July 1, 1958 J. FIELD ET AL 2,841,288

DISH TRAYS

Filed June 10, 1954

FIG. 1

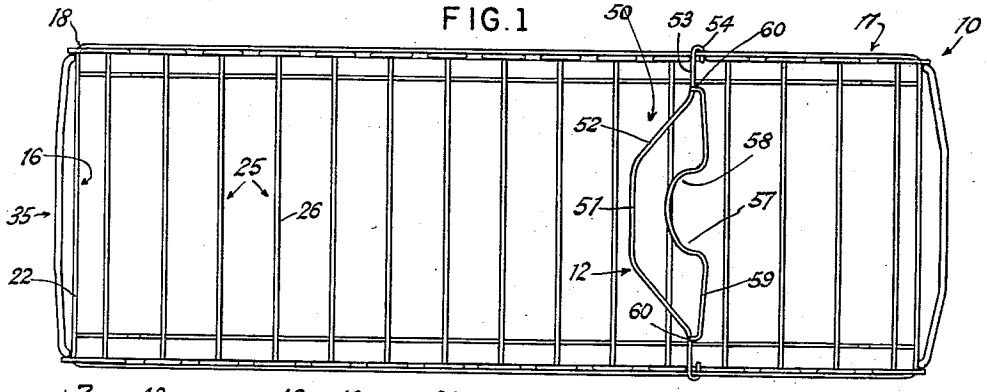


FIG. 2

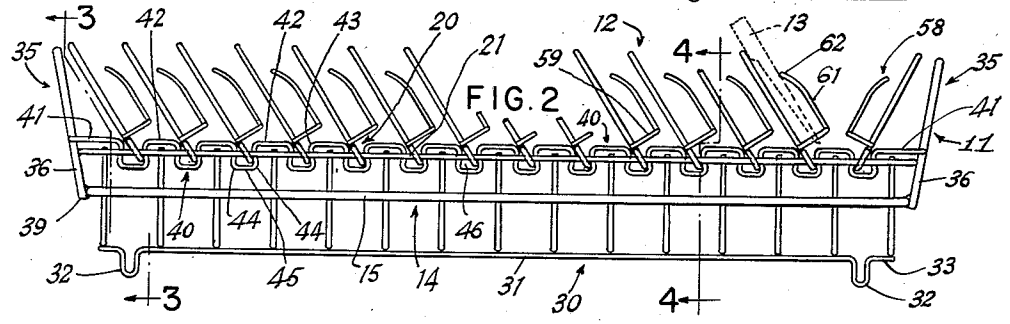


FIG. 3

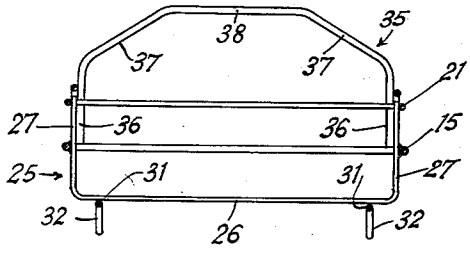


FIG. 4

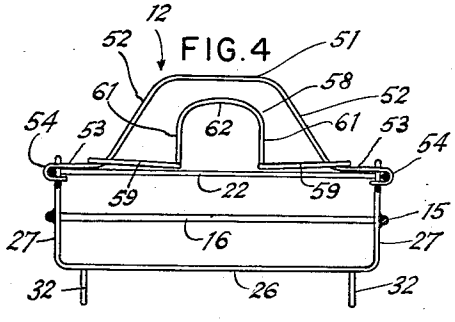


FIG. 5

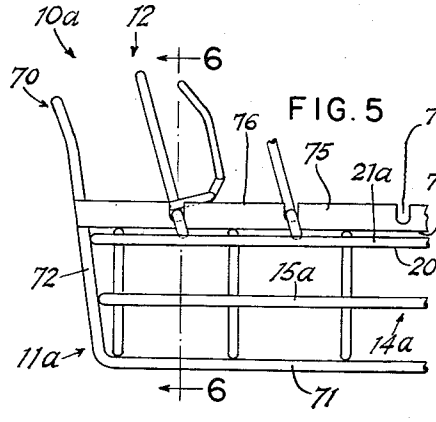
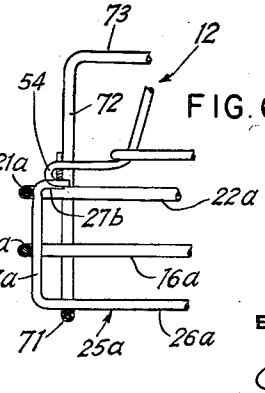


FIG. 6



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DISH TRAYS

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Application June 10, 1954, Serial No. 435,859

4 Claims. (Cl. 211—41)

This invention relates to dish trays. It is particularly directed to a dish tray in which dishes may be placed and washed.

An object of this invention is to provide a tray of the character described comprising a holder provided with a row or series of dish carrying clips or holders so mounted that they may be selectively swung from forwardly and upwardly inclined positions to upwardly and rearwardly inclined positions so as to increase the space between the plates mounted on adjacent clips whereby to facilitate washing on opposite sides of the plates on said clips.

A further object of this invention is to provide a dish washing tray of the character described in which the clips are removable and replaceable to permit rubberizing of the holder part of the tray and separate rubberizing of the clips before assembly. A further advantage of making the clips removable and replaceable is that the clips may be rubberized in different colors and also to permit replacing broken, bent or damaged clips.

A further object of this invention is to provide a dish washing tray of the character described comprising a holder and a plurality of spring clips each provided with means to carry a dish, and each formed at the ends thereof with hooked ends to engage opposite side portions of the holder, the portions of the holder engaged by the hooked ends of the clips being so constructed as to permit swinging movement of the clips and yet to limit the angular extent of the swinging movement of the clips, the construction of the clips being such, furthermore, that the hooked ends of the clips may be grasped and pulled in opposite directions to disengage the clips from the basket. Also these hooked ends of the clips may be pulled apart in order to re-engage the clips with the holder.

Still a further object of this invention is to provide a strong, rugged and durable dish washing tray of the character described, which shall be relatively inexpensive to manufacture, easy to manipulate, and yet practical and efficient to a high degree in use.

Other objects of this invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists in the features of construction, combinations of elements, and arrangements of parts, which will be exemplified in the construction hereinafter described, and of which the scope of invention will be indicated in the appended claims.

In the drawings:

Fig. 1 is a top plan view of a dish washing tray embodying the invention to show only one clip, it being understood that the illustrated tray is to be provided with 14 clips of the kind shown and similarly mounted;

Fig. 2 is a side elevational view of the tray shown in Fig. 1 with some parts broken away;

Fig. 3 is a cross sectional view taken on the line 3—3 of Fig. 2;

Fig. 4 is a cross sectional view taken on the line 4—4 of Fig. 2;

Fig. 5 is a partial side elevational view of a tray embodying a modification of the invention with parts broken away, and

Fig. 6 is a partial cross sectional view taken on the line 6—6 of Fig. 5.

Referring now in detail to the drawing, 10 designates a dish washing tray embodying the invention. The same comprises generally a holder 11 and a plurality of clips 12 swingably and removably mounted thereon and provided with means for carrying dishes 13. The holder 11 may be made of wire if desired. Said holder comprises a rectangular lower wire frame 14 disposed in a horizontal frame having longitudinal parallel side portions 15 interconnected by transverse parallel end portions 16. The frame 14 may be made from a single piece of wire bent to suitable shape with the meeting ends welded together in any well known manner. The four corners of the frame 14 may be curved as at 18.

The holder further comprises an upper wire frame 20 parallel to and spaced above frame 14 and having parallel longitudinal side portions 21 and end wire portions 22. The longitudinal side portions 21 of the upper frame 20 are located substantially above the wire portions 15 of the lower frame 14. The end portions 22 of the upper frame 20 are disposed somewhat beyond the end portions 16 of the lower frame 14. Thus the upper frame is of somewhat longer dimension.

Attached to said upper and lower frames 14 and 15 are a plurality of parallel transverse wire members 25. Each member 25 comprises a bottom horizontal wire portion 26 from which extends upwardly side wire portions 27 contacting the inner sides of said upper and lower frames and welded thereto. Members 25 are equally spaced apart. In the drawing there are 15 of such transverse U-shaped wires shown, although any suitable number may be provided.

It will be noted that the upper ends of wire portions 27 are substantially at the level of the upper frame 20. However the bottom portions 26 of members 25 are disposed below the lower frame 14. Attached to the undersides of the portions 26 of members 25 are a pair of longitudinal brace members 30. Said members 30 are parallel to each other. Each comprises an elongated wire portion 31 from which extend downwardly curved U-shaped portions 32, and extending outwardly from the U-shaped portions 32 are short end portions 33. The portions 31 and 33 of members 30 are welded to the undersides of portions 26 of members 25. The U-shaped portions 32 serve as legs on which tray 10 rests.

At the ends of the holder 11 are a pair of handles 35. Handles 35 may also be made of wire. Each comprises a pair of parallel side portions 36 from which extend upwardly and inwardly inclined portions 37 interconnected by transverse horizontal portions 38. Portions 36 are welded to the outer sides of portions 16 and 22 of frame members 14 and 20. Thus handles 35 are upwardly and outwardly inclined. The lower ends 39 of portions 36 are located substantially at the level of the lower frame 14.

Welded to the inner side of each portion 21 of the upper frame 20 is a zig-zag shaped wire member 40. Member 40 comprises end portions 41 welded to portions 36 of handles 35. Each member 40, furthermore, comprises a plurality of spaced aligned portions 42. Extending from each portion 42 is a downwardly and inwardly spaced curved portion 43. Extending from each curved portion 43 of adjacent portions 42 are downwardly and inwardly curved portions 44 interconnected by a bottom horizontal portion 45. Thus each of the portions 42 are interconnected by looped portions 43, 44 and 45, which extend downwardly from said portions 42. The wire portions 21 of the upper frame 20 cross

and contact said looped portions and are welded thereto so that substantially half of each of the looped portions projects below the wire portions **21**. There is thus formed openings **46** in each loop below the wire portions **21**. Said openings **46** are bounded by wire **21** and wire portions **44** and **45**. Thus in the holder illustrated in the drawing there are 14 loops on each side of the basket and of course the loops on opposite sides of the basket are aligned.

The clips **12** are hingedly mounted on the side portions **21** of the upper frame, there being one such clip on each pair of aligned openings **46**. Each clip **12** comprises a wire member **50** having a central horizontal wire portion **51** from which extends downwardly and outwardly inclined wire portions **52**. Extending outwardly from the wire portions **52** are straight aligned horizontal wire portions **53** from which extend downwardly and inwardly hooked portions **54**. Each hooked portion **54** may extend over a portion **21** of the upper frame crossing a loop, and the hook passes inwardly through an opening **46**. Each clip **12** further comprises a second wire portion **57**. The wire portion **57** comprises a central curved portion **58** from which extend upwardly inclined portions **59** formed with rearwardly extending ends **60** contacting the inner ends of portions **53** and welded thereto. Portions **58** of wire **57** are of inverted U-shape, comprising side portions **61** interconnected by a top curved portion **62**. The side portions **61** are substantially in the plane parallel to the wire portions **50**. The curved portions **62** may be inclined somewhat towards the plane of the wire **50**. The portions **59** and **60** form the bottom supports for dishes or plates **13** inserted between the clip portions **50** and **57**.

It will be noted that the clips **12** may be inclined upwardly and toward one end of the tray. However, each clip may be rotated so as to incline upwardly and toward the opposite end of the tray. In this manner a space may be provided between two adjacent clips and that is accomplished when one clip is caused to be inclined in one direction and the next adjacent clip in an opposite direction. Thus as the dishes are washed, the first plate may be washed on one side and then the clip on which it is mounted swung to an opposite direction to wash its opposite side, then the adjacent side of the dish on the next clip may be washed and then said next clip may also be swung. In this way the dishes may be washed on both sides seriatim.

It will be noted that the ends of the hooks **54** will engage the undersides of the wire portions **21** whereas the portion **53** of the clips will engage the tops of the wire portions **21**. The angle of rotation of the clips is thus limited by the hooked ends of the clips.

It will be further noted that the clips are removable and replaceable. Thus in the removal of each clip the ends of the clip are pulled apart so as to disengage one of the hooks **54** on one side of the basket. Then the clip may be moved sideways to disengage the other hook. One of the advantages of making these clips disengageable, removable and replaceable is that the holder may be rubberized separately from the clips. If the clips were permanently mounted on the holder, it would be difficult to rubberize the entire tray. Furthermore, if any of the clips become bent or damaged in any way, it may be removed and replaced by another one. Furthermore, with such construction, clips may be rubberized in different colors and mounted on the holder to suit any desired color combination.

It will be understood that the basket **11** and the clips **12** may be coated with a coating of rubber or plastic.

In Figs. 5 and 6 there is shown a tray **10***a* illustrating a modified construction. Tray **10***a* comprises a holder **11***a* on which are mounted clips **12**, the same as clips **12** of Figs. 1 to 4.

Holder **11***a* may comprise a lower frame **14***a* similar to the frame **14** of Figs. 1 to 4 and an upper frame **20***a* similar to the frame **20** of Figs. 1 to 4. The lower frame **14***a* has longitudinal side portions **15***a* interconnected by end portions **16***a*. The upper frame **20***a* has side portions **21***a* connected by end portions **22***a*. Welded to the sides of the side portions **14***a* and **21***a* of the lower and upper frames are a plurality of equally spaced transverse wire members **25***a*. Each member **25***a* comprises a bottom portion **26***a* from which extend upwardly side portions **27***a* having inwardly turned upper ends **27***b*. Side portions **27***a* of members **25***a* are welded to the inner sides of portions **15***a* and **21***a* of the lower and upper frame members.

The holder **11***a* further comprises a member **70** which may be made of a single piece of wire and comprises longitudinal parallel side portions **71** contacting the undersides of portions **25***a* and welded thereto. Extending upwardly from the end of said side portions **71** are upwardly and outwardly inclined portions **72** contacting the end portions **16***a* and **22***a* and welded thereto. Side portions **72** extend above the level of the upper frame **20***a* and their upper ends are interconnected by a transverse handle portion **73**. Welded to the outer sides of portions **72** and to the top sides of the inwardly turned end portions **27***b* of member **25***a* and at each side of the holder is a bar **75** having an upper edge **76** and a lower edge **77**. The lower edge **77** of each bar rests on the inturned ends **27***b* and is welded thereto. Each bar **75** is formed at its upper edge with spaced notches **78**.

It will be noted that the bars **75** are spaced inwardly from the longitudinal side portions **21***a* of the upper frame **20***a*. It will also be noted that the hooked ends **54** of the clips **12** are engaged in the notches **78** and inwardly around the underedges of the bars **75**. Thus clips **12**, likewise, are inclined upwardly in one direction but may be swung to incline upwardly in an opposite direction. With such construction the dishes may be washed in the manner described above for the tray **10**. It will also be noted that all the wires of tray **10***a* as well as the bars **75** may be rubberized or coated with rubber or plastic.

It will thus be seen that there is provided a device in which the several objects of this invention are achieved and which is well adapted to meet the conditions of practical use.

As possible embodiments might be made of the above invention, and as various changes might be made in the embodiment above set forth, it is to be understood that all matter herein set forth or shown in the accompanying drawing is to be interpreted as illustrative and not in a limiting sense.

Having thus described the invention in some detail, what is claimed as new and desired to protect by Letters Patent of the United States, is:

1. A tray comprising a holder, said holder having side portions, each side portion comprising a zig-zag shaped member having downwardly extending loops and a side wire crossing said loops forming openings in the loops below said wire, and dish carrying clips having hooked end portions loosely engaged around the side wires and removably received within said openings and means to individually limit the free swinging movement of each of said clips.

2. A dish supporting tray comprising an elongated holder and a plurality of dish engageable clips, said clips each including an elongated wire having axially aligned end portions and an intermediate laterally bowed portion, said end portions terminating in U-shaped hooks opening toward each other, said holder comprising means normally received in said hooks for swinging movement of said clips toward either end of said holder, said holder comprising other means for limiting the swinging movement of said clips in either of said directions, and said intermediate laterally bowed portions of said clips providing for movement of said hooks laterally of said

holder for engagement with or disengagement from said first mentioned means.

3. A dish supporting tray according to claim 2, wherein said first means comprises an elongated horizontally disposed wire at each side of said holder and wherein said second means comprises wire loops disposed beneath each of said horizontally disposed wires, said loops being of such size as to permit the free swingable movement of the clips in the respective loops.

4. A dish supporting tray according to claim 2, wherein said first means comprises a series of spaced notches in an elongated bar at each side of said holder in which the upper portions of said hooks are pivotally disposed, and said second means comprising the lower edges of said bars with which the lower portions of said hooks engage upon a predetermined range of swinging movement of said hooks in either direction longitudinally of said holder.

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