

[72] Inventor **Wallace B. Daugherty**
715 West Elm St., Arlington Heights, Ill.
60004
[21] Appl. No. **45,012**
[22] Filed **June 10, 1970**
[45] Patented **Dec. 21, 1971**
Original application Oct. 9, 1967, Ser. No. 673,712, now Patent No. 3,517,868.
Divided and this application June 10, 1970, Ser. No. 45,012

2,125,246 7/1938 Meyer 224/45 E
Primary Examiner—Gerald M. Forlenza
Assistant Examiner—Jerold M. Forsberg
Attorney—Burmeister, Palmatier & Hamby

- [54] **CARRIERS FOR FOOD PLATES AND THE LIKE**
10 Claims, 4 Drawing Figs.
- [52] U.S. Cl..... 224/45 G,
229/52 B, 224/45 P
- [51] Int. Cl..... B65d 5/46,
B65d 5/48
- [50] Field of Search..... 224/45 AB,
45 F, 45 G, 45 H, 45 J, 45 K, 48 F, 45 P; 248/174;
108/111; 211/135; 229/52 B
- [56] **References Cited**
UNITED STATES PATENTS
2,033,526 3/1936 Kinkenon 224/45 D

ABSTRACT: The carrier, made of foldable material, such as corrugated cardboard, solid fiberboard, paperboard, molded pulp, or various solid or foamed plastics, or laminates of these or other materials, for example, comprises a bottom wall, first and second end walls extending upwardly from said bottom wall, and a handle extending between said first and second end walls, said handle having a horizontal panel and downwardly folded stiffening flanges thereon. The handle is folded from one end wall and is adapted to extend through an opening in the other end wall. The handle and the opening are preferably triangular in shape. Locking means are preferably provided to retain the handle in the opening. Each of the end walls may be provided with vertical retaining flanges folded toward the opposite end wall. The end walls and the retaining flanges may be formed with a series of slots to hold plates or the like. The carrier comprises a top panel folded from said second end wall and a vertical panel folded downwardly from said top panel. The vertical panel is formed with a second opening for receiving the handle. Locking tabs are preferably provided to hold the various retaining flanges in their folded positions.

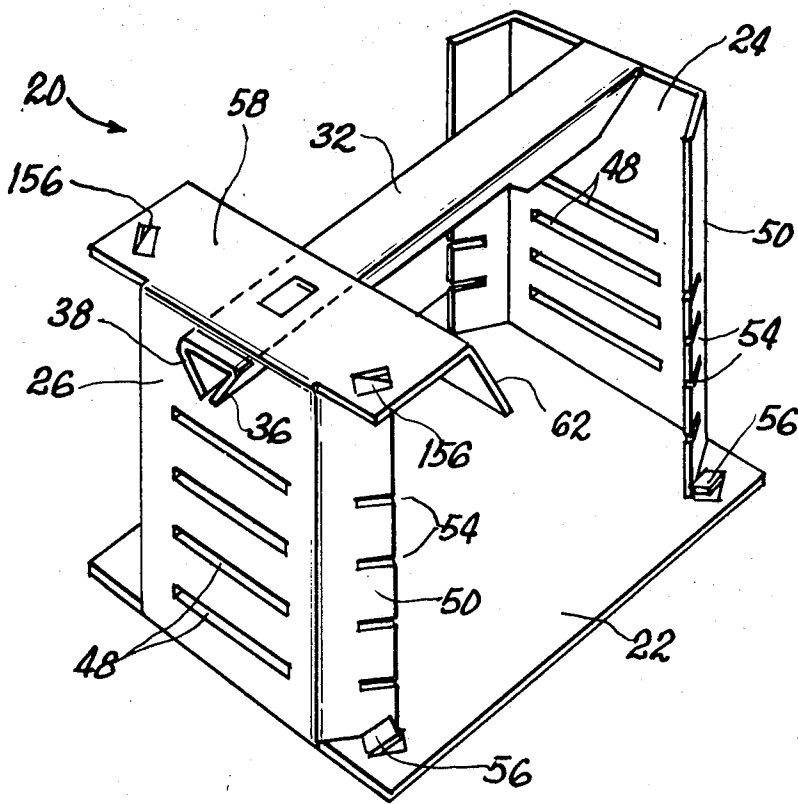


FIG. 1

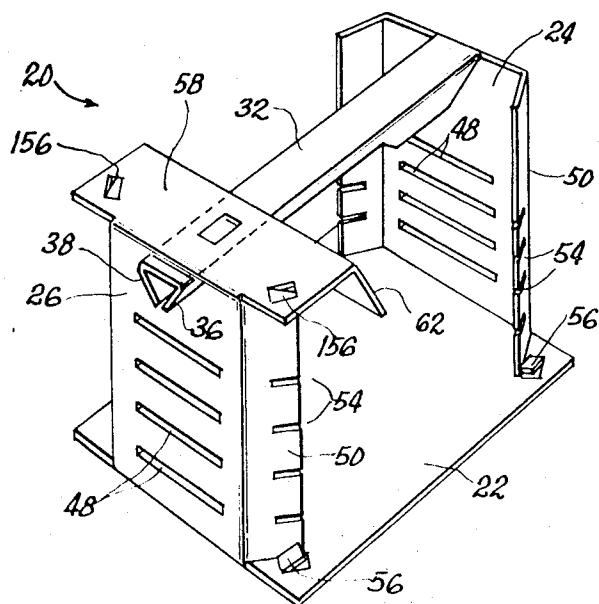


FIG. 2

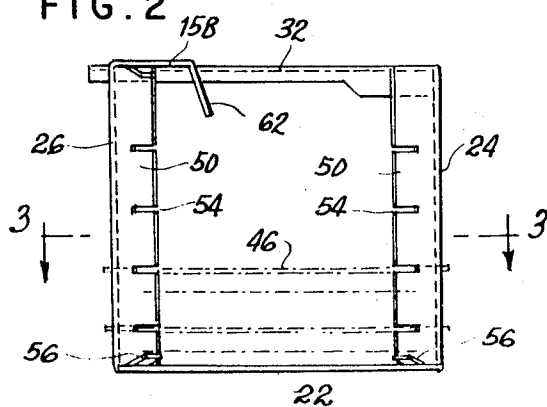


FIG. 3

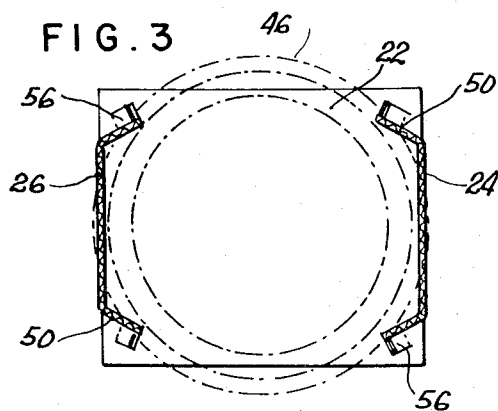
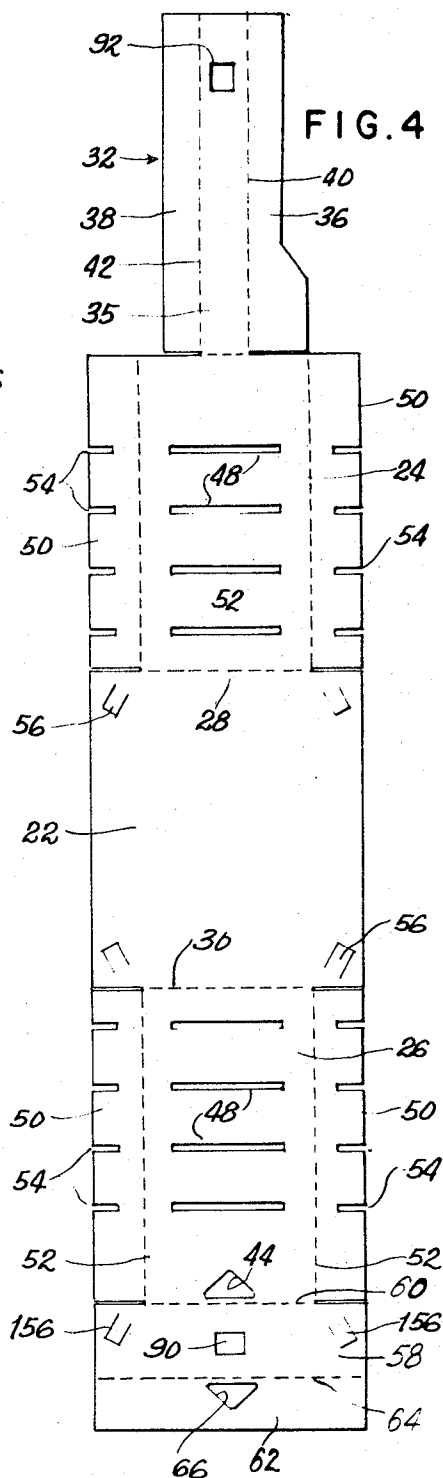


FIG. 4



CARRIERS FOR FOOD PLATES AND THE LIKE

This application is a division of my copending application, Ser. No. 673,712, filed Oct. 9, 1967 now U.S. Pat. No. 3,517,868.

This invention relates to carriers adapted to hold food plates and the like. Such carriers are extremely useful for restaurants, food stands, and the like, which sell food to be carried out.

Various carriers have been provided to hold carryout food, but a need has existed for carriers having greater capacity and efficiency, which nevertheless are easier for the customers to use.

The present invention provides a carrier having a handle which enables the customer to grasp and firmly hold the carrier in one hand, so that the other hand is free to perform other necessary tasks, such as opening a car door, for example. The carrier of the present invention provides large capacity, so that several food plates may be held in one carrier. The carrier is stable and strong so that there is no danger of spilling or dropping the items being carried. For convenient storage, the carrier is arranged so that it may be folded flat. The carrier is easy to erect from the folded blank. The carrier may be made of low-cost materials, such as plain or corrugated cardboard, solid fiber board, paperboard, molded pulp, chip board, or various solid or foamed plastics.

In general, the carrier preferably comprises a bottom wall, first and second end walls projecting upwardly therefrom, a handle extending between the end walls, and means connecting the handle to the upper portions of the end walls. The handle preferably comprises an elongated generally horizontal panel and a pair of stiffening flanges folded therefrom.

The handle is foldably connected to the first end wall and is received in an opening in the second end wall. The handle and the opening are preferably triangular in shape. Locking means are also preferably provided to secure the handle to the second end wall.

The carrier preferably comprises vertical retaining flanges folded inwardly from either or both of the end walls. Horizontal slots may be formed in the end walls or the retaining flanges to hold a series of food plates. Locking devices are preferably provided to hold the retaining flanges in their folded positions.

The carrier preferably comprises a top panel foldably connected to the second end wall, and a vertical panel extending downwardly from the top panel. The handle is received in a second opening formed in the vertical panel. This construction increases the rigidity of the carrier.

Various other objects, features and advantages of the present invention will appear from the following description, taken with the accompanying drawings, in which:

FIG. 1 is a perspective view of a plate carrier, constituting an illustrative embodiment of the present invention.

FIG. 2 is a side elevation of the carrier of FIG. 1.

FIG. 3 is a horizontal section, taken generally along the line 3-3 in FIG. 2.

FIG. 4 is a plan view of the flat blank from which the carrier of FIG. 1 is erected.

As already indicated, FIGS. 1-4 illustrate a carrier 20 which is especially well adapted for holding food plates. However, the carrier may be employed to hold various other items. The illustrated carrier is especially arranged to hold four food plates. The capacity of the carrier may be varied by changing the size of the carrier. Thus, for example, the height of the carrier may be reduced, if it is desired to hold only two plates.

The illustrated carrier 20 is made in one piece from a foldable sheet material. Various suitable sheet materials may be employed, such as corrugated cardboard, solid cardboard, chipboard, fiberboard, paperboard, molded pulp, solid plastics, foamed plastics, or various laminates of these or other materials, for example. The carrier may be cut from sheet stock or may be molded or otherwise formed.

The carrier 20 of FIG. 1 comprises a bottom wall 22 which forms the base of the carrier. First and second end walls 24

and 26 are folded upwardly from the bottom wall 22. In the flat blank of FIG. 4, these folds are formed along score lines 28 and 30.

A handle 32 is folded from the first end wall 24, and extends in a generally horizontal direction to the second end wall 26. This fold is along a score line 34 in FIG. 4. As shown, the handle 32 has an elongated, generally horizontal panel 35.

To stiffen the handle 32, it is preferred to fold a pair of flanges 36 and 38 from the horizontal panel 35. These folds are formed along score lines 40 and 42. The illustrated flanges 36 and 38 are folded downwardly, but in some cases they could be folded upwardly.

An opening 44 is formed in the second end wall 26 to receive the handle 32. Preferably, the handle 32 is triangular in cross section, so that the opening 44 is also preferably triangular. It will be seen that the opening 44 is at the upper end of the second end wall 26. In order to hold a series of food plates 46, the end walls 27 and 26 are preferably formed with a series of vertically spaced generally horizontal slots 48. In the illustrated carrier 20, four such slots 48 are formed in each end wall, to provide a capacity of four plates. It will be understood that the number of slots may be varied, in accordance with the desired capacity.

To provide better retention of the plates 46, it is preferred to form each of the end walls 24 and 26 with a pair of generally vertical retaining flanges 50, which are folded from each end wall toward the opposite end wall. These folds are along score lines 52. Plate-receiving slots 54 are also formed in the retaining flanges 50.

Locking means are preferably provided to hold the retaining flanges 50 in their folded positions. As shown in FIGS. 1 and 2, such locking means preferably comprise tabs or ears 56 which are adapted to be folded upwardly from the bottom wall 22. The illustrated tabs 56 are cut from the bottom wall 22.

To give the carrier 20 greater rigidity, a top panel 58 is preferably folded from the second end wall 26, along a score line 60. A generally vertical panel 62 is folded downwardly from the top panel 58, along a score line 64. The handle 32 preferably extends through another opening 66 in the depending panel 62. The opening 66 is similar to the opening 44. The engagement of the handle 32 with the vertical panel 62, as well as the end wall 26, provides a bracing effect which rigidifies the carrier.

The carrier is preferably provided with means for securing the handle 32 in its position within the opening 44 in the second end wall 26. As illustrated, such means take the form of a tab 90, adapted to be folded downwardly from the top panel 58, through an opening 92 in the horizontal panel 42 of the handle 32.

The carrier 20 is manufactured in the form of a flat blank, as shown in FIG. 4. For storage, the blank may conveniently be folded along one of the transverse score lines, preferably the score line 28 between the bottom wall 22 and the second end wall 24. It will be evident that the carrier may be erected very quickly and easily, from the flat position of FIG. 4 to the erected position of FIG. 1. This is done by folding up the end walls 24 and 26, folding the panels 58 and 62, and inserting the handle 32 through the triangular openings 44 and 66. The handle locking tab 90 is folded downwardly into the opening 92 in the handle.

To retain the plates 46, the flanges 50 are folded from the end walls 24 and 26. The locking tabs 56 are folded upwardly to retain the flanges 50.

As shown in FIGS. 1 and 2 the vertical panel 62 is in the form of a flange, projecting downwardly from the top panel 58. The top panel 58 is folded toward the first end wall 24. Thus, the generally vertical panel 62 projects downwardly between the end walls 24 and 26.

Additional locking tabs 156 are preferably provided on the top panel 58 and are adapted to be folded downwardly, so as to engage and retain the flanges 50.

It will be recognized that the handle makes it very easy to grasp and hold the food carrier, so that there will be no sub-

stantial chance of dropping or spilling the food plates contained therein.

It is perfectly feasible to reuse the carrier, but the cost of the carrier is so low that normally it will be treated as an expendable, single service item. Normally, the customer will discard the carrier after a single use.

The carrier illustrated in FIG. 1 is capable of holding four food plates. It will be recognized, however, that the size and capacity of the carrier may be varied.

It will be evident that the carrier of the present invention provides a handle which enables the carrier to be securely grasped and held in one hand. Thus, a person can easily transport two of the carriers, without any danger of spilling or dropping the food. If only one carrier is transported, the other hand is free for other necessary tasks.

The carrier is so constructed that it can be shipped and stored in a flat position, to conserve space. The carrier may be erected very easily and quickly.

Inasmuch as the carrier is made of cardboard or other inexpensive materials, the carrier is very low in cost. Thus, the carrier may be treated as an expendable item to be thrown away after use.

Various other modifications, alternative constructions and equivalents may be employed, as will be evident to those skilled in the art.

I claim:

1. A carrier for food plates or the like, comprising a bottom wall made of foldable material,
first and second end walls foldably connected to the opposite ends of said bottom wall,
a handle foldably connected to the upper end of said first end wall,
a top panel foldably connected to the upper end of said second end wall,
and a generally vertical panel foldably connected to said top panel and extending downwardly therefrom in spaced relation to said second end wall,

said second end wall and said vertical panel having openings therein,

said handle having an end portion received in said openings.

2. A carrier according to claim 1,
in which said handle is generally triangular in cross section, said openings being of a corresponding triangular shape.

3. A carrier according to claim 1,
in which said handle comprises an elongated generally horizontal panel and a pair of stiffening flanges foldably connected thereto.

4. A carrier according to claim 1,
in which said end walls are formed with generally horizontal slots for receiving food plates or the like.

5. A carrier according to claim 1,
in which at least one of said end walls is provided with a pair of generally vertical flanges foldably connected thereto and extending toward the other end wall.

6. A carrier according to claim 5,
in which said end walls and said vertical flanges are formed with slots for receiving food plates or the like.

7. A carrier according to claim 1,
in which each of said end walls is provided with generally vertical flanges foldably connected thereto and directed toward the opposite end wall,
said end walls and said vertical flanges being formed with slots for receiving food plates or the like.

8. A carrier according to claim 7,
including means for retaining said flanges in folded relation to said end walls.

9. A carrier according to claim 1,
including means for retaining said handle in said openings.

10. A carrier according to claim 1,
including a foldable tab on said top panel for retaining said handle in said openings,
said handle having an opening for receiving said tab.

* * * * *