

DISPLAY BOX WITH STAND

5 **FIELD OF THE INVENTION**

The present invention relates to box, in particular, to a box which is made from a blank and can be used as a carrier box and which also has an integrated stand for display purposes.

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BACKGROUND OF THE INVENTION

Boxes are commonly used for storing products and for transporting them. It is useful if, once a box reaches its intended destination, it can also be conveniently
15 used for displaying its contents.

In US Patent No. 4,666,036, a display container is described. It is a 2-piece container with box-like complementary upper and lower members which have pins engaging in slots of the lower member. Such a display container can be used for
20 transporting its contents as well as to display its contents. However, its construction is relatively more complicated because it comprises at least two separate members, and the members are further held together by pins.

In EP 335,358, a display box and foldable blank is disclosed. The foldable display
25 box is made from a blank so that it may be shipped flat and assembled at its point of use. When used as a display box, an easel panel is formed to fold out from the back and bottom panels of the box to support the display stand on a flat surface. The easel panel is divided into two portions by a hinge or fold line, with one portion forming an upstanding leg and the other portion being connectable to the bottom
30 of the back panel. When in the folded out position, the easel panel together with the back panel forms a triangular support to stabilize the assembled display box on a flat surface. The disadvantage of this design is that the weight of the display

box acts solely on the hinge or fold line. When supporting a weight, it is possible that the fold line would give way, or the upstanding leg may bend. Thus, such a box needs to be formed from rigid material such as plastic, and is made by injection moulding, as mentioned in the said patent. This, amongst other things,
5 increases the cost of production.

SUMMARY OF THE INVENTION

The objective of the present invention is to produce a display box with stand which
10 can be made from a single blank of light-weight material such as cardboard. The box can be used for transporting its contents during shipping and opened up to be used as a display box with stand at its destination. Such a box is versatile, saves costs and it is easy to manufacture.

15 Accordingly, the present invention provides a box assembled from a blank and comprising a front panel and a rear panel, each having opposed upper and lower edges and opposed side edges, a respective side panel between corresponding side edges of the front and rear panels, a base panel, a pair of stand panels formed in the rear panel and attached thereto by fold lines substantially parallel to
20 the side edges of the rear panel, the stand panels being foldable outwardly from the rear panel, and means to brace the stand panels in the outwardly folded position whereby the stand panels support the box in an upright position.

It is preferred that each stand panel has a lower edge which is inclined upwardly
25 from the fold line to the free edge of the stand panel, whereby in the outwardly folded position, the stand panels support the box in an upright position tilted slightly backwards. It is further preferred that the bracing means comprises a flap adapted to project outwardly from the rear of the box between the stand panels when in the outwardly folded position, to thereby prevent the stand panels folding back in
30 towards the rear panel. The bracing means preferably comprises a flap adapted to project outwardly from the rear of the box beneath the stand panels, the flap further comprising a pair of tongues formed therein and foldable into an upright

configuration whereby each tongue is positioned to present a barrier to a respective stand panel to prevent it folding back in towards the rear panel.

It is preferred that the front panel has first and second side panels respectively
5 attached at a fold line to first and second side edges thereof, the rear panel is attached at a fold line to the other side of the second side panel, and a base panel is attached at a fold line to the lower edge of the front panel. The box should include a lid panel to close the top of the box and the lid panel should be attached to the upper edge of the front panel.

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It is also preferred that the box further comprises a fixing flap attached by a fold line to the side edge of the rear panel opposed to the second side panel, for attachment to the first side panel and fixing flaps attached at fold lines to upper and lower edges of each side panel, for attachment to the lid panel and base panel.

15 It is further preferred that the bracing flap is attached at a fold line to an edge of the base panel remote from the front panel.

The base panel preferably includes one or more slots, an additional base panel is attached at a fold line to the lower edge of the rear panel and includes one or more
20 tabs projecting from the edge remote from the rear panel, whereby the or each tab fits into a corresponding slot to close the base of the box. The bracing flap should preferably extend over the whole width of the base panel and two cuts are made in the flap transverse to the foldline to define a central flap portion adapted to be folded upwardly in order to be positioned between the stand panels.

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It is further preferred that the box has a perforation line which extends across the front panel, from each side edge of the front panel to an upper edge of each side panel and along the upper edge thereof to the side edge remote from the front panel, thereby allowing removal of the lid panel, an upper portion of the front panel
30 and upper portions of the side panels to allow access to the contents of the box.

Preferably the box is constructed from a blank formed of cardboard material or

plastic material.

BRIEF DESCRIPTION OF THE DRAWINGS

- 5 The drawings relate to a preferred embodiment of the invention.

Figure 1 is a plan view of a blank used to form a display box of the present invention.

- 10 Figure 2 is an isometric view of the rear of a display box constructed from the blank of Figure 1 wherein the stand panel is extended.

Figure 3 is an isometric view of the rear of a display box constructed from the blank of Figure 1 wherein the stand panel is alternatively supported by the base panel

- 15 which has been folded out. The top portion of the box is also torn off to reveal the box's contents.

DESCRIPTION OF THE PREFERRED EMBODIMENT OF THE INVENTION

- 20 Figure 1 is a plan view of a blank used to form a display box according to the present invention. The blank includes an array of connected panels joined along fold lines. As will become clear, the blank 10 may be folded along the fold lines to form the display box illustrated in Figures 2 and 3.

- 25 The blank 10 is a piece of cardboard material, which may optionally have a glossy finish. The blank includes a front panel 20b, side panels 20a,20c, and rear panel 20d. Extending from the top and bottom edges of the front panel 20b are lid panels 22a,22b, which further extend into lid panel folds 23a,23b. Flaps 24a-d extend from the top and bottom edges of the side panels 20a,20c. At the bottom
30 edge of the rear panel 20d, there is an additional base panel 21 extending from it.

There are a series of cut-outs formed in the various connected panels. A pair of

stand panels 28 are cut into the rear panel 20d. It should be noted that the base of the stand panels 28 are inclined at angle so that the display box 10 will be similarly inclined when the stand is used, to increase aesthetic appeal. Two lid panel slots 27 are cut into the base panel 22b, which receives the inserts 26
5 extending from the additional base panel 21 when the box is fully constructed. Cuts 30 are made to the base panel fold 23b to enable the middle portion of the basepanel fold 31 to be folded outside of the display box 10 to hold the stand panels 28 in position when the stand panels 28 are folded out. Folds 32 are cut into the additional base panel 21 as an alternative means to hold the stand panels
10 28 in position when in use.

Finally, a perforation 34 is made running across the front panel 20b and side panels 20a in order to remove the cut-out portion 36 to reveal and display the contents of the display box 10, if desired.

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The following are the steps involved in constructing the display box from the aforementioned blank 10:

The rear panel 20d is folded upwards and across to become substantially parallel
20 with the front panel 20b. The side panel 20c thus becomes substantially vertical. The right-most portion of the rear panel 20d is folded downwards to be substantially vertical while at the same time, the side panel 20a is folded upwards to meet with the right-most portion of the rear panel 20d. The side panel 20a is then glued to this portion of the rear panel 20d. The sides of the display box are
25 formed.

Thereafter, the flaps 24a-d are folded towards the inside of the box. At the upper part of the box, the upper lid panel 22a is folded over the flaps 24a,24b and the lid panel fold 23a is further folded and inserted into the box. At the lower part of the
30 box, the base panel 22b is similarly folded over the flaps 24c,24d and the base panel fold 23b is further folded and inserted into the box. It is to be appreciated that the middle portion of the basepanel fold 31 overlaps the base of the stand

panels 28 once the base panel fold 23b is fully inserted.

Finally, the additional base panel 21 is folded over the base panel 22b and the inserts 26 are slotted into the lid panel slots 27 cut into the base panel 22b. The
5 complete box is now formed.

Figure 2 is an isometric view of a display box constructed from the blank of Figure 1 wherein the stand panels 28 are extended. This is so that the display box may be placed in a standing position, but at an angle off the vertical. The stand panels
10 28 are folded out and the middle portion of the basepanel fold 31 which was earlier inserted into the box is pulled outwards. Since the width of the said portion of the basepanel fold 31 is substantially similar to that between the vertical edges of the two stand panels 28, it opposes the inclination of the stand panels to return to their original positions. Therefore, the stand panels 28 are substantially perpendicular
15 to the plane of the rear panel 20d. The invention thus uses the length of the base of the stand panels 28 to provide support for the display box 10.

Alternatively, Figure 3 illustrates how the additional base panel 21 of the box can be used to oppose the closing bias of the stand panels 28n instead of using the
20 aforementioned middle portion of the basepanel fold 31. This can be achieved by pulling the inserts 26 from the lid panel slots 27 and turning the base panel 180° around its horizontal axis to locate the additional base panel 21 below the stand panels 28. The folds 32 are lifted up on the inside of the stand panels 28. Thus, the outward bias of the folds 32 oppose the inward bias of the stand panels 28,
25 ensuring that the stand panels 28 remain substantially perpendicular to the plane of the rear panel 20d, and providing a stable support.

Also, Figure 3 shows the display box with the top portion 36 of the box torn off in order to reveal the box's contents. This can be done easily by the user tearing off
30 the said top portion along the perforation line 34.

The container is preferably made from a material such as stiff paper, cardboard or

thin plastic which is relatively cheap and easy to handle and has a degree of resilience. However, any other suitable material could be used. A number of other modifications to the display box described will be apparent to those skilled in the art. The invention described herein is thus susceptible to variations, modifications
5 and/or additions other than those specifically described and it is to be understood that the invention includes all such variations, modifications and/or additions which fall within the spirit and scope of the above description.



CLAIMS:

1. A box assembled from a blank and comprising:
5 a front panel and a rear panel, each having opposed upper and lower edges and opposed side edges, a respective side panel between corresponding side edges of the front and rear panels, a base panel, a pair of stand panels formed in the rear panel and attached thereto by fold lines substantially parallel to the side edges of the rear panel, the stand panels being foldable outwardly from the rear
10 panel, and means to brace the stand panels in the outwardly folded position whereby the stand panels support the box in an upright position.
2. A box as claimed in claim 1, wherein each stand panel has a lower
15 edge which is inclined upwardly from the fold line to the free edge of the stand panel, whereby in the outwardly folded position, the stand panels support the box in an upright position tilted slightly backwards.
3. A box as claimed in claim 1 or claim 2, wherein the bracing means
20 comprises a flap adapted to project outwardly from the rear of the box between the stand panels when in the outwardly folded position, to thereby prevent the stand panels folding back in towards the rear panel.
4. A box as claimed in claim 1 or claim 2, wherein the bracing means
25 comprises a flap adapted to project outwardly from the rear of the box beneath the stand panels, the flap further comprising a pair of tongues formed therein and foldable into an upright configuration whereby each tongue is positioned to present a barrier to a respective stand panel to prevent it folding back in towards the rear panel.



5. A box as claimed in claim 3 or claim 4, wherein the front panel has first and second side panels respectively attached at a fold line to first and second side edges thereof, the rear panel is attached at a fold line to the other side of the second side panel, and a base panel is attached at a fold line to the lower edge of
5 the front panel.

6. A box as claimed in claim 5, further comprising a lid panel to close the top of the box.

10 7. A box as claimed in claim 6, wherein the lid panel is attached to the upper edge of the front panel.

8. A box as claimed in any of claims 5-7, further comprising a fixing flap attached by a fold line to the side edge of the rear panel opposed to the second
15 side panel, for attachment to the first side panel.

9. A box as claimed in any of claims 5-8, further comprising fixing flaps attached at fold lines to upper and lower edges of each side panel, for attachment to the lid panel and base panel.

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10. A box as claimed in any of claims 5-9, wherein the bracing flap is attached at a fold line to an edge of the base panel remote from the front panel.

11. A box as claimed in claim 10, wherein the base panel includes one
25 or more slots, an additional base panel is attached at a fold line to the lower edge of the rear panel and includes one or more tabs projecting from the edge remote from the rear panel, whereby the or each tab fits into a corresponding slot to close the base of the box.

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THIS SHEET HAS BEEN
REPLACED

12. A box as claimed in claim 10 or claim 11, wherein the bracing flap extends over the whole width of the base panel and two cuts are made in the flap transverse to the foldline to define a central flap portion adapted to be folded upwardly in order to be positioned between the stand panels.

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13. A box as claimed in any of claims 5-9, wherein the bracing means is attached at a fold line to the lower edge of the rear panel.

14. A box as claimed in claim 7, wherein a perforation line extends
10 across the front panel, from each side edge of the front panel to an upper edge of each side panel and along the upper edge thereof to the side edge remote from the front panel, thereby allowing removal of the lid panel, an upper portion of the front panel and upper portions of the side panels to allow access to the contents of the box.

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15. A blank for forming a box as claimed in any preceding claim.

16. A blank as claimed in claim 15, formed of cardboard material or plastic material.

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17. A box substantially as hereinbefore described with reference to the accompanying drawings.

18. A blank substantially as hereinbefore described with reference to the
25 accompanying drawings.

