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Wilson

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[54] **RECEPTACLE**

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[52] **U.S. Cl.** ..... **229/34 R**

[51] **Int. Cl.** **B65d 5/22**

[58] **Field of Search** ..... 229/34 R, 31, 33

[56] **References Cited**

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Attorney, Agent, or Firm—Jessup & Beecher

[57] **ABSTRACT**

A nestable pasteboard receptacle is provided which has particular utility in the handling of mail, both in conjunction with wheeled racks in which the receptacles may be stacked for the transport of mail from a main post office to sub-station post offices, or in conjunction with special cartons in which the mail may be shipped by air, for example, throughout the country and the world. The receptacle of the invention is intended to replace plastic type prior art receptacles, which are presently in use. The receptacle of the invention has a folded construction, and it is made from a single pasteboard blank to provide a rigid rectangular tray. The sides of the tray have double panels and mating projections and slots, so that the entire tray may be formed without tne need for adhesives. The ends of the tray have integral flaps which are received between the side panels to hold the ends in an upright position. Additional turned-over upper panels are provided on each end of the receptacle to constitute handles and supports.

2 Claims, 5 Drawing Figures

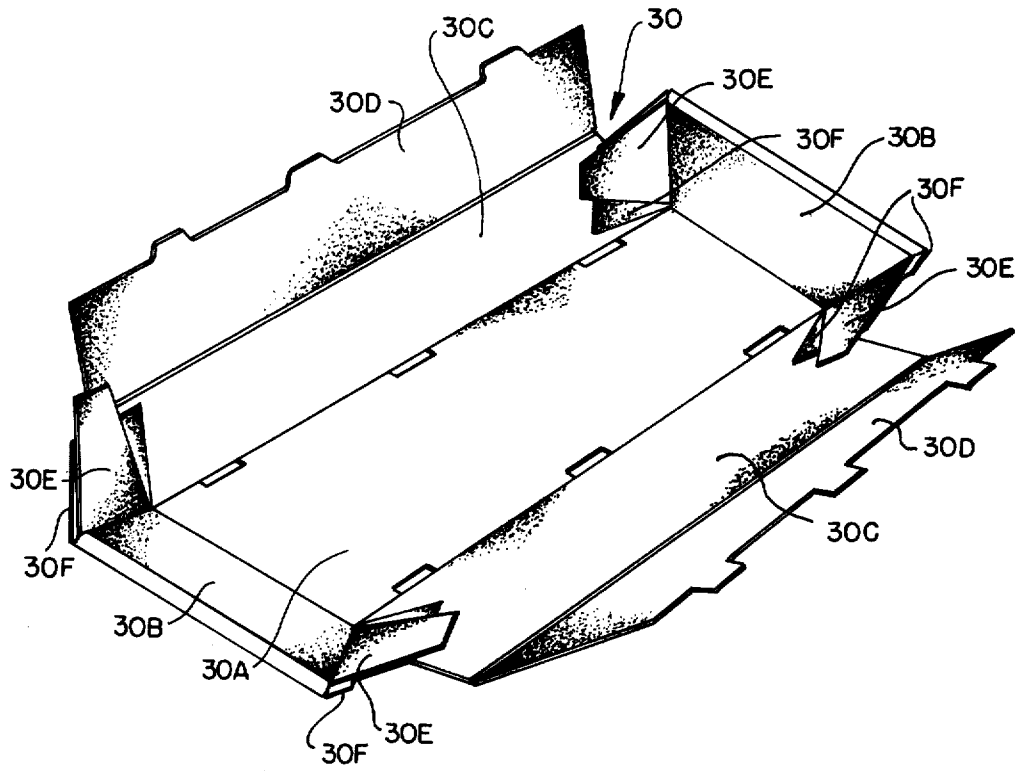


FIG. 1

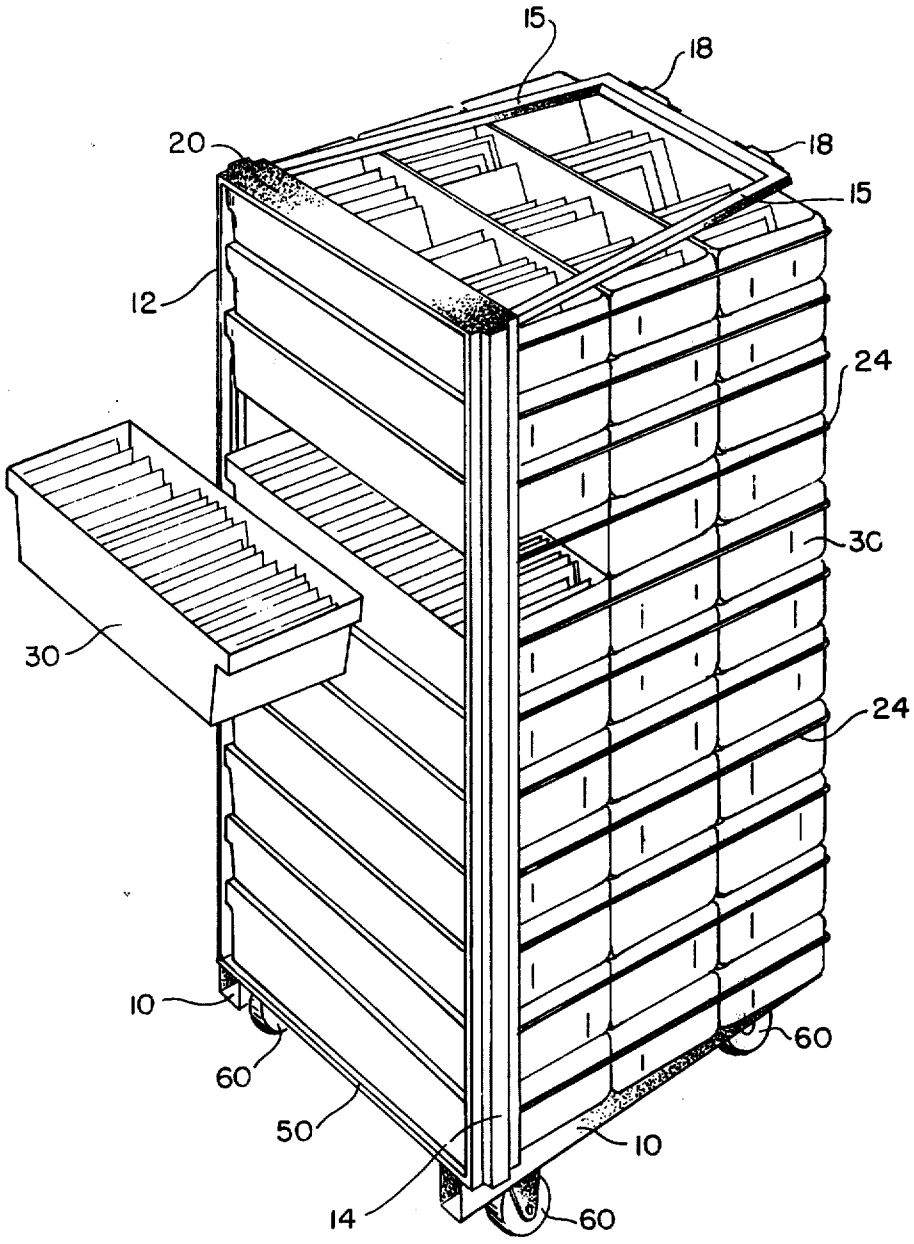


FIG. 2

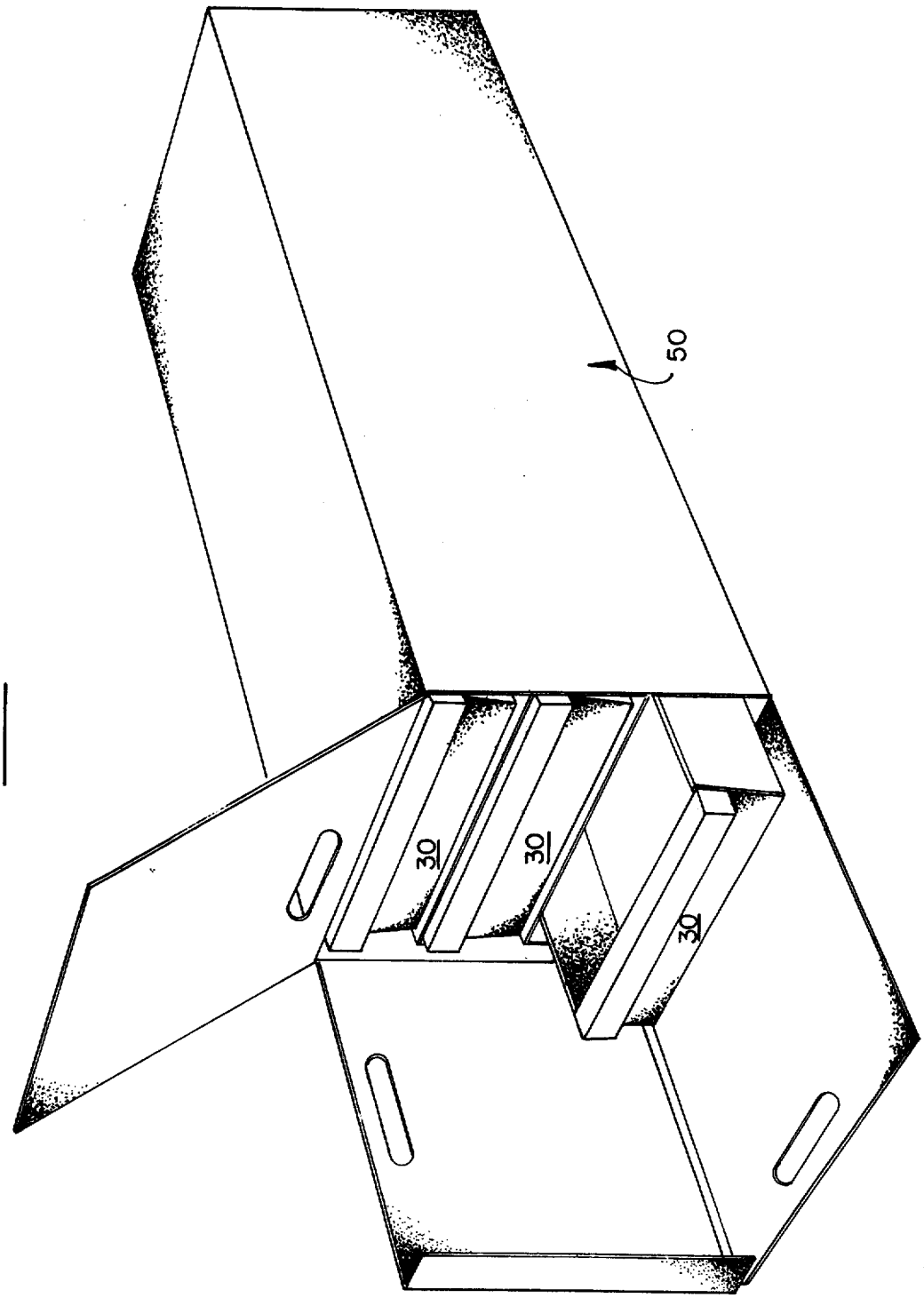


FIG. 3

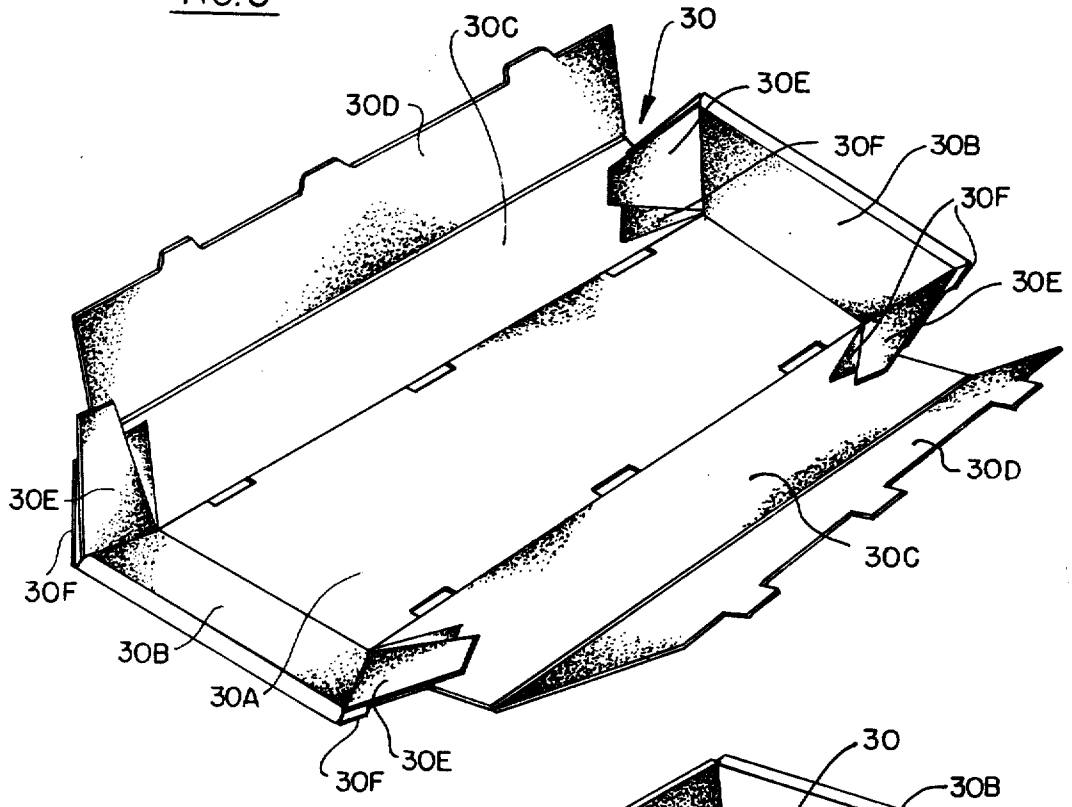

30C
30
30D
30E
30F
30B
30F
30E
30E
30D
30C
30F
30B
30A
30E
30F

FIG. 4

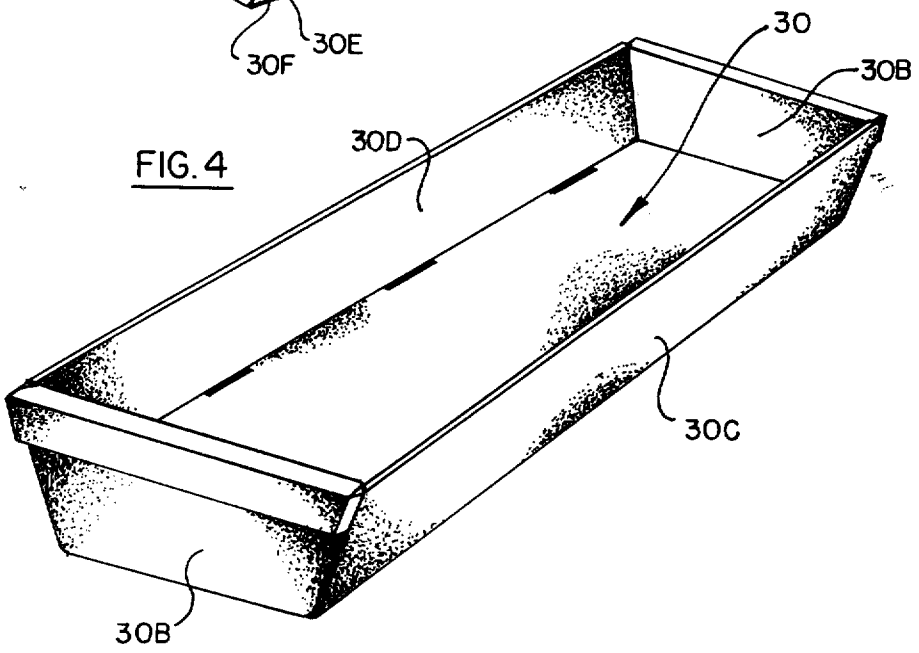
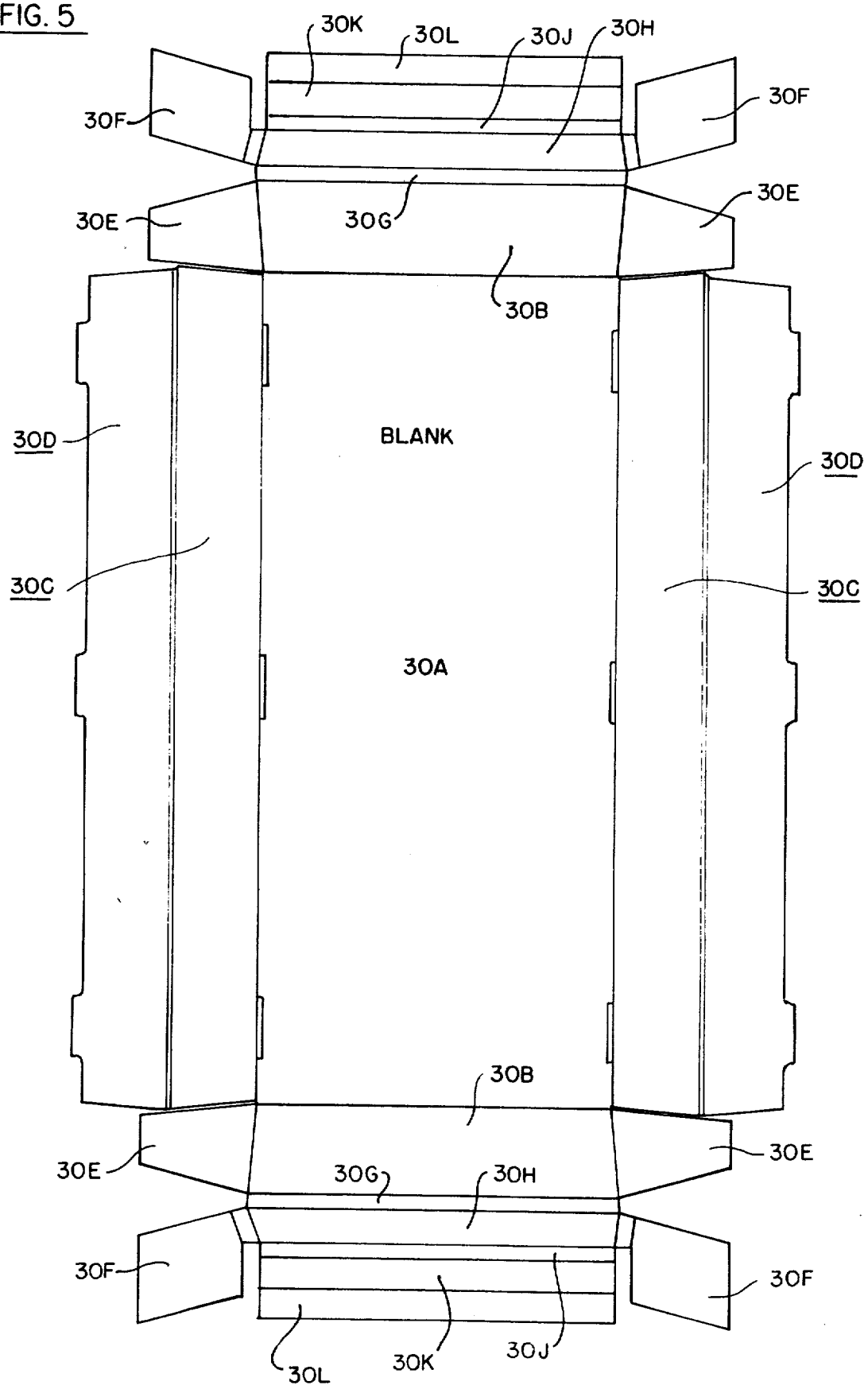

30
30B
30D
30C
30B

FIG. 5


30K
30L
30J
30H
30F
30F
30E
30E
30G
30B
30D
BLANK
30D
30C
30C
30A
30B
30E
30E
30G
30H
30F
30F
30L
30K
30J

RECEPTACLE

BACKGROUND OF THE INVENTION

The pasteboard receptacle, or tray, of the invention, as noted above has utility in carrying mail from a main post office to sub-station post offices, and for the shipment of mail by air. The tray is intended to carry the mail in a side-stacked position within each tray. When empty, the trays may be nested within one another to conserve space. It will become evident as the description proceeds, that although the tray of the invention has particular utility in the transportation and distribution of mail, it has general utility wherever a rigid, sturdy, and yet inexpensive tray is required.

Copending application Ser. No. 307,812 filed Nov. 20, 1972, describes a vehicle which has particular utility for carrying trays of sorted, or partially sorted mail, from a main post office to sub-station post offices. The vehicle described in the copending appplication includes a wheeled rack in which the trays of sorted, or partially sorted, mail are supported in a tiered condition. The trays of the invention are particularly suited for use in conjunction with such a vehicle. In addition, as referred to above, a plurality of loaded trays, each constructed in accordance with the invention, may be stacked, and encased in a special carton for shipment by air, for example, throughout the country and the world.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a perspective representation of a wheeled rack similar to the rack described in the copending application, and loaded with mail trays constructed in accordance with the concepts of the invention;

FIG. **2** is a perspective representation of a carton containing a plurality of laoded trays, each constructed in accordance with the invention, and stacked on top of one another within the carton;

FIG. **3** is a perspective representation of one embodiment of the invention, showing the tray in a partially formed condition;

FIG. **4** is a representation of the tray of FIG. **3**; showing the tray in a fully formed condition; and

FIG. **5** is a plan view of a pasteboard blank from which the tray of the invention may be formed.

DETAILED DESCRIPTION OF THE ILLUSTRATED EMBODIMENT

The vehicle shown in FIG. **1**, as noted above may be of the general type described and claimed in the copending application. The vehicle includes a lower U-shaped frame member **10** having side legs which diverge outwardly from the rear of the vehicle to define an open front side, and which includes a bight portion, not shown, that extends across the rear side of the vehicle. The vehicle of FIG. **1** also includes two upright posts **12** and **14** which are attached to the U-shaped member **10** at the front corners of the vehicle, and which extend upwardly, as shown.

A transverse brace **20** extends across the upper ends of the posts **12** and **14**. An upper U-shaped member **15** is attached to the posts **12** and **14**. A pair of rear posts **16** and **18** extend upwardly between the lower U-shaped member **10** and the upper U-shaped member **15**. A plurality of spaced and parallel horizontal U-shaped tray-supporting wires **24** are attached to the upright posts **12, 14, 16** and **18**, as shown. The wires **24**

support trays such as the trays of the present invention, as designated **30** in FIG. **1**. The rectangular, pasteboard trays **30** of the invention are supported in a tiered condition within the vehicle, as shown. The trays **30** are supported on the respective wires **24**, as shown in FIG. **1**, by their handle portions at each end of the tray. The rectangular trays **30** are shaped to have outwardly flared sides and ends, as shown in FIG. **4**, so that they may be nested into one another, when not in use.

As mentioned above, the mail from a main post office may be transported to sub-stations in the trays **30**, with the trays being supported in the vehicle on the wires **24**, as shown in FIG. **1**. On the return trip to the main post office, the trays may be removed and nested. For air shipments of mail, for example, the trays **30** may be enclosed in an appropriate carton designated **50** in FIG. **2**.

The trays themselves have the construction shown in FIGS. **3–5**. Specifically, each tray is formed from a single blank, such as shown in FIG. **5**. Each tray **30** includes, for example, a rectangular panel **30a** which forms the bottom for the tray. As shown in FIGS. **3** and **4**, a series of slots extend along each side edge of the bottom **30**. The tray also includes a pair of up-turned side panels **30*c*** which are formed integral with the respective side edges of the bottom panel **30*a***. A further pair of side panels **30*d*** are formed integral with the outer edges of the respective side panels **30*c***, and the panels **30*d*** are turned down to co-act with the respective innerfaces of the panels **30*c***, as best shown in FIG. **4**. The panels **30*d*** have projections at their outer edges, and these projections extend into the slots in the side edges of the bottom **30*a***, so that the sides of the tray may be held rigid in an upright position without the need for glueing, or for any other reinforcing means.

A pair of end panels **30*b*** is formed integral with the end edges of the bottom panel **30*a***, and the end panels **30*b*** are turned up as best shown in FIG. **4**, so as to constitute ends for the tray. The end panels **30*b*** have flaps **30*e*** formed at each end, and these flaps are received frictionally between the panels **30*d*** and **30*c*** at each side of the tray, so that the end panels **30*b*** may be held in their upright position.

Additionally, and as shown in FIG. **5**, a further series of panels **30*h***, **30*k*** and **30*i*** are positioned at the outer edge of each of end panels **30*b***. In each case, the panel **30*h*** is hinged to the adjacent panel **30*b*** by an integral hinge **30*g*** and the panel **30*k*** is hinged to the adjacent panel **30*h*** by an integral hinge **30*j***. The panels **30*h***, **30*k*** and **30*i*** are turned into one another and around the outer edge of the adjacent panels **30*b*** to form end handles for the tray, as best shown in FIG. **4**, which are also used to support the tray on the wires of the receptacle of FIG. **1**. End flaps **30*f*** are provided at each end of the panels **30h**, so that the panels **30*h***, **30*k*** and **30*i*** may be held rigidly in place in the configuration shown in FIG. **4**, and without the need for glueing, or other reinforcing means.

The invention provides, therefore, a rigid and rugged receptacle which may be composed of pasteboard, or the like, and which is particularly, although not exclusively, suited for the transportation of mail. The receptacle of the invention has the feature in that it can be made relatively quickly and inexpensively, and it requires no adhesively attached joints to maintain it in its rigidly assembled condition. Because of this, the trays may be shipped in large quantities as flat blanks, and

can be assembled at the point of receipt, if so desired. Also, trays are configured to have a flared configuration, so that they may be nested into one another, when empty.

It will be appreciated that although a particular embodiment of the invention has been shown and describe, modifications may be made. It is intended in the claims to cover the modifications which come within the spirit and scope of the invention.

What is claimed is:

1. A rectangular receptacle formed of pasteboard, or the like, and intended to be supported in a tiered condition on wires on a wheeled rack, comprising: a first rectangular panel forming a bottom for the receptacle and having a series of slots extending along each side thereof; a first pair of up-turned rectangular panels integral with the respective side edges of said first rectangular panel and forming sides for the receptacle; a second pair of down-turned rectangular panels integral with the respective outer side edges of the panels of the first pair and co-acting with the respective inner faces of the panels of the first pair; a series of projections integral with the outer side edge of each panel of the second pair extending into said slots to maintain the sides of the receptacle in an upright position; a third pair of

up-turned rectangular panels integral with the respective end edges of said first rectangular panel and forming ends for the receptacle; a pair of side flaps integral with the respective end edges of each of the panels of the third pair and received between the panels of the first and second pairs to hold the panels of the third pair in an upright position; a fourth pair of down-turned panels integral with the outer edge of each panel of the third pair, a fifth pair of up-turned panels integral with the outer edge of each panel of the fourth pair and positioned between and in surface engagement with the panels of the fourth pair and the panels of the third pair to form handles for the receptacle and supports for suspending the receptacle from the wires of the wheeled rack, and end flaps integral with the end edges of each of these panels of the fourth pair and received between the panels of the first and second pair to hold the panels of the fifth pair turned within the panels of the fourth pair.

2. The receptacle defined in claim 1, in which the sides and ends of the receptacle are flared outwardly from the bottom, so that the receptacle may be nested into other like receptacles.

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