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DISHRACK

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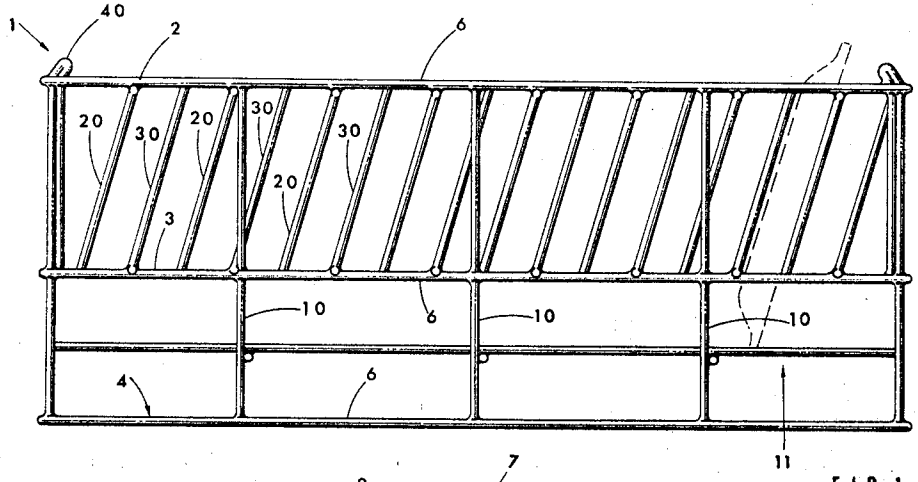


FIG. 1

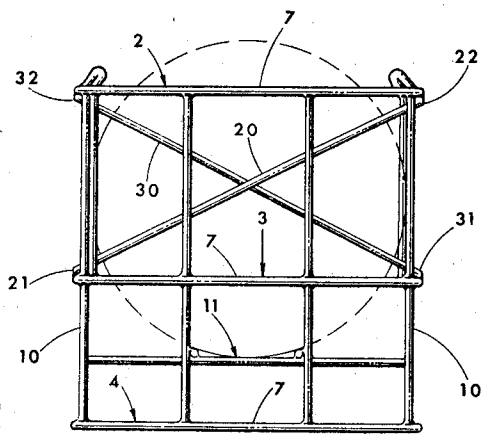


FIG. 2

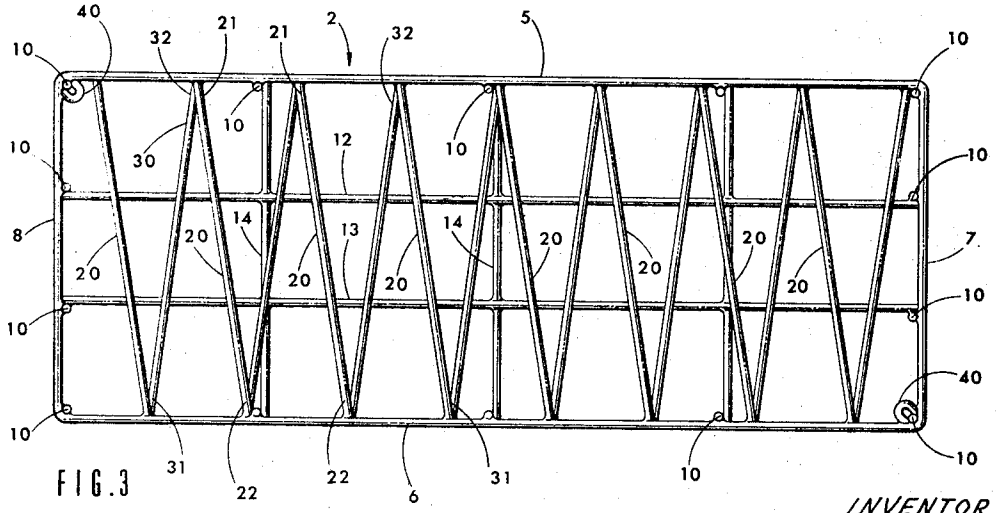


FIG. 3

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DISHRACK

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ABSTRACT OF THE DISCLOSURE

A stackable dishrack designed for use in storing, cleaning and dispensing dishes formed entirely of wire. Three rectangular elements parallel to and spaced from one another are secured in spaced relations by vertical struts to form a frame. Dish dividers are formed by two sets of transversely extending struts with the struts of one set parallel to one another and lying in a plane intersecting another plane in which the struts of the other set lie. The upper ends of the struts of each set are respectively secured to opposite sides of the upper, rectangular element and the lower ends of the struts of each frame are respectively secured to opposite sides of the intermediate rectangular element. The individual struts are inclined rearwardly.

The subject matter

The present invention relates to an improved stackable dishrack adapted for use in storing, cleaning and dispensing dishes and the like.

Background of the invention

Heretofore, there have been numerous attempts to provide a dishrack which is useful for storing, cleaning and dispensing dishes. Such devices, of necessity, must be capable of compactly storing a large number of dishes with the racks adapted to be stacked one upon the other and at times side by side without unduly wasting space. These racks, moreover, must be capable of being used in commercial dishwashing equipment and, consequently, have to be easily loaded and unloaded into the dishwasher. Furthermore, the dishes contained within the rack have to be supported in such a fashion as to maximize the efficiency of the dishwashing machine by exposing as much of the surface of the dishes to the cleaning water while at the same time orienting the dishes for proper drainage. In addition, it is desirable to provide a dishrack which may be used for dispensing dishes. Racks used for this purpose must be of a height, size and shape such that they may sit on counters in cafeterias or the like for rapid dispensing of dishes. In this connection, it is desirable to provide a dishrack which may be oriented vertically or horizontally depending upon the specific application for which it is desired.

It is an object of the present invention to provide a dishrack which attains the foregoing objectives while at the same time providing a rugged structure which can be fabricated economically.

Summary of the invention

In the present invention there is provided a stackable dishrack adapted for use in storing, cleaning and dispensing dishes and the like. This dishrack is preferably formed of wire which may be covered with a vinyl, plastic or rubber material. A frame is formed, preferably by three rectangular elements supported and secured in spaced parallel relation to one another by a plurality of vertically extending struts. Dish dividers are formed in the frame by two sets of wire struts. The struts of one set are parallel with one another and lie in a common plane that intersects a second plane within which the parallel struts of the other set lie. The ends of struts of each set are secured to the sides of different rectangular elements and extend between these elements at a non-perpendicular angle to the sides.

Description of the drawings

These and other objects and advantages of the present invention will be more clearly understood when considered in conjunction with the accompanying drawings in which:

FIG. 1 is a side plan view of a dishrack embodying the invention;

FIG. 2 is an end plan view of the embodiment illustrated in FIG. 1; and

FIG. 3 is a top plan view of the embodiment illustrated in FIG. 1.

Description of a preferred embodiment

The dishrack illustrated in FIG. 1 is formed with a rectangular frame **1**. The frame and other components of the dishrack are preferably formed of wire which is relatively stiff and which is secured together by welding or the like. The wire may, if desired, be covered with a rubber or vinyl coating in a conventional fashion. The rectangular frame **1** is provided with an upper rectangular element **2**, an intermediate rectangular element **3** and a lower rectangular element **4**. Each of these rectangular elements **2**, **3** and **4**, is provided with opposite longitudinally extending side members **5** and **6** and end members **7** and **8** interconnected respectively at their ends to form the continuous rectangular element. The rectangular elements **2**, **3** and **4**, are supported in parallel, spaced relation by a plurality of vertical struts **10**. These struts **10** are preferably parallel to one another and in addition to being positioned at the corners of the rectangular elements **2**, **3** and **4**, are also positioned along the longitudinal side members **5** and **6** and end members **7** and **8**. A bottom support **11** is positioned parallel to and intermediate the intermediate rectangular element **3** and lower rectangular element **4**. This bottom support **11** comprises preferably a pair of longitudinally extending parallel rails **12** and **13** secured at their end to the vertical struts **10** that in turn are secured to the longitudinal side members **5** and **6**. The longitudinal rails **12** and **13** may be suitably secured at their intersections to the transverse rails **14**.

The dishrack is provided with a dish divider formed principally of two sets of struts. One set of struts comprises the struts **20**. These struts **20** are each parallel to one another and all lie in a common plane. The common plane in which these struts **20** lie extends angularly upward, as viewed in FIG. 2. This common plane passes through the struts **20** perpendicular to the plane of the paper. The struts **20** are connected at their lower end **21** to the longitudinal side member **5** of the intermediate rectangular element **3**, while the upper end **22** of the struts **20** are connected to the longitudinal side member **6** of the upper rectangular element **2**. The struts **20** each have their lower ends **21** connected to the longitudinal side member **5** of the intermediate rectangular element **3** closer to the end member **8** than the upper ends **22**. Thus the struts **20** lie in parallel planes perpendicular to the drawing as viewed in FIG. 3, which planes are non-perpendicular to the longitudinal side members **5** and **6**.

The second set of struts is formed by a plurality of struts **30**. These struts each lie in a common plane that extends angularly upward as viewed in FIG. 2, with the common plane perpendicular to the paper as viewed in FIG. 2, and intersecting the plane which is common to the struts **20**. The lower ends **31** of the struts **30** are each connected to the longitudinal side member **6** of the intermediate rectangular element **3** while the upper ends **32** of the struts **30** are each connected to the longitudinal side member **5** of the upper rectangular element **2**. The struts **30** are each parallel to one another, and as viewed

in FIG. 1 lie in planes parallel to the struts **20**. The struts **30**, however, as viewed in FIG. 3 lie in planes nonparallel to the struts **20** with the upper ends **32** of the struts **30** being more remote from the ends **8** than the lower ends **31**.

Inverted U-shaped engaging elements **40** may be provided at two or more corners of the frame. These inverted U-shaped elements **40** are projected upwardly and slightly inwardly and are designed to engage the inner periphery of a rectangular element **4** of another dishrack so as to provide a rigid interengagement of a plurality of racks when stacked one upon the other.

Dishes positioned in the dishrack are separated one from the other by the dish divider with one strut **20** lying on one side of a dish and a strut **30** of the set lying in the other side of the dish. The bottoms of the dishes are supported by the bottom support **11** while the upper portions of the dishes project upwardly above the upper rectangular element **2**. However, the upper edges of the dishes will not interfere with another dishrack set on top of it because another similar dishrack would receive the upper portions of dishes in a lower rack within the space defined by the lower rectangular element **4** and the bottom support **11**.

What is claimed is:

1. A rack adapted for use in storing, cleaning and dispensing dishes and the like comprising,

elongated wire elements forming a rectangular frame having upper longitudinally extending opposed side members and lower longitudinally extending opposed side members,

first and second sets of transversely extending struts, said first set of transversely extending struts comprising a plurality of parallel struts with each having one end secured to the same one of said upper longitudinally extending side members and the other end secured to the same one of said lower longitudinally extending side members on the side of said frame opposite said one upper side member, and said second set of transversely extending struts comprising a plurality of parallel struts with each having one end secured to the same other of said upper longitudinally extending side members and the other end secured to the same other of said lower longitudinally extending side members, said struts of said first and second sets alternately and longitudinally arranged and lying entirely in planes that extend between said opposite side members at nonperpendicular angles to said side members and entirely in planes that extend between said upper and lower side members at nonperpendicular angles to said side members with said planes extending between said upper and lower side members extending in generally the same direction.

2. A rack as set forth in claim **1** wherein alternate struts are longitudinally spaced at the points at which they intersect along a longitudinal axis.

3. A rack as set forth in claim **2** wherein said upper side members form opposed side members of an upper rectangular element and said lower side members form opposed side members of an intermediate rectangular element.

4. A rack as set forth in claim **3** having wire elements forming a lower rectangular element with portions parallel to and spaced below portions of said intermediate rectangular element, and means securing said intermediate and lower rectangular elements in spaced relation.

5. A rack as set forth in claim **4** having a plurality of spaced vertical struts secured to and supporting said upper, intermediate and lower rectangular elements in spaced parallel relation.

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U.S. Cl. X.R.

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