

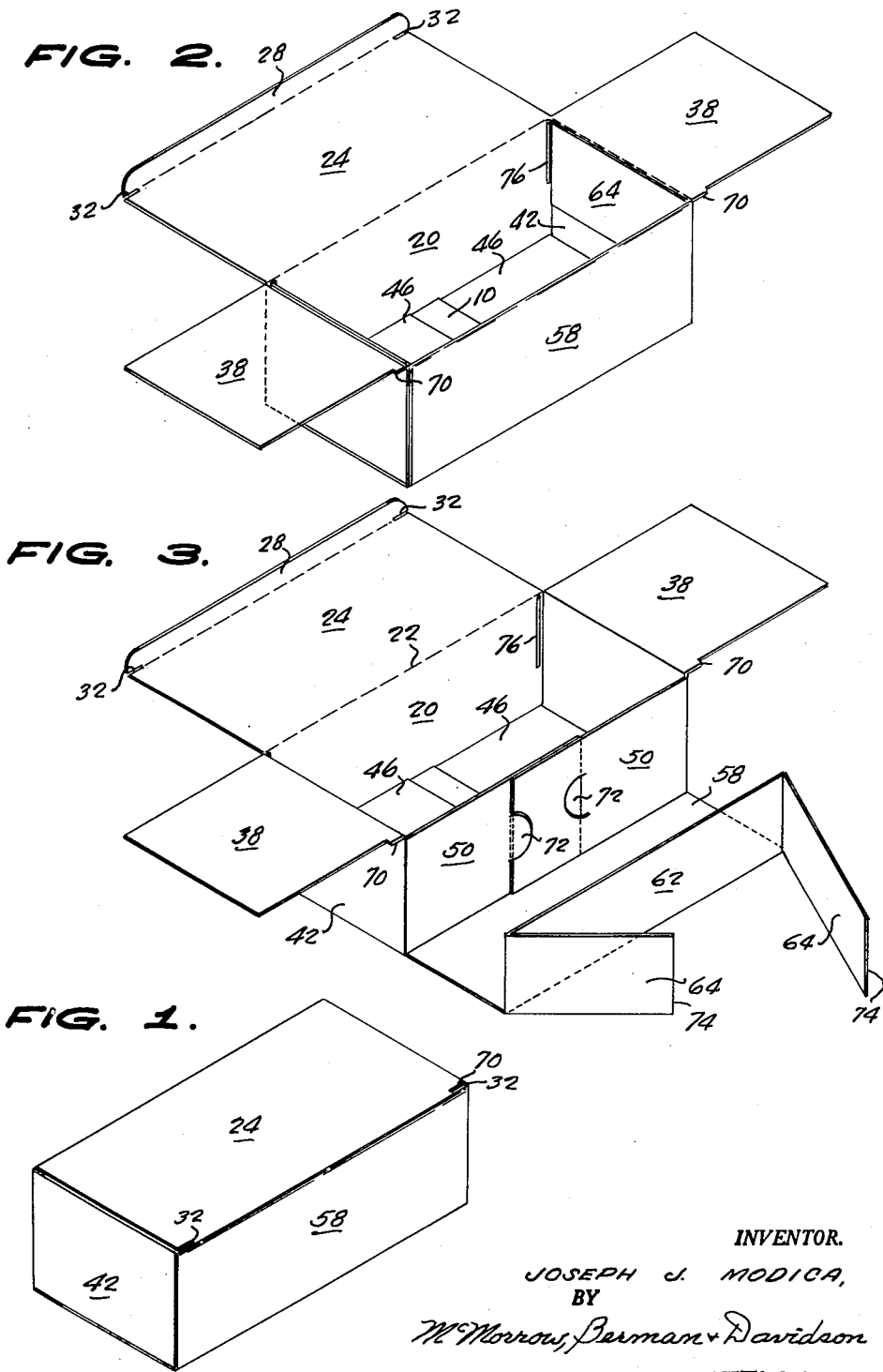
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J. J. MODICA
KNOCKDOWN CARTON

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2 Sheets-Sheet 1



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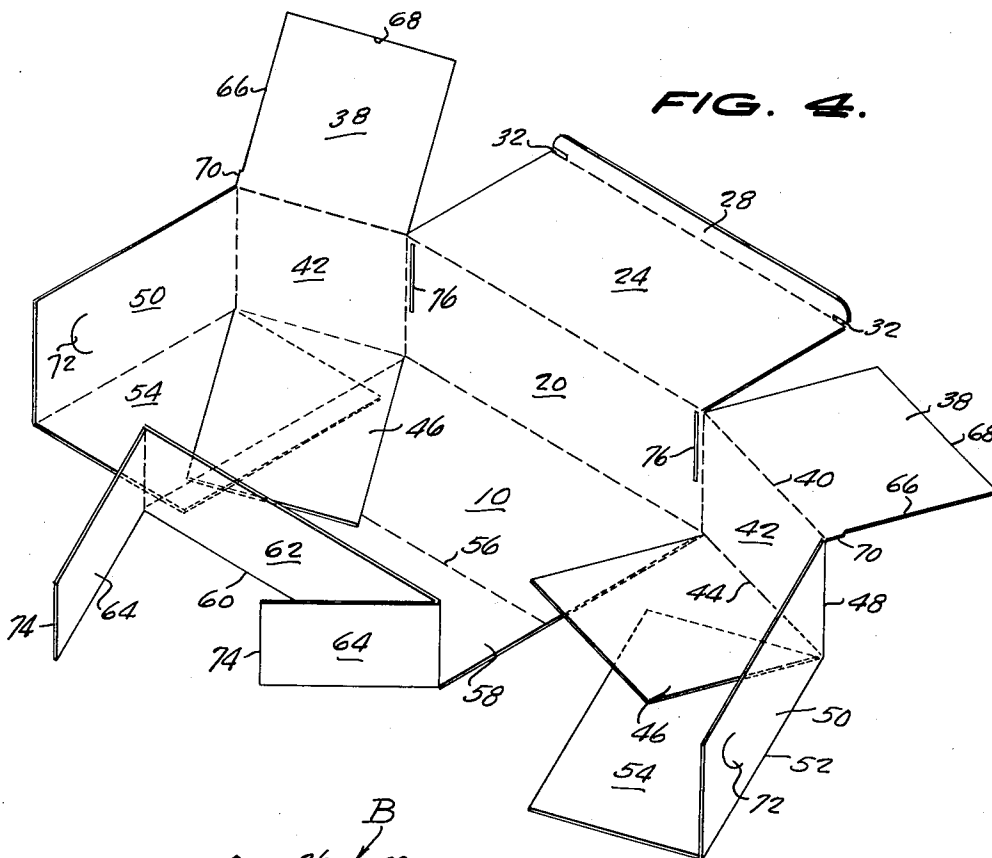


FIG. 4.

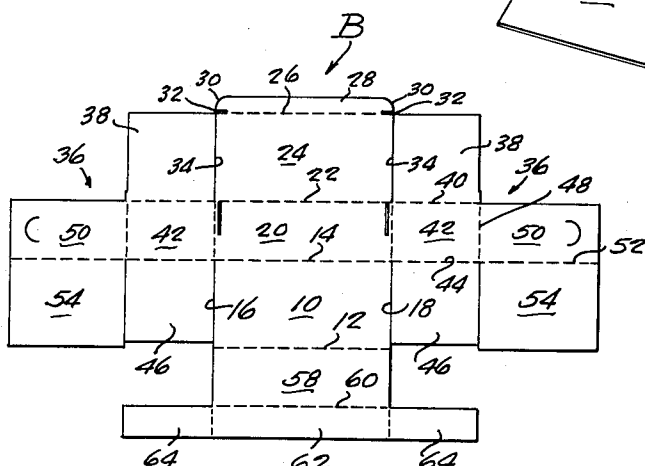


FIG. 5.

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KNOCKDOWN CARTON

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9 Claims. (Cl. 229-38)

This invention relates to a novel knockdown, glueless carton.

The primary object of the invention is the provision of a generally superior carton of the kind indicated which is adapted to be economically shipped and stored in flat form, and which can be quickly and easily set up, when needed, by unskilled persons.

Another object of the invention is the provision of a carton of the character indicated above which is adapted to be economically made of a single blank of sheet material.

A further object of the invention is the provision of a rugged and substantially leak-proof carton of the character indicated above, which has a multi-ply and hence an unusually strong and rigid bottom.

Other important objects and advantageous features of the invention will be apparent from the following description and the accompanying drawings, wherein, for purposes of illustration only a specific form of the invention is set forth in detail.

In the drawings:

FIGURE 1 is a perspective view of a carton of the present invention in set-up and closed condition;

FIGURE 2 is a perspective view of the carton in open condition;

FIGURE 3 is a perspective view of the carton partially set-up;

FIGURE 4 is a perspective view showing the carton in process of being set up; and

FIGURE 5 is a plan view, on a reduced scale, of the blank from which the carton is formed.

Referring in detail to the drawings, wherein like numerals designate like parts throughout the several views, the illustrated carton is made from a single blank B, shown in FIGURE 5, of suitable relatively rigid sheet material, such as paperboard or the like, which comprises an elongated rectangular main bottom panel 10 which is bounded by front and rear longitudinal fold lines 12 and 14 and left- and right-hand transverse cuts 16 and 18, respectively.

The rear fold line 14 connects a rear wall panel 20 to the main bottom panel 10, and a longitudinal fold line 22 connects a cover panel 24 on the upper edge of the rear wall. Extending along and spaced from the free edge of the cover panel 24 is a longitudinal fold line 26 which defines a narrow cover panel flap 28, whose corners are rounded, as indicated at 30. Longitudinal slots 32 are provided in the side edges of the cover panel 24, in line with the fold line 26.

The cover panel 24 is separated by transverse cuts 34 from compound panel components 36 which comprise closure panels 38 which are connected by transverse fold lines 40 to the upper edges of end wall panels 42. Transverse fold lines 44 connect the lower edges of the end wall panels 42 with upper auxiliary bottom panels 46 which are each shorter than half the length of the main bottom panel 10.

Transverse fold lines 48 connect front wall forming panels 50 to the ends of the end wall panels 42 remote from the rear wall panel 20. Longitudinal fold lines 52 connect lower auxiliary bottom panels 54 to the lower edges of the front wall forming panels 50. The front wall forming panels 50 are each larger than half the length of the carton, so that they overlap each other, as shown in FIGURE 3.

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A longitudinal fold line 56 connects to the front edge of the main bottom panel 10 on outer front wall panel 58, of the full length of the carton. Another longitudinal fold line 60, spaced parallel from the fold line 56 connects a full length overlap panel 62 to the upper edge of the outer front wall panel 58. The overlap panel 62 is narrower than the panel 58 and has similarly narrow longitudinal rectangular retaining legs 64 on its ends.

As shown in FIGURES 1 to 3, the closure panels 38 have their forward edges 66 cut away, from their free end edges 68, to points near the fold lines 40, so as to define short lugs 70, which, in the closed position of the cover panel 24 and the closure panels 38, engage in the cover panel slots 32.

Semi-circular cuts 70, provided in the front wall forming panels 50, provide detent tabs 72 for holding the panels 50 in mutually overlapped condition, as shown in FIGURE 3.

As shown in FIGURES 3 and 4, the carton is set up by bringing the compound panel components 36 forwardly, with the rear wall panel 20 erected, and then inwardly so as to put the lower panels 54 upon the bottom wall panel 10, with the upper panels 46 on top of the panels 54, then overlapping and securing the wall panels 50. The outer front wall panel 58 is then erected and the overlap panel 62 engaged downwardly behind the overlap panels 50, with the legs 64 engaged with the inward sides of the end wall panels 42. The free end edges 74 of the legs 64 are then securably engaged between the end wall panels 42 and vertical ribs 76 formed in the rear wall panel 20 and projecting forwardly therefrom.

It will be understood from the foregoing that, except for a minor central transverse portion of the bottom of the carton, the bottom is composed of three plies of material, and that the front wall of the carton is in effect compound of three plies of material, and the end walls of two plies of material, for unusual strength and rigidity.

Although there has been shown and described herein a preferred form of the invention, it is to be understood that the invention is not necessarily confined thereto, and that any change or changes in the structure of and in the relative arrangements of components thereof are contemplated as being within the scope of the invention as defined by the claims appended hereto.

What is claimed is:

1. A knockdown carton comprising a main bottom panel having front and rear longitudinal edges and end edges, a rear wall panel on said rear edge having a cover panel on its upper edge, an outer front wall panel on the front edge of the bottom panel, an overlap panel on the longitudinal edge of the outer front wall panel remote from the main bottom panel, longitudinal legs on the ends of the overlap panel, compound panel components on the ends of the rear wall panel comprising end wall panels having closure panels on their upper edges and upper supplementary bottom panels on their lower edges, front wall forming panels on the ends of the end wall panels remote from the rear wall, and lower supplementary bottom panels on the lower edges of the front wall forming panels.

2. A knockdown carton comprising a main bottom panel having front and rear longitudinal edges and end edges, a rear wall panel on said rear edge having a cover panel on its upper edge, an outer front wall panel on the front edge of the bottom panel, an overlap panel on the longitudinal edge of the outer front wall panel remote from the main bottom panel, longitudinal legs on the ends of the overlap panel, compound panel components on the ends of the rear wall panel comprising end wall panels having closure panels on their upper edges and upper supplementary bottom panels on their lower edges, front wall forming panels on the ends of the end wall

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5 from the main bottom panel, longitudinal legs on the ends of the overlap panel, compound panel components on the ends of the rear wall panel comprising end wall panels having closure panels on their upper edges and upper supplementary bottom panels on their lower edges, 10 front wall forming panels on the ends of the end wall panels remote from the rear wall, and lower supplementary bottom panels on the lower edges of the front wall forming panels, said panels and said legs being parts of a single blank, the lower supplementary bottom panels 15 being engaged with the upper surface of the main bottom panel, the upper supplementary bottom panels being engaged with the lower supplementary bottom panels, with the front wall forming panels overlapped along the front edge of the main bottom panel, said front wall forming 20 panels having tabs securing the same together, the outer front wall panels being engaged with the front surfaces of the front wall forming panels, and the overlap panel being engaged over the upper edges of the front wall forming panels and engaged with their rear surfaces, said 25 legs being engaged with the inner surfaces of the end wall panels.

7. A knockdown carton comprising a main bottom panel having front and rear longitudinal edges and end edges, a rear wall panel on said rear edge having a cover panel on its upper edge, an outer front wall panel on the front edge of the bottom panel, an overlap panel on the longitudinal edge of the outer front wall panel remote from the main bottom panel, longitudinal legs on the ends of the overlap panel, compound panel components on the ends of the rear wall panel comprising end wall panels having closure panels on their upper edges and upper supplementary bottom panels on their lower edges, front wall forming panels on the ends of the end wall panels remote from the rear wall, and lower supplementary bottom panels on the lower edges of the front wall forming panels, said panels and said legs being parts of a single blank, the lower supplementary bottom panels being engaged with the upper surface of the main bottom panel, the upper supplementary bottom panels being engaged with the lower supplementary bottom panels, with the front wall forming panels overlapped along the front edge of the main bottom panel, said front wall forming panels having tabs securing the same together, the outer front wall panels being engaged with the front surfaces of the front wall forming panels, and the overlap panel being engaged over the upper edges of the front wall forming panels and engaged with their rear surfaces, said legs being engaged with the inner surfaces of the end wall panels, said legs having free ends engaged with the rear wall panels.

8. A knockdown carton comprising a main bottom panel having front and rear longitudinal edges and end edges, a rear wall panel on said rear edge having a cover panel on its upper edge, an outer front wall panel on the front edge of the bottom panel, an overlap panel on the longitudinal edge of the outer front wall panel remote from the main bottom panel, longitudinal legs on the ends of the overlap panel, compound panel components on the ends of the rear wall panel comprising end wall panels having closure panels on their upper edges and upper supplementary bottom panels on their lower edges, front wall forming panels on the ends of the end wall panels remote from the rear wall, and lower supplementary bottom panels on the lower edges of the front wall forming panels, said panels and said legs being parts of a single blank, the lower supplementary bottom panels being engaged with the upper surface of the main bottom panel, the upper supplementary bottom panels being engaged with the lower supplementary bottom panels, with the front wall forming panels overlapped along the

6. A knockdown carton comprising a main bottom panel having front and rear longitudinal edges and end

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front edge of the main bottom panel, said front wall forming panels having tabs securing the same together, the outer front wall panels being engaged with the front surfaces of the front wall forming panels, and the overlap panel being engaged over the upper edges of the front wall forming panels and engaged with their rear surfaces, said legs being engaged with the inner surfaces of the end wall panels, said legs having free ends engaged with the rear wall panels, and vertical ribs projecting forwardly from the rear wall panel and spaced from the end wall panels, the free ends of the legs being engaged between the ribs and the end wall panels.

9. A knockdown carton comprising a main bottom panel having front and rear longitudinal edges and end edges, a rear wall panel on said rear edge having a cover panel on its upper edge, an outer front wall panel on the front edge of the bottom panel, an overlap panel on the longitudinal edge of the outer front wall panel remote from the main bottom panel, longitudinal legs on the ends of the overlap panel, compound panel components on the ends of the rear wall panel comprising end wall panels having closure panels on their upper edges and upper supplementary bottom panels on their lower edges, front wall forming panels on the ends of the end wall panels remote from the rear wall, and lower supplementary bottom panels on the lower edges of the front wall forming panels, said panels and said legs being parts of a single blank, the lower supplementary bottom panels being engaged with the upper surface of the main bottom panel, the upper supplementary bottom panels being en-

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gaged with the lower supplementary bottom panels, with the front wall forming panels overlapped along the front edge of the main bottom panel, said front wall forming panels having tabs securing the same together, the outer front wall panels being engaged with the front surfaces of the front wall forming panels, and the overlap panel being engaged over the upper edges of the front wall forming panels and engaged with their rear surfaces, said legs being engaged with the inner surfaces of the end wall panels, said legs having free ends engaged with the rear wall panels, and vertical ribs projecting forwardly from the rear wall panel and spaced from the end wall panels, the free ends of the legs being engaged between the ribs and the end wall panels, a cover flap on the free edges of the cover panel at the juncture of the cover flap therewith, said closure panels having forward edges having lugs which engage in the slots in the closed position of the cover panel.

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