This invention relates to portable dish carriers and, more particularly, to a wheeled cart having dish drying and storing racks.

The object of the invention is to provide a portable dish carrier usable particularly in restaurants, dining rooms and institutions wherein a relatively large number of dishes are handled at a washing station and which have to be transported and stored for further use at a point away from the washing station. The object now is to provide a cart for this purpose in which a large number of dishes may be individually edge supported in spaced relation from one another and thus transported or stored while they dry. It is intended to provide a particularly strong and rugged, although easily maneuverable device capable of supporting the relatively great weight of a large number of dishes, with the dishes individually supported so that they do not rest upon one another and also that they may air and drain.

Another object of the invention is to provide a portable dish carrier in which dishes may be stored and transported without the likelihood of contamination by vermin, or by falling or airborne particles. To this end it is intended to provide a portable dish carrier having not only a permanent top for shielding the dishes from descending contamination, but having its normally open sides closable by curtains so that the entire interior of the carrier may be enclosed, thereby preventing rats or cockroaches from entering the dish-containing area. It is also intended to provide a dish carrier having a closable interior and a sterilizing lamp within the interior.

These and other objects will be apparent from the following specification and drawing:

Fig. 1 is a side elevation of the portable dish carrier, with the curtains and curtain supports removed;

Fig. 2 is an end elevation of a portable dish carrier shown in Fig. 1 with the curtains and curtain supports mounted thereon;

Fig. 3 is a vertical longitudinal section taken through the metal of the portable dish carrier as illustrated in Fig. 1;

Fig. 4 is a horizontal cross section taken along the lines 4—4 of Fig. 1 looking in the direction of the arrows;

Fig. 5 is a vertical cross section taken adjacent the metal of the structure shown in Fig. 1, but showing the curtain supports with the curtains removed;

Fig. 6 is a longitudinal section taken along the lines 6—6 of Fig. 1 looking in the direction of the arrows;

Fig. 7 is a fragmentary view illustrating the bottom member of a dish supporting unit;

Fig. 8 is a vertical cross section taken along line 8—8 of Fig. 7;

Fig. 9 is a fragmentary view illustrating the end mounting of one of the dish support bars.

Fig. 10 is a fragmentary side elevation showing adjustable dish-supporting bars of an alternate embodiment;

Fig. 11 is a section, reduced in size, taken along the line 11—11 of Fig. 10 looking in the direction of the arrows;

Fig. 12 is a fragmentary section, enlarged, showing the mounting of the end of a dish-supporting bar, taken along the line 12—12 of Fig. 11, and looking in the direction of the arrows;

Fig. 13 is a fragmentary section, enlarged, taken along the line 13—13 of Fig. 10, looking in the direction of the arrows; and

Fig. 14 is a fragmentary section, enlarged, taken along the line 14—14 of Fig. 11, looking in the direction of the arrows.

Referring now to the drawings in which like reference numerals denote similar elements, the portable dish carrier illustrated in Fig. 1 is a wheeled cart denoted generally by the reference numeral 2. The structure is preferably formed of metal sheets and bars, such as stainless or galvanized steel, and includes a centrally dished bottom wall 4 and flat vertical end walls 6 and 8 joined at their tops by a flat top wall 10 which extends over the entire area of the cart. As seen best in Figs. 4 and 6 the corner edges of the cart are formed by angle pieces 12 rigidly secured as by welding to the adjacent elements and the bottom and top walls 4 and 10, respectively, are formed with flanges 14 and 16 welded to the end walls so that a rigid open rectangular configuration is formed. Conventional casters 18 rollably support the cart, the caster mountings 19 being welded within the corner of the cart. A drainpipe 20 extends downwardly from the lowermost part of centrally dished bottom wall 4 so that water will drain to the exterior. A top shelf 22 having end flanges 24 welded to end wall 6 and 8 is provided for supporting cups and glasses and for further reinforcing the upper portion of the structure against the distortive forces of a heavy load of dishes.

Referring now particularly to Figs. 3 to 5 inclusive, the dishes are individually edge supported within cart 2 on longitudinally running racks indicated generally at 28. The racks and elements thereof for supporting larger dishes are denoted by prime reference numerals, it being understood that racks for the smaller dishes are identical with those of the larger except for the spacing.
of the individual elements. Each rack 28 is formed of three rigid bars 30, 32, and 34, respectively, arranged in generally triangular configuration as seen in cross section with the apex member of the triangle lowermost. As shown in detail in Figs. 7 and 8 bar 34 has rigidly affixed along its top a cap-strip 36 and secured to the cap-strip is a corrugated strip 38. Strip 38 is formed of conventionally corrugated metal with at least some of the valleys thereof welded to cap-strip 36, in the former being shown, or directly welded to the top of bar 34 if desired. Similarly corrugated strips 40 and 42 are secured along the inner sides of bars 30 and 32, respectively, so that when a dish indicated by broken lines at 28 is inserted, the latter will be supported by its edges at three points. As detailed in Fig. 9 the ends of bar 30, as well as the ends of bars 32 and 34 are rigidly but removably attached to the end walls of the cart, bar 30, for example, being supported by a bolt 44 extending through an opening 45 in end wall 6 and threaded engaged in tapped opening 46 in the end of bar 30.

In order further to reinforce the assembly, tie bars 48 extend between the end walls 6 and 8 with their ends rigidly affixed to the adjacent walls as detailed in Fig. 9 in the manner of bar 30. As illustrated, particularly in Figs. 2 and 6 side curtains 50 generally resembling conventional roller curtains, are supported by brackets 52 at the upper portion of each side of the cart so that the interior of the latter may be completely enclosed when it is desired to use the device as a storage vessel. A sterilizing lamp 54 is mounted on the underside of top wall 19 by conventional socket 55 and supplied from a suitable source of electricity through lamp cord 56. It will be apparent to those skilled in the art that the sterilizing lamp and socket may be of any one of a number of conventional forms and that a similar lamp may be mounted beneath shelf 21 if desired.

In the operation of cart 2, dishes 26 and 28 are loaded in racks 25, 27 by fitting the dishes in the corrugations of strips 38, 40 and 42, the latter acting both as supports and as spacers for the dishes. The downward forces of loads which would tend to bow rods 30, 32 and 34 outwardly are resisted both by the inherent strength of the rods, which operate in part as a bundle, and by the other structural elements, such as tie bars 48 and top 10 and shelf 22, which hold ends 6 and 8 apart.

The embodiment of the invention illustrated in Figs. 10 to 14, inclusive, is generally similar to the form previously described except for the form and mounting of the dish support racks. The elements bearing prime numerals correspond to those previously described, and in the modification it will be understood that the wheeled cart 2 has the wheeled undercarriage and top, as previously described, and preferably includes a curtain 50 corresponding to curtain 59. The vertical end walls 6', 8' are similar to the corresponding elements previously delineated. However, the rigid bars 34' are polygonal, preferably square in cross section and have corrugated strips 38' welded along one side thereof. Supporting the ends of bars 34' are rectangually corrugated strips 61 having upwardly and downwardly projecting tabs 63 and 65, respectively, welded as at 67 to the inner sides of end walls 5', 8'. It should be noted that the ends of the corrugated strips 38' stop short of the ends of bars 34' so that the latter may be nested in the upwardly opening square corrugations of strip 61 with the corrugated strips 38' upwardly disposed as illustrated, or with the corrugated strips 38' disposed sidewise or even downwardly, if desired, for accommodating dishes of various size and forms at the top of the dishes resting in the rack. In Fig. 11 the bars 34' are shown with random distribution to illustrate the versatility of the rack, it being apparent that the bars may be moved about to accommodate dishes of various size and forms. The invention as described above is not limited to the structure detailed above, and the structure may be utilized for supporting analogous articles of all sorts, it being intended to cover all substitutions, modifications and equivalents within the scope of the following claims.

1. A claim:
2. In a portable dish carrier, including a bottom member, casters rollably supporting said bottom member, and a spaced pair of end walls extending upwardly from said bottom member at opposite ends thereof, corrugated dish rack means supported by and between said end walls, including a plurality of elongate bars rectangular in cross-section spanning the space between said end walls, corrugated strips respectively secured to said bars along one side thereof, the corrugations of said strip extending transverse to the length of said end walls and bar means for supporting said bars on the inner sides of said walls, comprising a plurality of regularly corrugated members rigidly affixed on the inner side of said walls, the corrugations of said members extending normally to said walls and defining rectangular, upwardly facing pockets for receiving and supporting the ends of said bars.
3. The combination claimed in claim 1, the corrugated strips along said bars terminating short of the ends of said bars, whereby the latter may be fitted into said rectangular corrugations selectively in a plurality of angular dispositions.

3. In a portable dish carrier, including a bottom member, casters rollably supporting said bottom member, and a spaced pair of end walls extending upwardly from said bottom member at opposite ends thereof, corrugated dish rack means supported by and between said end walls, including a plurality of elongate bars spanning the space between said end walls, corrugated strips respectively secured to said bars along one side thereof, the corrugations of said strip extending transverse to the length of said strips and bars, said bars having opposite end portions rectangular in cross-section and means for supporting said bars on the inner sides of said walls, comprising a plurality of substantially rectangularly corrugated members rigidly affixed on the inner side of said walls, the corrugations of said members extending normally to said walls and defining rectangular, upwardly facing pockets for receiving and supporting the rectangular end portions of said bars.

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