July 9, 1957 L. MASLOW 2,798,616

DISHWASHING RACK

Filed Aug. 11, 1954 2 Sheets-Sheet 1

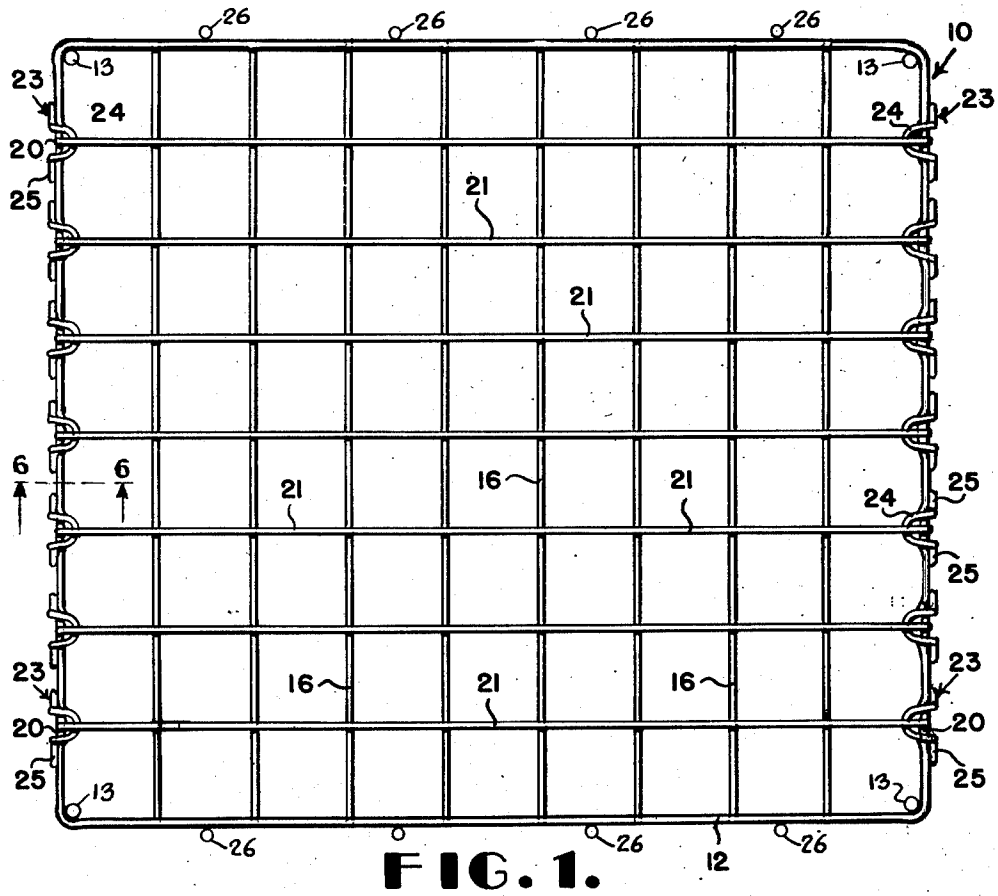

FIG. 1.

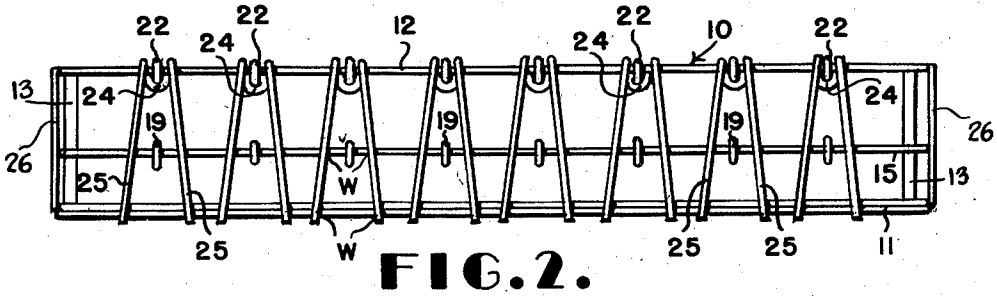

FIG. 2.

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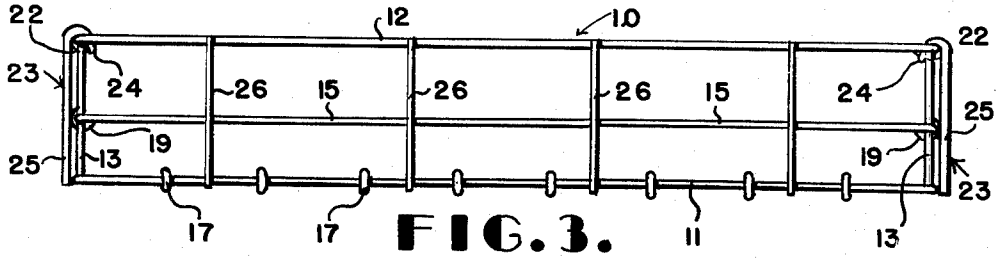

FIG. 3.

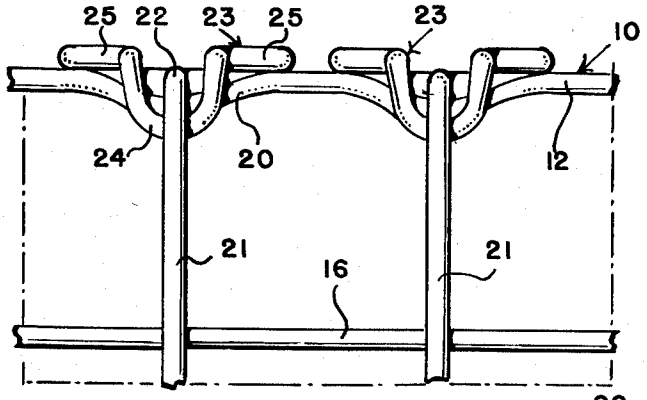

FIG. 4.

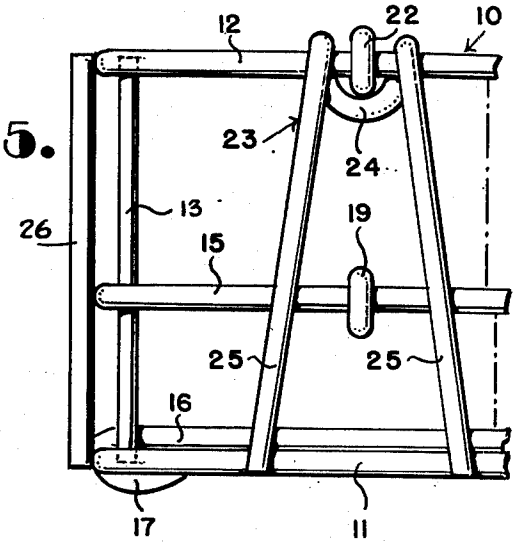

FIG. 5.

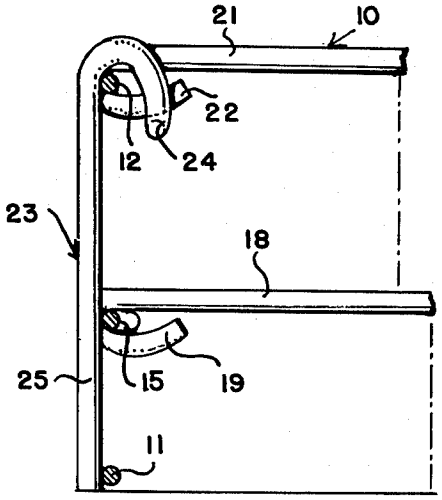

FIG. 6.

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2,798,616

DISHWASHING RACK

Louis Maslow, Brooklyn, N. Y.

Application August 11, 1954, Serial No. 449,117

2 Claims. (Cl. 211—41)

This invention relates to dish washing trays.

In the construction of dish washing trays, particularly for use with plates, platters and similar dishware, it is customary to provide a tray formed of a grid work or wire having a plurality of spaced parallel struts secured at opposite ends to the opposite sides of the tray and which serve the purpose of spacing and stacking the such dishes in a manner well known to those skilled in the art.

It has not been found practical to support these struts intermediate their ends, considering the vibration to which these struts are subjected within the dish washing machine as well as the nature of the articles stacked therein. The struts must be secured solely at their ends, the ends of the struts being usually welded to the sides of the tray. However, this method of securing the struts has proved unsatisfactory, since the flexible struts vibrate during the operation of the washing machine, this vibration fracturing the brittle weld at the opposite ends thereof. Similarly it has been found necessary to employ excessively heavy wire for these struts in order to achieve the required strength and rigidity in the relatively long unsupported span of these strut wires.

It is accordingly a principal object of the present invention to provide improved means for securing the ends of the spaced parallel struts in dish washing trays to the opposite sides thereof which will not fracture or break or bend during the vibration to which it is subjected in handling of the trays.

It is another object of the present invention to provide means for securing the opposite ends of the spaced parallel struts in dish washing trays to the opposite sides of the tray which will mount the ends of the struts with greater strength and rigidity than heretofore achieved, while reducing the possibility of fracture at the point of securement.

Other objects of the present invention are to provide in a dish washing tray arrangement bearing the above objects in mind which is of simple construction, inexpensive to manufacture, has a minimum number of parts, is easy to assemble and sturdy and durable in use.

For other objects and a better understanding of the invention, reference may be had to the following detailed description taken in connection with the accompanying drawing, in which:

Figure 1 is a top plan view of a dish washing tray and showing the invention incorporated thereon;

Figure 2 is a side elevational view thereof looking from either the left or right of Figure 1;

Figure 3 is an end elevational view thereof;

Figure 4 is an enlarged detail of a fragment of Figure 1;

Figure 5 is an enlarged detail of a fragment of Figure 2; and

Figure 6 is a vertical sectional view taken along the line 6—6 of Figure 1.

Referring now more in detail to the drawing, the numeral 10 indicates generally a dish washing tray embodying the features of the present invention and including an

endless lower loop or framing wire 11 of substantially square configuration, substantially as illustrated.

An upper framing wire or endless loop 12 of substantially square configuration overlies and is secured to the lower loop 11 in spaced relationship thereto by means of the inner and outer corner posts 13, respectively, provided at each corner of the tray, the ends of the posts 13 being secured to the loops 11 and 12 by welding.

A framing wire or endless loop 15 of substantially square configuration is disposed intermediate the upper and lower loops 12 and 11, respectively, the corners of the loop 15 being secured to the corner posts 13 therebetween.

A plurality of spaced, parallel struts 16 extend across the lower loop 11, the opposite ends of the struts 16 being secured to the opposite sides of the loop 11 by means of the end loop portions 17.

Intermediate struts 18 disposed at substantially right angles to the struts 16 are secured to the opposite sides of the intermediate loop 15 by means of the looped ends 19 (Figs. 5 and 6).

In the practice of my invention and in order to secure the uppermost longitudinal struts in position, the uppermost loop 12 on oppositely disposed sides thereof is provided with the laterally spaced, inwardly bent portions 20 (Fig. 4).

A plurality of spaced, longitudinal struts 21 are secured to opposite sides of the uppermost loop 12 by means of end loop portions 22 (Fig. 5) which engage the inwardly bent portions 20. The strut wires 21 are thus securely and positively locked in position against lateral displacement.

In order to impart greater rigidity and support to the ends of the longitudinal struts 21, a plurality of loop members indicated generally at 23 are provided, the looped members 23 being formed from a substantially V-shaped length of metal having a rounded bight or central portion 24 which is doubled back upon the looped member 23 at the top thereof, and adapted to straddle the uppermost framing wire 12, substantially as illustrated. It will be noted that the doubled up portions 24 extend under the longitudinal struts 21 in tensional engagement therewith to rigidly retain the looped portions 22 on the inwardly bent portions 20. It will be also noted that each of the looped members 23 includes a pair of diverging legs 25 which extend downwardly on the outside of the loops 15 and 11, and when secured thereto by means of welding will further retain the doubled up portion 24 in tensional engagement with the ends of the longitudinal struts 21. By this construction, the longitudinal struts 21 are fixedly secured at their opposite ends in a rigid manner to the opposite sides of the loop 12 in such a manner that vibration will not fracture the joint. Furthermore, the strut wires are thereby supported inwardly of the top endless loop or framing wire 12 thereby greatly reducing the tendency of an elongated span of wire of this character to bend, flex or vibrate. The loops 11, 15 and 12 are further reinforced by means of intermediate posts 26 welded thereto (Fig. 3).

In assembly, the looped members 23 are pre-formed and mounted in the position of Fig. 5, whereupon they are welded to the outside of the intermediate loop 15. The ends of the diverging portions 25 are then welded to the outside of the loop 11 as indicated at W (Fig. 2).

It will be noted that with the looped members 23 greater rigidity is provided at the ends of the longitudinal struts 21 than would be the case if they are merely connected to the upper loop 12 by means of the looped ends 22 and the inwardly bent portions 20.

Thus the looped ends 22 of the longitudinal struts 21 linked to the inwardly bent portions 20 of the upper loop 12 will firmly secure the opposite ends of the struts 21

in a permanent manner even under extreme vibration of the struts. The looped members **23** permanently welded to the outside of the loops **11** and **12** will provide rigidity to the linked joints, providing a joint which is both permanent and rigid. It will be noted that the strut wires **21** are secured and supported without any welded connection.

While various changes may be made in the detail construction, it shall be understood that such changes shall be made within the spirit and scope of the present invention as defined by the appended claims.

I claim:

1. In a tray including upper and lower endless loops secured together in overlying vertically spaced relationship, a plurality of spaced, substantially parallel upper struts terminating at opposite sides of said upper endless loop, loops at the opposite ends of each of said upper struts engaging the opposite sides of said upper endless loop, the opposite sides of said upper endless loop having inwardly bent portions receiving said end loops therearound, means for rigidly securing said looped ends to said inwardly bent portions, said means comprising a substantially V-shaped post having a central bight portion bent downwardly and back upon itself and adapted to straddle said inwardly bent portions of said upper endless loop on each side of said looped ends with the central portion of said posts passing under said longitudinal struts adjacent the looped ends thereof, said posts including

diverging sides extending downwardly on the outside of said upper and lower endless loops and secured thereto.

2. In a tray including upper and lower endless loops secured together in overlying vertically spaced relationship, a plurality of spaced, substantially parallel upper struts terminating at opposite sides of said upper endless loop, loops at the opposite ends of each of said upper struts engaging the opposite sides of said upper endless loop, the opposite sides of said upper endless loop having inwardly bent portions receiving said end loops therearound, means for rigidly securing said looped ends to said inwardly bent portions, said means comprising a substantially V-shaped post having a central bight portion bent downwardly and back upon itself and adapted to straddle said inwardly bent portions of said upper endless loop on each side of said looped ends with the central portion of said posts passing under said longitudinal struts adjacent the looped ends thereof.

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