

Display Crate and Kit of Parts Therefor

The present invention relates to a display crate and to a kit of parts for assembling such a display crate.

Many consumers buy sneakers as fashion items. Sneakers are often acquired by individual owners to form a unique sneaker collection. There is a desire to store such collectible sneakers in a suitable storage location where the sneakers can be safely stored away from dust, exposure to sunlight, and humidity. A suitable storage device is a box. However, conventional cardboard shoe boxes are easily damaged and are not a stylish way to store and display expensive sneakers.

US-A-5197661 discloses a see-through storage container which consists of a housing for holding at least one article therein. A structure on a portion of the housing is for transmitting light, so that the at least one article can be seen within the housing as if there is no intervening material. A mechanism is provided for covering the housing to protect the at least one article. US-A-2002/0093272 is not concerned with a storage device in the form of a box which can function as a display crate, but instead relates to an assemble-in-place modular storage rack, display or cube system formed by snap together panels with alignment guides, which may also support wheels, shelves, drawers and doors. The system is assemble-in-place and may shipped and displayed for sale in a flat pack.

There is a need for a display crate which can stylishly store and display expensive sneakers.

The present invention aims at least partially to meet this need.

The present invention provides a kit of parts for a display crate for protecting and displaying a pair of sneakers, the kit comprising a plurality of individual panels for adhesive-free, tool-free, snap-fit assembly together to form a self-supporting, stackable, rigid crate, the kit comprising:

(i) a base panel having a front edge, a rear edge and two side edges extending between the front and rear edges, the front edge having a first hinge fitting;

- (ii) a front door panel having a second hinge fitting, the first and second hinge fittings being adapted to be coupled together thereby hingedly to fit a lower edge of the front door panel to the front edge of the base panel;
- (iii) a pair of side panels, each side panel having a lower edge adapted to be snap-fitted to a respective one of the side edges of the base panel, each side panel having a rear edge and an upper edge;
- (iv) a rear panel, the rear panel having a lower edge adapted to be snap-fitted to the rear edge of the base panel, and the rear panel having side edges, each side edge being adapted to be snap-fitted to the rear edge of a respective side panel, and an upper edge; and
- (v) a top panel having a front edge, a rear edge and two side edges extending between the front and rear edges, wherein the rear edge and the two side edges of the top panel are adapted to be snap-fitted, respectively, to the upper edge of the rear panel and the upper edges of the pair of side panels.

The present invention further provides a display crate for protecting and displaying a pair of sneakers, the display crate comprising a plurality of individual panels assembled together by an adhesive-free, tool-free, snap-fit assembly to form a self-supporting, stackable, rigid crate, the crate comprising:

- (i) a base panel having a front edge, a rear edge and two side edges extending between the front and rear edges, the front edge having a first hinge fitting;
- (ii) a front door panel having a second hinge fitting, the first and second hinge fittings being coupled together thereby hingedly to fit a lower edge of the front door panel to the front edge of the base panel;
- (iii) a pair of side panels, each side panel having a lower edge snap-fitted to a respective one of the side edges of the base panel, each side panel having a rear edge and an upper edge;
- (iv) a rear panel, the rear panel having a lower edge snap-fitted to the rear edge of the base panel, and the rear panel having side edges, each side edge being snap-fitted to the rear edge of a respective side panel, and an upper edge; and

(v) a top panel having a front edge, a rear edge and two side edges extending between the front and rear edges, wherein the rear edge and the two side edges of the top panel are snap-fitted, respectively, to the upper edge of the rear panel and the upper edges of the pair of side panels.

Preferred features are defined in the dependent claims.

The present invention is at least partly predicated on the finding by the present inventor that a display crate in kit form provides the advantages that the unassembled kit can be shipped and sold at minimal shipping cost. However, the consumer and purchaser can readily manually assemble the display crate at home from the kit without using adhesive or any tools. The display crate can be assembled in only about 20 seconds.

In the preferred embodiments, the resultant display crate is robust, self-supporting, stackable and rigid. In the particularly preferred embodiment, these advantages are achieved by providing that the rear panel is snap-fitted into recesses in the side panels, and that the assembled rear and side panels are snap-fitted into recesses in the base and top panels. The robustness can be enhanced by making each panel from injection moulded polymer. The panels may optionally be provided with internal reinforcement, such as struts or beams. The outside of the display crate is decorative and may be decorated with any desired two-dimensional printing or embossed surface relief.

Such a display crate is inexpensive to manufacture and ship to the consumer, yet easy to assemble and use.

The display crate has a particular application for displaying sneakers, but other articles may be stored therein. The display case also has features, uses, benefits and advantages which make it suitable to display merchandise at a point-of-sale, and so may be used as a sales and marketing tool. In addition, the device may be distributed to the public or consumers as a free advertising, marketing or merchandising tool.

Embodiments of the present invention will now be described by way of example only with reference to the accompanying drawings, in which:

Figure 1 is an exploded schematic perspective view of a plurality of panels forming a kit of parts for a display crate in accordance with a first embodiment of the present invention;

Figure 2 is a schematic perspective view of the display crate assembled from the kit of Figure 1;

Figure 3 is a schematic side view of the display crate assembled from the kit of Figure 1; and

Figure 4 schematic shows a sequence of steps side for assembly of the display crate from the kit of Figure 1, and also an enlarged view of the .

Referring to Figure 1, there is shown a kit of parts 2 for a display crate for protecting and displaying a pair of sneakers, the assembled crate 4 being shown in Figures 2 and 3. The kit 2 comprises a plurality of individual panels for adhesive-free, tool-free, snap-fit assembly together, as shown in Figure 4, to form a self-supporting, stackable, rigid crate 4.

The kit 2 comprises a base panel 6 having a front edge 18, a rear edge 20 and two side edges 22, 24 extending between the front and rear edges 18, 20. The front edge 18 has a first hinge fitting 22.

A front door panel 26 has a second hinge fitting 28. The first and second hinge fittings 22, 28 are adapted to be coupled together thereby hingedly to fit a lower edge 30 of the front door panel 26 to the front edge 18 of the base panel 6.

The first hinge fitting 22 comprises a pair of holes 32 at opposite ends of the front edge 18 of the base panel 6. As shown in detail in Figure 4, the second hinge fitting 28 comprises a pair of pivot members 34 extending outwardly in opposite directions from opposite sides of the front door panel 26. The pair of pivot members 34 is separate from the front door panel 26 and the base panel 6. Each pivot member 34 is adapted to be inserted into a respective pair of aligned holes 32, 36 in adjacent edges 38, 40 of the front door panel 26 and the base panel 6. Typically, each pivot member 34 is adapted to provide a snap fit between the pivot member 34 and at least one of the front door panel 26 and the base panel 6.

In an alternative construction, not illustrated, the first hinge fitting 22 comprises a pair of pivot members extending outwardly in opposite directions from opposite sides of the front door panel 26 and the second hinge fitting 28 comprises a pair of holes at opposite ends of the front edge of the base panel 6.

The front door panel 26 has a finger recess and/or handle 42 at an upper edge 44 of the front door panel 26 to assist opening of the front door panel 26 when the display crate 4 is assembled.

The kit 2 further comprises a pair of side panels 46, 48. Each side panel 46, 48 has a lower edge 50, 52 adapted to be snap-fitted to a respective one of the side edges 22, 24 of the base panel 6. Each side panel 48, 50 has a rear edge 54, 56 and an upper edge 58, 60.

The kit 2 further comprises a rear panel 62. The rear panel 62 has a lower edge 63 adapted to be snap-fitted to the rear edge 20 of the base panel 6. The rear panel 62 has side edges 64, 66. Each side edge 64, 66 is adapted to be snap-fitted to the rear edge 54, 56 of a respective side panel 46, 48. The rear panel 62 has an upper edge 68. The rear edges 54, 56 of the two side panels 46, 48 each have an inwardly oriented elongate recess 70, 72 for receiving therein a respective one of the side edges 64, 66 of the rear panel 62.

The kit 2 further comprises a top panel 74 having a front edge 76, a rear edge 78 and two side edges 80, 82 extending between the front and rear edges 76, 78. The rear edge 78 and the two side edges 80, 82 of the top panel 74 are adapted to be snap-fitted, respectively, to the upper edge 68 of the rear panel 62 and the upper edges 58, 60 of the pair of side panels 46, 48.

The rear edge 20 and two side edges 22, 24 of the base panel 6 each have an upwardly oriented elongate recess 88a, 88b, 88c for receiving therein the lower edges 63, 50, 52 of the rear panel 62 and side panels 46, 48 respectively. The upwardly oriented elongate recesses 88a, 88b, 88c in the base panel 6 form a common U-shaped elongate recess 90 extending around the two side edges 22, 24 and the rear edge 20 of the base panel 6.

Correspondingly, the rear edge 78 and two side edges 80, 82 of the top panel 74 each have a downwardly oriented elongate recess 92a, 92b, 92c for receiving therein the upper edges 68, 58, 60 of the rear panel 62 and side panels 46, 48 respectively. The downwardly oriented elongate recesses 92a, 92b, 92c in the top panel 74 form a common U-shaped elongate recess 94 extending around the two side edges 80, 82 and the rear edge 78 of the top panel 74.

The top panel 74 has a front stop member 84 located inwardly of the front edge 76 of the top panel 74 to act as a stop for the front door panel 26. The side panels 46, 48 each have a side stop member 96 located inwardly of a front edge 98 of the side panel 46, 48 to act as a stop for the front door panel 26.

Typically, each panel is composed of an injection moulded polymer, for example polypropylene. The panels may be provided with internal reinforcement, such as struts or beams. The outside of the display crate is decorative and may be decorated with any desired two-dimensional printing or embossed surface relief.

When it is desired to assemble the display crate 4 from the kit of parts 2, to provide a display crate for protecting and displaying a pair of sneakers, the display crate 4 can be formed by adhesive-free, tool-free, snap-fit assembly together of the plurality of individual panels of the kit 2.

In the assembly process, as shown in Figure 4, in step I as shown by arrow A, initially the base panel 6 and front door panel 26 are fitted together by coupling together the first and second hinge fittings 22, 28 by the pivot members 34 on opposite sides of the front door panel 26. The pivot members 34 are each inserted into the respective pair of the aligned holes 32, 36 in adjacent edges 38, 40 of the front door panel 26 and the base panel 6, and secured with a snap fit.

Then, in step II as shown by arrows B, the pair of side panels 46, 48 are fitted to the rear panel 62. The side edges 64, 66 of the rear panel 62 are snap-fitted to the rear edge 54, 56 of a respective side panel 46, 48,

Next, in step III as shown by arrows C, the lower edges 50, 52 of the side panels 46, 48 and the lower edge 63 of the rear panel 62 are snap-fitted into the common U-shaped elongate recess 90 of the base panel 6.

Finally, in step IV as shown by arrows D, the upper edges 58, 60 of the side panels 46, 48 and the upper edge 68 of the rear panel 62 are snap-fitted into the common U-shaped elongate recess 94 of the top panel 74.

The front door panel 26 can then be pivoted between open and closed positions to access or conceal sneakers with the display crate 4.

The display crate in kit form provides the advantages that the unassembled kit can be shipped and sold at minimal shipping cost. However, the consumer and purchaser can readily manually assemble the display crate at home from the kit without using adhesive or any tools. The display crate can be assembled in only about 20 seconds. By providing that the rear panel

is snap-fitted into recesses in the side panels, and that the assembled rear and side panels are snap-fitted into recesses in the base and top panels, the resultant display crate is robust, self-supporting, stackable and rigid. The robustness may be enhanced by making each panel from injection moulded polymer, with optional internal reinforcement.

Various modifications to the illustrated embodiments will be apparent to those skilled in the art and are intended to be included within the scope of the present invention.

Claims

1. A kit of parts for a display crate for protecting and displaying a pair of sneakers, the kit comprising a plurality of individual panels for adhesive-free, tool-free, snap-fit assembly together to form a self-supporting, stackable, rigid crate, the kit comprising:

(i) a base panel having a front edge, a rear edge and two side edges extending between the front and rear edges, the front edge having a first hinge fitting;

(ii) a front door panel having a second hinge fitting, the first and second hinge fittings being adapted to be coupled together thereby hingedly to fit a lower edge of the front door panel to the front edge of the base panel;

(iii) a pair of side panels, each side panel having a lower edge adapted to be snap-fitted to a respective one of the side edges of the base panel, each side panel having a rear edge and an upper edge;

(iv) a rear panel, the rear panel having a lower edge adapted to be snap-fitted to the rear edge of the base panel, and the rear panel having side edges, each side edge being adapted to be snap-fitted to the rear edge of a respective side panel, and an upper edge; and

(v) a top panel having a front edge, a rear edge and two side edges extending between the front and rear edges, wherein the rear edge and the two side edges of the top panel are adapted to be snap-fitted, respectively, to the upper edge of the rear panel and the upper edges of the pair of side panels;

wherein the rear edge and two side edges of the base panel each have an upwardly oriented elongate recess for receiving therein the lower edges of the rear panel and side panels respectively, the rear edges of the two side panels each have an inwardly oriented elongate recess for receiving therein a respective one of the side edges of the rear panel and the rear edge and two side edges of the top panel each have a downwardly oriented elongate recess for receiving therein the upper edges of the rear panel and side panels respectively.

2. A kit according to claim 1 wherein the first hinge fitting comprises a pair of holes at opposite ends of the front edge of the base panel and the second hinge fitting comprises a pair of pivot members extending outwardly in opposite directions from opposite sides of the front door panel.
3. A kit according to claim 2 wherein each pivot member is adapted to provide a snap fit between the pivot member and at least one of the front door panel and the base panel.
4. A kit according to any foregoing claim wherein the front door panel has a finger recess and/or handle at an upper edge of the front door panel.
5. A kit according to any foregoing claim wherein the upwardly oriented elongate recesses in the base panel form a common U-shaped elongate recess extending around the two side edges and the rear edge of the base panel.
6. A kit according to any foregoing claim wherein the downwardly oriented elongate recesses in the top panel form a common U-shaped elongate recess extending around the two side edges and the rear edge of the top panel.
7. A kit according to any foregoing claim wherein the side panels each have a side stop member located inwardly of a front edge of the side panel to act as a stop for the front door panel.
8. A kit according to any foregoing claim wherein the top panel has a front stop member located inwardly of a front edge of the top panel to act as a stop for the front door panel.
9. A kit according to any foregoing claim wherein each panel is composed of an injection moulded polymer.
10. A display crate for protecting and displaying a pair of sneakers, the display crate being formed by adhesive-free snap-fit assembly together of the plurality of individual panels of the kit according to any foregoing claim.
11. A display crate for protecting and displaying a pair of sneakers, the display crate comprising a plurality of individual panels assembled together by an adhesive-free, tool-

free, snap-fit assembly to form a self-supporting, stackable, rigid crate, the crate comprising:

- (i) a base panel having a front edge, a rear edge and two side edges extending between the front and rear edges, the front edge having a first hinge fitting;
- (ii) a front door panel having a second hinge fitting, the first and second hinge fittings being coupled together thereby hingedly to fit a lower edge of the front door panel to the front edge of the base panel;
- (iii) a pair of side panels, each side panel having a lower edge snap-fitted to a respective one of the side edges of the base panel, each side panel having a rear edge and an upper edge;
- (iv) a rear panel, the rear panel having a lower edge snap-fitted to the rear edge of the base panel, and the rear panel having side edges, each side edge being snap-fitted to the rear edge of a respective side panel, and an upper edge; and
- (v) a top panel having a front edge, a rear edge and two side edges extending between the front and rear edges, wherein the rear edge and the two side edges of the top panel are snap-fitted, respectively, to the upper edge of the rear panel and the upper edges of the pair of side panels;

wherein the rear edge and two side edges of the base panel each have an upwardly oriented elongate recess which receives therein the lower edges of the rear panel and side panels respectively, the rear edges of the two side panels each have an inwardly oriented elongate recess which receives therein a respective one of the side edges of the rear panel and the rear edge and two side edges of the top panel each have a downwardly oriented elongate recess which receives therein the upper edges of the rear panel and side panels respectively.

12. A display crate according to claim 11 wherein the first hinge fitting comprises a pair of holes at opposite ends of the front edge of the base panel and the second hinge fitting comprises a pair of pivot members extending outwardly in opposite directions from opposite sides of the front door panel.

13. A display crate according to claim 12 wherein each pivot member provides a snap fit between the pivot member and at least one of the front door panel and the base panel.
14. A display crate according to any one of claims 11 to 13 wherein the front door panel has a finger recess and/or handle at an upper edge of the front door panel.
15. A display crate according to any one of claims 11 to 14 wherein the upwardly oriented elongate recesses in the base panel form a common U-shaped elongate recess extending around the two side edges and the rear edge of the base panel.
16. A display crate according to any one of claims 11 to 15 wherein the downwardly oriented elongate recesses in the top panel form a common U-shaped elongate recess extending around the two side edges and the rear edge of the top panel.
17. A display crate according to any one of claims 11 to 16 wherein the side panels each have a side stop member located inwardly of a front edge of the side panel which acts as a stop for the front door panel.
18. A display crate according to any one of claims 11 to 17 wherein the top panel has a front stop member located inwardly of a front edge of the top panel which acts as a stop for the front door panel.
19. A display crate according to any one of claims 11 to 18 wherein each panel is composed of an injection moulded polymer.