W. R. WALKER.

CULINARY BASKET FOR DISHWASHING MACHINES.

APPLICATION FILED AUG. 27, 1920.

1,426,931. Patented Aug. 22, 1922.

Fig. 1.

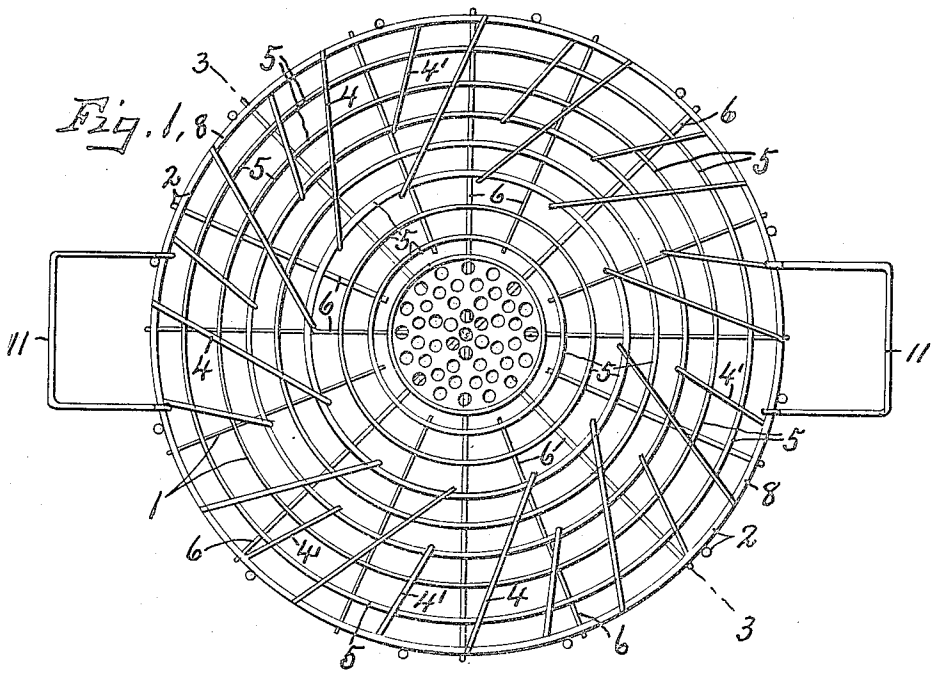


Fig. 2.

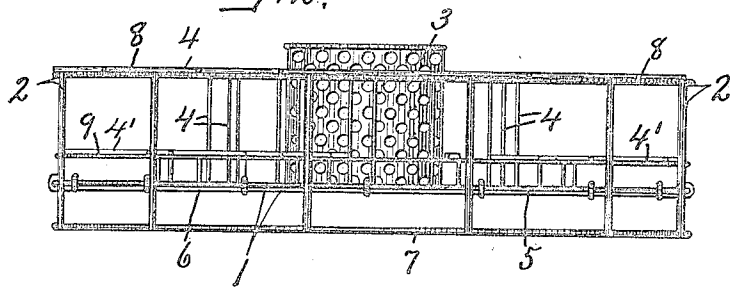
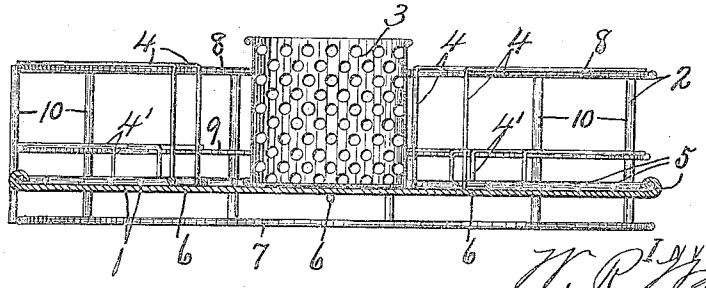


Fig. 3.



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CULINARY BASKET FOR DISHWASHING MACHINES.

1,426,931. Specification of Letters Patent. Patented Aug. 22, 1922.

Application filed August 27, 1920. Serial No. 406,305.

To all whom it may concern:

Be it known that I, WILLARD R. WALKER, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Culinary Baskets for Dishwashing Machines, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to a culinary basket for dish-washing machines of the class set forth in my Patents No. 1,244,446, October 23, 1917, and No. 1,397,846, Nov. 22, 1921, in which the tray or basket containing the dishes and other kitchen utensils to be washed is placed within the vat directly over a rotary impeller whereby the washing fluid is impelled upwardly and laterally through the basket and against the dishes and other utensils therein for cleansing purposes.

Heretofore, the dishes have been placed in more or less circular concentric rows around the axis of the basket with the result that the whirling motion of the washing fluid produced by the revolving impeller causes said fluid to be thrown more against the edges and across the faces of the dishes than by direct impact against the faces where the washing is more frequently required, and while this method of supporting the dishes brings about a thorough cleansing thereof, it has been found by experiment that the time required for this work may be considerably reduced and the cleansing operation more thoroughly accomplished by positioning the dishes so that the impact of the water will be more directly against the faces thereof, and the main object of my present invention is to provide a culinary basket with means whereby the dishes will be supported in upright planes tangentially with relation to the axis of the basket, or axis of revolution of the impeller which is coincident with that of the basket, whereby the faces rather than the edges of the dishes will be presented to the more or less whirling fluid and will constitute a series of deflecting surfaces around said axis for deflecting the moving fluid from the several dishes against the surfaces of other dishes with greater force and directness of impact than would be possible with the plates arranged in concentric rows about the axis of the basket, all of which not only greatly increases the output for a given period of time, but also produces a more thorough cleansing of the dishes.

Another object is to greatly increase the strength of the basket without increasing its weight so that it may be used with perfect safety for carrying its full capacity of dishes and other kitchen utensils from place to place without liability of breakage.

A further object is to provide the basket with an annular bearing some distance below the plane of the dish supporting bottom so that it may rest upon the bottom of the vat with the assurance that the dishes will be held a sufficient distance above said vat bottom to clear the revolving impeller and to allow ample space for the free circulation of the relatively small body of washing fluid required for machines of this type.

Other objects and uses relating to specific parts of the basket will be brought out in the following description.

In the drawings:

Figure 1 is a top plan.

Figure 2 is a side elevation.

Figure 3 is a transverse vertical sectional view of a culinary basket embodying the various features of my invention.

As illustrated, this basket is preferably circular in plan and comprises a bottom portion —1—, an outer upright marginal wall —2—, an inner concentric upright cage —3— and a series of upright partitions —4— arranged about a common axis coincident with that of the basket and extending inwardly from the outer upright wall in tangential relation to circles about said axis or at an angle to the radii passing through their points of attachment to the outer upright wall, the inner ends of said partitions being additionally supported upon the bottom of the basket.

The bottom —1— is composed of a series of circular concentric rings —5— in uniformly spaced relation radially, but disposed in substantially the same flat plane horizontally and held in these relative positions by radial tie rods —6— which are spaced a uniform distance apart circumferentially, the inner ends of the alternate tie rods —6— being extended under the bottom of the cage —3— for supporting the same, and preferably meet in the axis of the cage where they are secured together by electric welding or other equivalent fastening means.

These tie rods are rigidly secured by spot welding to the undersides of the rings —5— and have their outer ends looped around the outermost ring —6— of the bottom for additional securement, the inner ends of alternate tie rods terminating short of the periphery of the cage —3—.

The outer upright wall —2— extends some distance above and below the bottom wall —1— and comprises a bottom ring —7—, a top ring —8—, an intermediate ring —9— and a series of upright supporting posts —10—, said rings —7—, —8— and —9— being concentric with the axis of the basket and of substantially the same diameter as that of the outer ring —6— of the bottom wall —1—, and are also disposed in vertically spaced relation relatively to each other and to the bottom wall in planes parallel therewith, and are held in fixed relation to each other, and to said bottom wall by the posts —10— which are spot-welded thereto and also to the outer ring of the bottom wall for rigidly uniting the outer upright wall with said bottom wall.

The bottom ring —7— is, therefore, disposed in a plane some distance below the bottom wall of the basket and forms an annular bearing adapted to rest upon the bottom of a vat (not shown) for supporting the bottom of the basket a sufficient distance above the impeller to clear the same and also to allow ample space for the recession of the washing fluid from the bottom wall of the basket and dishes thereon to allow the dishes to dry when the washer is at rest without removing the basket with the dishes therein from the vat, it being understood that only a comparatively small volume of water is used in the cleansing operation and that this water is normally below the level of the bottom of the basket.

The cage —3— is adapted to receive and retain knives, forks, spoons and other small utensils during the cleansing operation and preferably consists of a perforated cylindrical shell of sheet metal supported at its bottom upon the underlying portions of the tie rods —6— which extend thereunder, and has its upper end extending some distance above the plane of the upper ring —8— of the side walls —2— and open at the top for the reception of said utensils, and also to permit the washing fluid to enter the top as well as through the perforations for cleansing the utensils therein.

The upright partitions —4— and —4'— are arranged in circumferentially spaced relation about the axis of the basket tangential to circles about said axis and have their outer ends rigidly secured to the upright walls —2— and their inner ends rigidly secured to the bottom wall —1—, and they are, therefore, disposed at an angle to radial lines passing through their outer ends.

The partitions —4— are somewhat longer and deeper vertically than the partitions —4'—, but the inner ends of all of the partitions are spaced apart some distance from upright walls of the cage —3— to allow free circulation of the water upwardly through the bottom of the basket between the cage and partitions as well as between the partitions.

Each of the partitions —4— preferably consists of an L-shaped wire having a horizontal portion disposed in substantially the same horizontal plane as that of the upper ring —8— of the side walls and its other arm disposed in a vertical position and secured by spot welding or otherwise at its lower end to one of the rings of the bottom with the partitions —4— are also L-shaped, member being connected intermediate its ends to the intermediate ring —9— by a horizontally extending wire.

The partitions —4'— which alternate with the partitions —4 —are also L-shaped, one arm of each being disposed in substantially the same horizontal plane as the intermediate ring —9— and secured by spot welding thereto, while the other arm is secured by spot welding to one of the rings of the bottom wall —1— outside of that to which the L-shaped members of the partitions —4— are secured.

These partitions divide the interior of the basket above the bottom wall —1— into a series of compartments open at their inner sides or ends, and also at the top to permit plates and similar dishes to be placed edgewise therein with their lower edges resting upon the bottom wall —1—, each compartment serving to receive a plurality of dishes, which, owing to the tangential arrangement of the partitions, will be disposed in planes more or less tangential to circles about the axis of the basket, so that the whirling and centrifugal motion of the washing fluid as it is thrown upwardly and circumferentially by the impeller will impinge more directly against the faces of the dishes than against the edges thereof. In other words, the upward and circumferential motion of the washing fluid will cause the latter to impinge against the faces of the dishes with a glancing impact, thereby causing the water to deflect from one plate to another with great rapidity and with considerable force, which produces a more thorough and expeditious cleansing of the plates and greatly increases the output for a given period of time.

Suitable U-shaped wire handles —10— are hinged to diametrically opposite sides of the upper ring —8— of the side walls to swing vertically against the outer faces of the sides walls —2— or over and upon the upper edges of the partitions —4— as may be desired.

What I claim is:

1. A culinary basket comprising an outer upright circular wall of open work having its lower and upper edges disposed in parallel planes, an open work bottom wall supported by the outer wall in a plane between and some distance from said lower and upper edges, and upright partitions arranged in spaced relation about the axis of the basket and extending inwardly and downwardly from the upper edge of the outer wall to the bottom wall.

2. A culinary basket comprising an outer upright circular wall of open work having its lower and upper edges disposed in parallel planes, an open work bottom wall supported by the outer wall in a plane between and some distance from said lower and upper edges, and upright partitions arranged in spaced relation about the axis of the basket and extending inwardly and downwardly from the upper edge of the outer wall to the bottom wall at substantially equal angles to radial planes passing through their outer end.

3. A culinary basket comprising lower and upper rings in parallel spaced relation, upright posts connecting the rings, a bottom wall composed of concentric rings in spaced relation and radial tie rods connecting them, the outer of said concentric rings being secured to the upright posts, and upright partitions arranged in spaced relation about the axis of the basket and extending inwardly and downwardly from the upper ring to the bottom wall in planes at an angle to radial planes passing through their outer ends.

4. A culinary basket comprising, lower, upper and intermediate rings of substantially the same diameter arranged in spaced parallel planes, posts connecting said rings, an open work bottom wall secured to the posts in a plane between the lower and intermediate rings, upright partitions extending inwardly and downwardly from the upper ring to the bottom wall, and additional upright partitions extending inwardly and downwardly from the intermediate ring to said bottom wall and relatively shorter than the first named partitions.

In witness whereof I have hereunto set my hand this 26th day of July, 1920.

WILLARD R. WALKER.

Witnesses:
ROSE G. CARROLL,
HOWARD P. DENISON.