another to ensure that the lid stays in the position shown in Figure 2B during handling and transportation.

[0016] When the user desires to fully assemble the container from the partially assembled condition of Figure 2B, all that is required is firstly for the container to be opened up from the flat configuration, and for the bottom flaps 24 to be affixed together to form a bottom, so that the container can be filled with its desired contents. The top flaps are then affixed together to form a top, and the container is ready for transportation. In the fully assembled container the top edge of the base wall panels 4b - 12b abuts against the inner surface of the lid top, to provide extra structural rigidity.

[0017] To remove the contents from the container, the lid is simply removed from the base to open the container top. The display panel 36 may be torn away along perforated line 38 to enable the contents to be inspected prior to their removal.

[0018] There has thus been shown and described a container formed from a blank, that permits particularly simple and convenient assembly from a partially assembled condition. In the partially assembled condition, the container remains as a single unit, with the lid, although separate, being retained in position on the base. The fully assembled container provides excellent structural rigidity during handling and shipping of the container.

Claims

1. A container blank comprising a plurality of side wall panels disposed side by side and connected across wall panel fold lines, a partially cut or perforated line extending across the side wall panels and intersecting the wall panel fold lines, to define on opposite sides of the partially cut or perforated line a base part and a lid part and to divide each side wall panel into a respective base wall panel and a lid wall panel, a plurality of top flaps connected to the lid wall panels across fold lines for forming a container top, a plurality of bottom flaps connected to the side wall panels across fold lines for forming a container bottom, and cut out areas provided at intersections between the partially cut or perforated line and the wall panel fold lines, whereby in assembly of the blank, the cut out areas enable the lid wall panels to be fitted over the base wall panels.

2. A container blank according to claim 1, wherein the cut out areas enable the edges of the lid wall panels to be moved outwardly and the edges of the base wall panels to be moved inwardly, so that the lid can be conveniently fitted onto the base.

3. A container blank according to claim 1 or 2, wherein the height of the cut out areas along the wall panel fold lines is equal to the height of the lid wall panels along the fold lines.

4. A container blank according to claim 1, 2 or 3, wherein, when the blank is in a partially assembled

condition, it is folded flat in a doubled over condition about wall panel fold lines.

5. A container blank according to claim 4, wherein the lid part is separated from the base part along the partially cut line and the lid wall panels are fitted over the base wall panels.

6. A container blank according to claim 4 or 5, wherein the lid wall panels are slid over the base wall panels until, at the folded fold lines, the upper edges of the cut out areas in the lid part abut against the lower edges of the cut out areas in the base part.

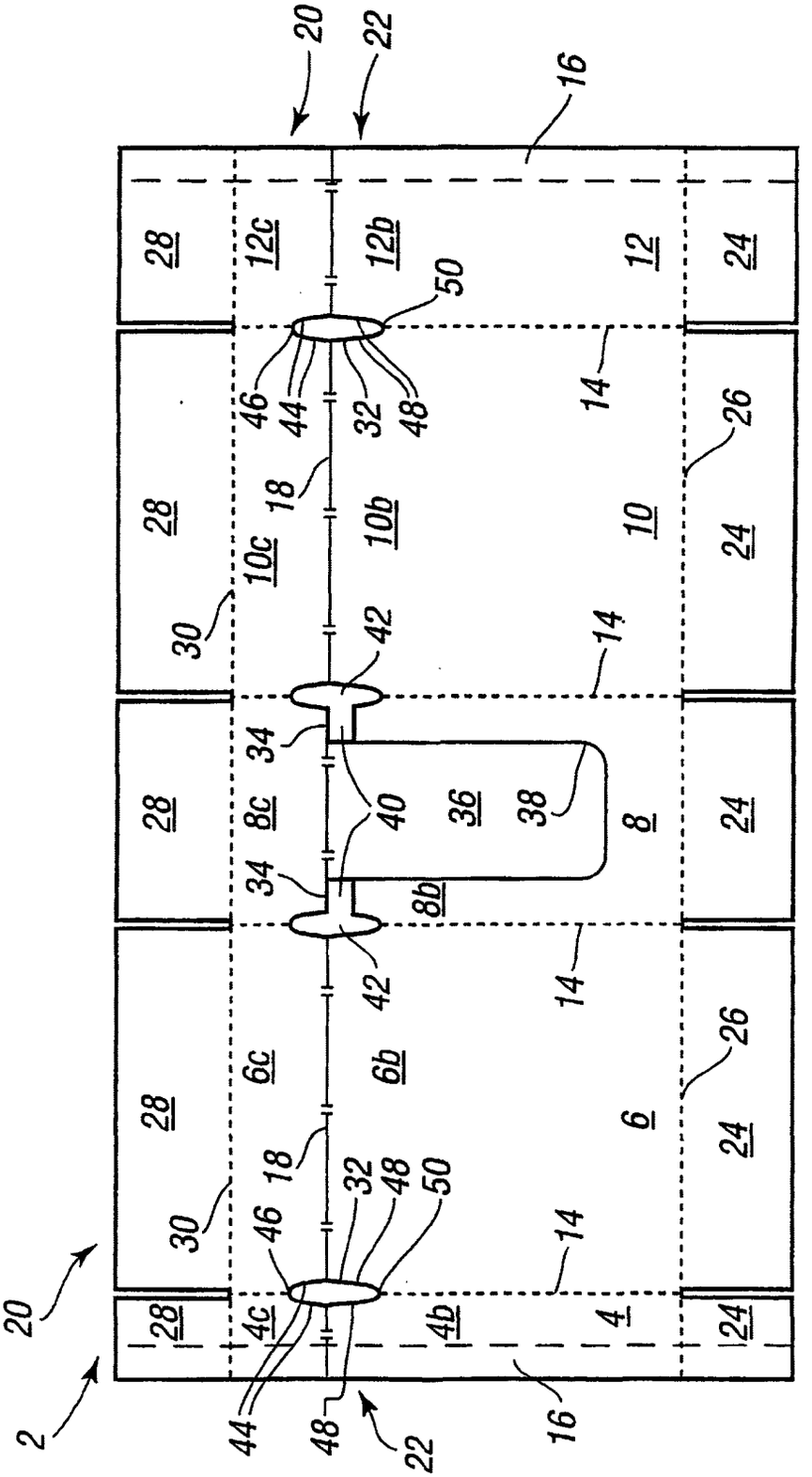
7. A container blank according to claim 6, wherein upper and lower edges are jammed together, so that the lid part is held in engagement with the base part sufficiently securely for handling and transportation.

8. A container blank according to any of claims 4 to 7, wherein the free edges of the plurality of wall panels are affixed together.

9. A container formed from a blank, the container being in a partially assembled condition, and the container comprising a base part and a lid part, the base part comprising a plurality of base wall panels connected to one another across fold lines, and a plurality of bottom flaps connected to the base wall panels across fold lines, the lid part comprising a plurality of lid wall panels connected to one another across fold lines, and a plurality of top flaps connected to the lid wall panels across fold lines, wherein both the base and the lid are in a folded flat configuration and the lid wall panels are positioned so as to embrace the base wall panels, and cut out areas being provided at the lower edge of the lid wall panels and at the upper edge of the base wall panels and intersecting the fold lines, wherein the lid is positioned on the base so that the tops of the cut out areas of the lid engage the bottoms of the cut out areas of the base, to retain the lid in position on the base.

10. A container according to claim 9, wherein, with the lid in position on the base and when the container is fully assembled, the top edge of the base wall panels abut against the underside of the lid top, to provide extra structural rigidity for the container.

11. A container formed from a blank, the container comprising a base and a lid, the base including base wall panels connected to one another across base wall panel fold lines and a bottom comprising bottom flaps connected to the base wall panels across fold lines, the top edge of the base having cut out areas at the intersections with the base wall panel fold lines, and the lid including lid wall panels connected to one another across lid wall panel fold lines and a top comprising top flaps connected to the lid wall panels across fold lines, the bottom edge of the lid having cut out areas at the intersections with the lid wall panel fold lines, wherein the lid is fitted over the base with the top edge of the base abutting against the lid top, and the cut out areas of the base and lid interengage with the top edge of a lid cut out area engaging against the bottom edge of a base cut out area.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22
16
28
12c
12b
12
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46
44
32
48
14
26
18
10b
10
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8b
6c
6b
6
4c
4b
4
2

FIG. 1

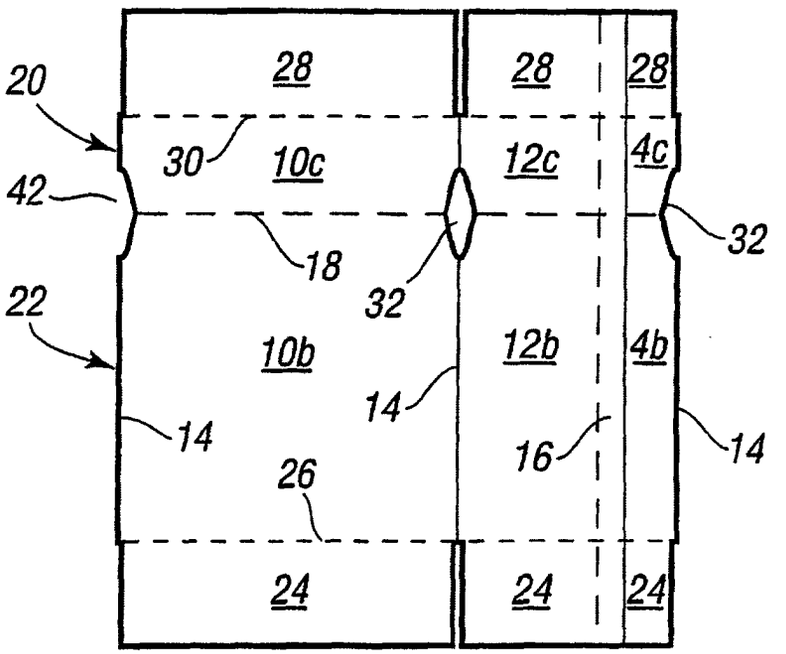
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FIG. 2a

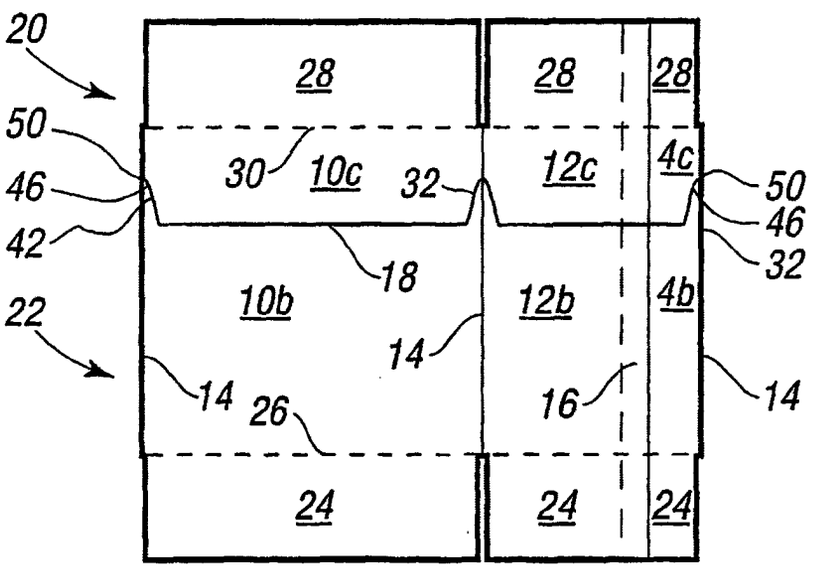
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FIG. 2b

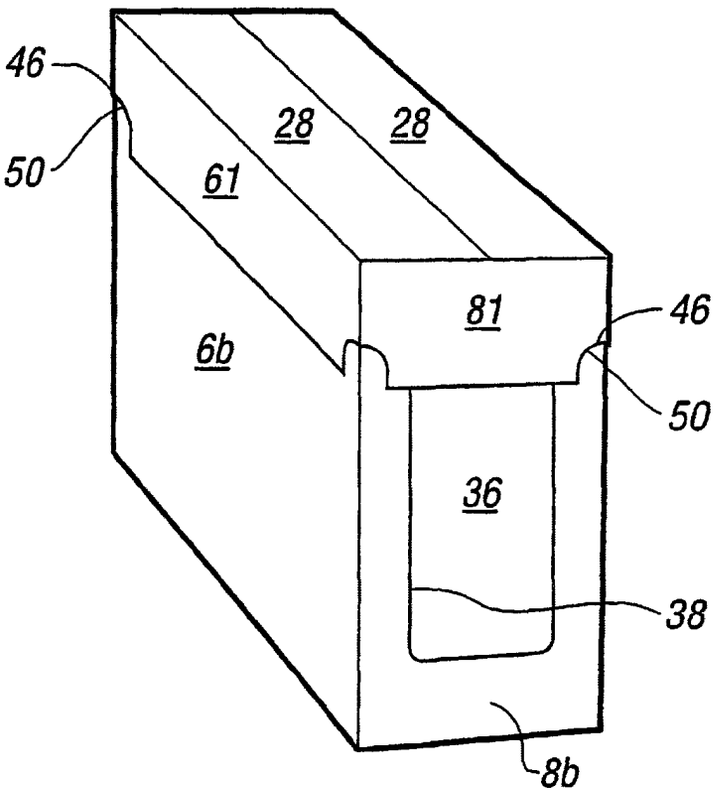

FIG. 3