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[54] DISHWASHER DISHRACK
7 Claims, 6 Drawing Figs.

[52]	U.S. Cl.....	211/41
[51]	Int. Cl.....	A47g 19/08
[50]	Field of Search.....	211/41, 126, 132

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ABSTRACT: A dishwasher dishrack for holding articles during the washing operation which is of open construction to receive upwardly projected sprays of washing liquid in which the dishrack comprises an article-holding basket and a pivotally mounted retainer therein having spaced-apart sides and a crossbar connecting these sides at their outer ends, the crossbar comprising a succession of recessed sections such as successive scallops so that the retainer under the force of gravity acting thereon embraces inverted stemware in the basket to hold the stemware against the force of the upward projected liquid to prevent breakage and also to rest on top of articles such as plastic cups, glasses and the like to prevent their being displaced by the force of the upwardly projected liquid.

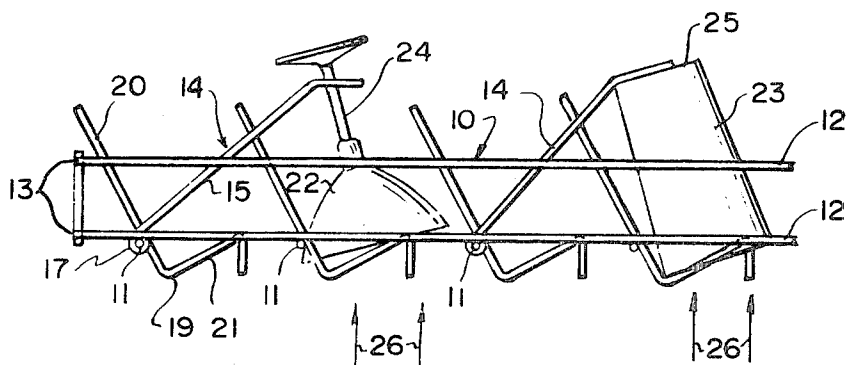


FIG. 1

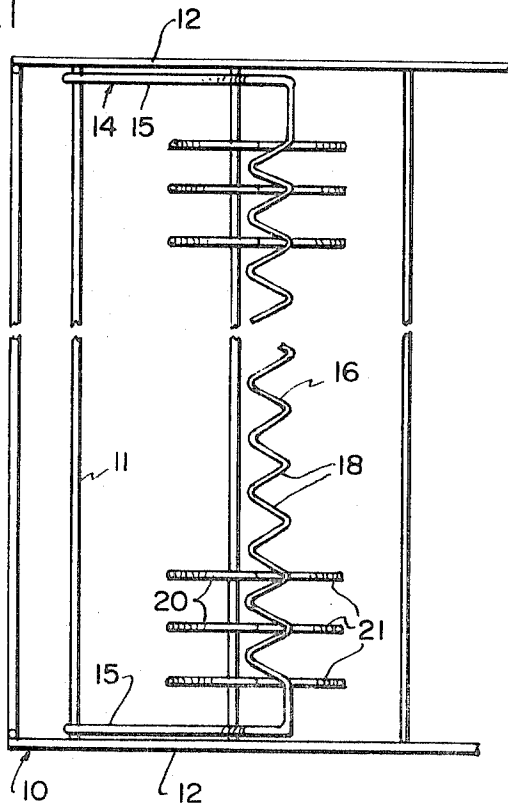


FIG. 4

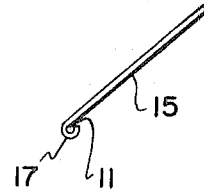


FIG. 5

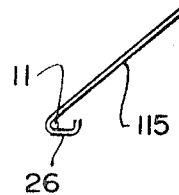


FIG. 6

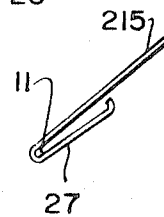


FIG. 2

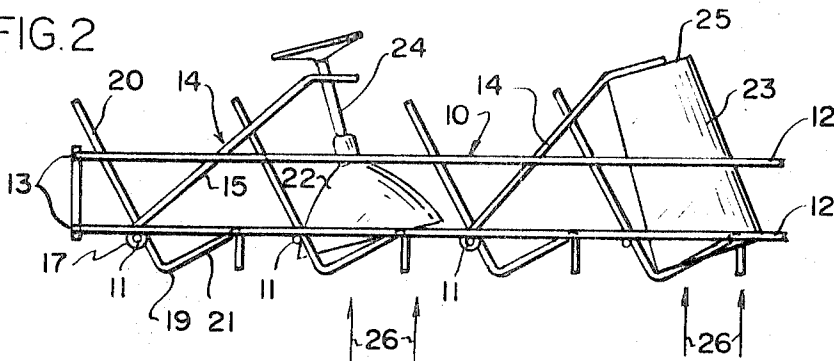
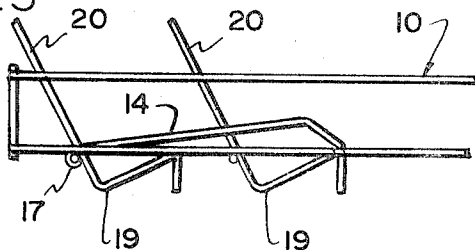


FIG. 3



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DISHWASHER DISHRACK

BACKGROUND OF THE INVENTION

As is well known, automatic dishwashers operate by providing open baskets in which the articles being washed are held in inverted position so as to be subjected to upwardly projected sprays of liquid as from a rotatable spray arm with the liquid exerting considerable upward force on the articles because of the pressure of the sprays. A problem in this type of article holder or basket is that the upward force of the sprays frequently displaced the articles and this can cause breakage particularly where the article is a piece of fragile stemware. In addition, if the article is extremely lightweight, as is true of plastic cups, plastic glasses and similar lightweight articles the force of the upward sprays of liquid can often easily shift the articles around in the basket. The dishrack of this invention includes a retainer means for preventing this shifting of the articles and resulting damage or at least improper washing action.

SUMMARY OF THE INVENTION

One of the features of this invention is to provide a dishwasher dishrack for holding articles being washed by upwardly projected sprays of liquid and including a retainer for engaging the articles and preventing displacement thereof by the washing liquid so as to avoid damage of the articles and in certain cases inefficient washing of the articles.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a fragmentary plan view of a dishwasher dishrack embodying the invention.

FIG. 2 is a fragmentary side elevation thereof with the basket containing representative articles during the washing operation.

FIG. 3 is a view similar to FIG. 2 but illustrating the basket when it is empty of articles.

FIGS. 4, 5 and 6 are fragmentary side elevational views showing three embodiments of means for attaching article retainers of the invention to the basket.

DESCRIPTION OF THE ILLUSTRATED EMBODIMENT

In the embodiment of FIGS. 1-3 the dishwasher dishrack comprises an article holding basket 10 comprising a latticework of spaced and crossing wires 11 transversely spaced and extending from side to side of the basket to form the bottom thereof. The wires also include side 12 and end 13 wires forming the corresponding sides and ends of the basket.

Pivotaly mounted in the basket are a plurality of article retainers 14 with each having spaced-apart parallel sides 15 that are inwardly of but adjacent the side wires 12 of the basket and a crossbar 16 extending across the basket between the opposite sides 12 and located at the ends of the retainer sides 15. Thus the sides 15 and crossbar 16 of the retainer are arranged in a generally inverted U-shape when the retainer is in its elevated position as shown in FIG. 2.

The ends of the retainer sides opposite the crossbar 16 are pivotally connected to the ends of a cross wire 11 at the bottom of the basket and this connection is provided in the embodiment of FIGS. 1-3 by circular loops 17 at these ends loosely embracing a bottom wire 11 as illustrated.

The crossbar 16 of the retainer 14 is provided with a succession of recessed sections 18 here shown as V-shaped scallops arranged successively in order along slightly less than the full length of the crossbar wire 16.

As can be seen most clearly in FIGS. 1-3 certain of the bottom wires 19 are arranged close together and have upwardly slanted sections 20 extending from the bottom to the top of the basket and basket bottom sections 21 sloped with respect to wires 12 as illustrated. Thus certain ones of the successive angled bottom sections 21 provide an article-retaining area angled toward a corresponding article retainer 14. This provides a support for the inverted articles during the washing operation as illustrated by the inverted stemmed glass 22 and the inverted tumbler 34 both shown in FIG. 2.

When the basket 10 is free of articles as illustrated in FIG. 3 each retainer 14 under the force of gravity rests against the bottom of the basket as illustrated in FIG. 3. When, however, each retainer 14 is elevated as shown in FIG. 2 the recessed sections 19 can either be used to engage the opposite sides of a stem 24 of the stemmed glass 22 or other stemware or can rest by its own weight against the bottom 25 of a tumbler 23. In either instance, the engagement of the retainer 14 with the sides of the stem 24 or with the bottom 25 supports the article during the washing operation against the pressure force of the upwardly projected stream of washing liquid as illustrated by the arrows 26 in FIG. 2.

The manner of connecting the retainer side wires 15 to the cross bottom wire 11 is illustrated in various embodiments in FIGS. 4, 5 and 6. FIG. 4 illustrates the partial circular loop 17 embracing the bottom wire 11 as discussed earlier in connection with the FIGS. 1-3 embodiment.

In the embodiment of FIG. 5 the attaching portion 26 on the lower end of each side wire 115 of this embodiment is elongated and angular to provide a loose connection to wire 11 that permits the retainer having a greater adaption to the dimensions and angular arrangement of the article being washed.

In the embodiment of FIG. 6 the sides 215 of the article retainer are each provided with an attaching portion 27 that is not only loose but that is elongated to a substantial degree which permits even a greater adaption to the characteristics of the articles held by the retainer.

As can be seen from the above description the dishrack basket of this invention provides engagement of the articles being washed and this support is provided by the weight of the retainer itself with no requirement for additional spring or other resilient biasing means to hold the article securely. However, such auxiliary means as a spring or resilient member may be added if desired.

Having described my invention as related to the embodiments shown in the accompanying drawings, it is my intention that the invention be not limited by any of the details of description, unless otherwise specified, but rather be construed broadly within its spirit and scope as set out in the appended claims.

I claim:

1. A dishwasher dishrack, comprising: an article-holding basket permeable to liquid and having a bottom; a retainer in said basket holding both stemware and lightweight articles against the force of upwardly projected washing liquid, said retainer having spaced-apart sides pivotally connected to said basket for selective arrangement of said retainer adjacent said bottom and in elevated position, and a crossmember connecting said sides having a succession of recessed sections, said retainer under the force of gravity being adapted when elevated to support stems of inverted articles and to rest on top of articles as desired during washing to retain them against said force of said upwardly projected liquid.

2. The dishrack of claim 1 wherein said crossmember comprises a bar and said succession of recessed sections comprises successive scallops in said crossbar.

3. The dishrack of claim 1 wherein said crossmember and said sides are arranged in a generally inverted U with said sides being substantially parallel to each other.

4. The dishrack of claim 2 wherein said retainer spans said rack from side to side with the spaced-apart sides of the rack being spaced inwardly of the adjacent sides of the basket.

5. The dishrack of claim 1 wherein said retainer sides are pivotally connected at their ends that are opposite the crossmember to a cross wire of the basket, said basket comprising a latticework of spaced and crossing wires.

6. The dishrack of claim 1 wherein said retainer sides comprise means loosely connecting the retainer to the basket to permit transverse shifting as well as arcuate movement of said retainer.

7. The dishrack of claim 1 wherein said basket comprises at least one transverse bottom section angled toward said retainer for receiving the bottoms of the articles held by said retainer.