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RINSING APPARATUS FOR DISHES

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Fig. 1.

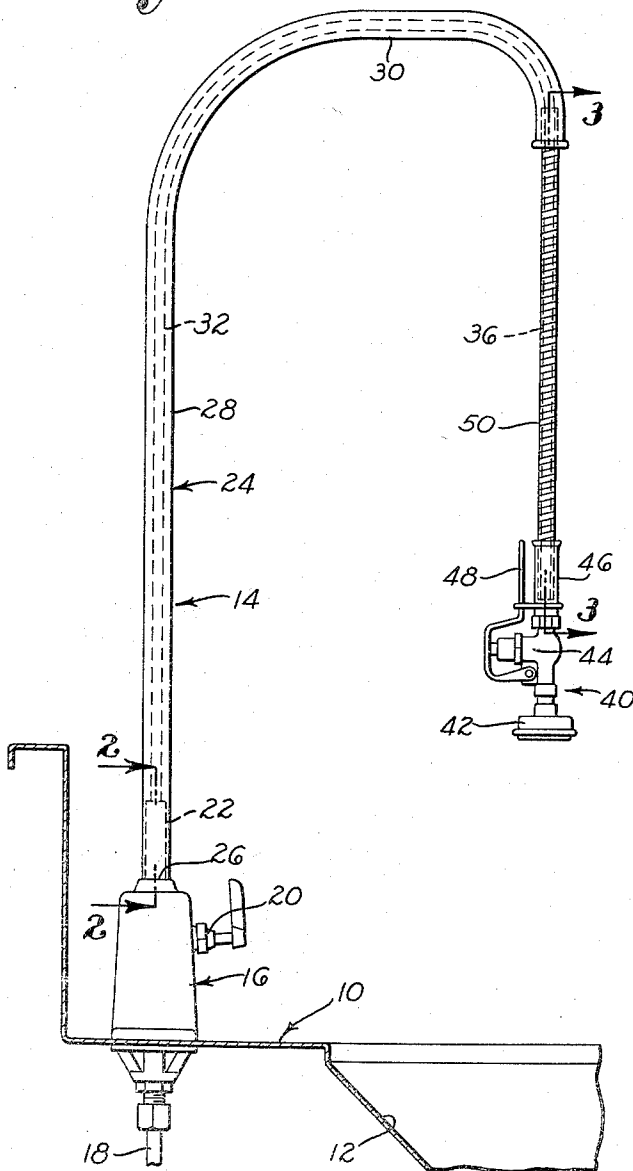


Fig. 3.

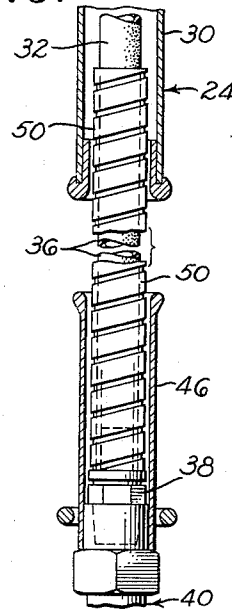
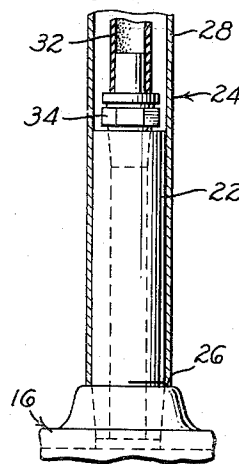


Fig. 2.



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RINSING APPARATUS FOR DISHES

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5 Claims. (Cl. 134—172)

The present invention relates to an apparatus for rinsing dishes, and the like, to rid them of most food waste thereon and adhering thereto prior to washing them in suitable dishwashing equipment, the invention being intended primarily for use in restaurants, and the like, but not being limited thereto.

A typical restaurant dishwashing installation includes a dish table or trim table over which dishes to be washed are moved on their way to suitable dishwashing equipment, such a trim table conventionally including a dish rinsing apparatus and including a sink leading to a garbage disposal apparatus for comminuting the food waste removed from the dishes by the rinsing device and for discharging the comminuting waste into a sewer, or the like. A primary object of the present invention is to provide an improved rinsing apparatus or device of the foregoing general character.

More particularly, a primary object of the invention is to provide a rinsing device which is out of the way when not in use, but which provides maximum flexibility so that it can be used to rinse food waste from dishes with optimum effectiveness.

A more specific object of the invention is to provide a rinsing apparatus which includes a support mounted on the trim table adjacent the sink leading to the garbage disposal apparatus, a rigid tube having an end mounted on the support, and a flexible conduit in this tube and having an end anchored relative to the support, the flexible conduit being longer than the tube so that a portion of such conduit projects from the other end of the tube a substantial distance, and the other end of the conduit being provided with discharge means at the end of the projecting portion thereof for spraying water, or other fluid, on the dishes to be rinsed. A related object is to provide a rigid guide tube for the flexible conduit which includes a generally vertical portion extending upwardly from the trim table, and which includes a generally semicircular portion forming a continuation of the vertical portion of the tube and extending upwardly, outwardly and then downwardly from the upper end of the vertical portion of the tube, the projecting portion of the flexible conduit projecting downwardly from the terminus of the generally semicircular portion of the guide tube.

With this construction, since the flexible conduit is anchored relative to the support adjacent the lower end of the guide tube only, it is free to rotate within the guide tube to some extent to provide maximum flexibility of movement of the discharge means at the end of the projecting portion of the conduit, this projecting portion itself also contributing to providing the discharge means with virtually unlimited freedom of movement for ease of application of rinsing water, or other fluid, to dishes traversing the trim table, which is an important feature of the invention.

Another object of the invention is to rotatably mount the lower end of the guide tube for the flexible conduit on its support, the guide tube preferably being ro-

tatably mounted on a tubular vertical shaft to which the lower end of the flexible conduit is connected in fluid communication with the interior thereof. With this construction, the rinsing apparatus may be swung to one side out of the way when not in use, and may be swung into an operative position when it is to be employed for its intended purpose, this rotary mounting of the guide tube for swinging movement from one position to another about a generally vertical axis also contributing materially to the optimum freedom of movement possessed by the discharge means at the end of the projecting portion of the flexible conduit.

A further object of the invention is to enclose the projecting portion of the flexible conduit in a flexible, protective sheath, this sheath being connected at one end to the discharge means, which is preferably a valve-equipped spray head, and extending into the generally semicircular portion of the guide tube. The flexible sheath is not connected to the guide tube and is free to move therein, whereby the sheath protects the projecting portion of the flexible conduit without impairing its flexibility and without interfering with relative movement between the flexible conduit and the guide tube, which is an important feature.

The forgoing objects, advantages, features and results of the present invention, together with various other objects, advantages, features and results thereof which will be apparent to those skilled in the art, may be attained with the exemplary embodiment of the invention illustrated in the accompanying drawing and described in detail hereinafter. Referring to the drawing:

Fig. 1 is a view, partially in section and partially in side elevation, illustrating a rinsing device of the invention installed on a dish or trim table; and

Figs. 2 and 3 are fragmentary, enlarged sectional views respectively taken along the arrowed lines 2—2 and 3—3 of Fig. 1 of the drawing.

The numeral 10 designates a dish table or trim table having a sink 12 to the lower end of which may be connected a garbage disposal apparatus, not shown, for comminuting food waste removed from dishes at the trim table by a rinsing device 14 of the invention mounted on the table.

The rinsing device 14 includes a support 16 rotatably mounted on the trim table 10 adjacent the sink 12 in communication with a supply line 18 for rinse water, which may contain a detergent, or other material, the support 16 including a valve 20 for controlling flow there-through. The support 16 includes an upwardly extending, vertical tubular shaft 22 into which water may flow from the supply line 18 through the valve 20. The shaft 22 may be threaded into the upper end of the body of the support 16 as shown.

Telescoped over and rotatable relative to the shaft 22 about a generally vertical axis is the lower end of a rigid guide tube 24, the lower end of this tube resting on an annular shoulder 26 on the support 16. The guide tube 24 includes a generally vertical portion 28 and includes a generally semicircular portion 30 which forms a continuation of the vertical portion 28 and which extends upwardly, outwardly and then downwardly. While the portion 30 is shown and described as semicircular, it will be understood that any configuration which, in effect, produces a 180° bend in the guide tube 24 may be utilized, the term "generally semicircular" being intended to cover any such configuration.

Within the guide tube 24 is a flexible conduit 32, such as a hose, the lower end of this flexible conduit being anchored relative to the support 16. As shown, the lower end of the flexible conduit 32 is provided with a coupling 34 which is threaded into the upper end of the tubular shaft 22 for the guide tube 24.

The flexible conduit 32 extends through the guide tube 24 and projects from the free end thereof a substantial distance, the projecting portion of the flexible conduit being identified by the numeral 36. The end of the projecting portion 36 of the flexible conduit 32 is provided with a coupling 38 which is threaded into a discharge means 40 comprising a spray head 42 equipped with a valve 44. The discharge means 40 is provided with a tubular handle 46 which encloses the coupling 38 and the lower end of the projecting portion 36 of the conduit 32, the valve 44 having a handle 48 which lies closely adjacent and parallel to the handle 46 so that the valve 44 may be opened to release water from the spray head 42 merely by squeezing the handle 48 toward the handle 46.

The projecting portion 36 of the conduit 32 is enclosed by a flexible, preferably metallic, sheath 50 one end of which is connected to the discharge means 40 through the coupling 38, the other end of the flexible sheath projecting into, but being unconnected to, the free end of the guide tube 24.

With the foregoing construction, maximum freedom of movement of the spray head 42 relative to the support 16 is provided. In other words, it is possible to swing the guide tube 24 about a vertical axis into any desired position and it is possible to move the spray head 42 into any desired position relative to the guide tube, the entire flexible conduit 32 between the spray head and the coupling 34, including the portion of the conduit 32 within the guide tube, being rotatable to permit this, and the projecting portion 36 of the flexible conduit within the flexible sheath 50 being bendable to accomplish this result. Thus, the spray head 42 may be maneuvered into any desired position in carrying out its rinsing function so that any object of any shape or size in any location on the table 10 may be rinsed easily and quickly, which is an important feature of the invention.

Although we have disclosed an exemplary embodiment of our invention herein for purposes of illustration, it will be understood that various changes, modifications, and substitutions may be incorporated in such embodiment without departing from the spirit of the invention as defined by the claims hereinafter appearing.

We claim as our invention:

1. In a rinsing device, the combination of: a support; a rigid tube having an end mounted on said support; a flexible conduit in said tube and having an end anchored relative to said support, said conduit being rotatable relative to said tube and being longer than said tube so that a portion of said conduit projects from the other end of said tube a substantial distance; a discharge means connected to the other end of said flexible conduit at the end of said projecting portion thereof and rotatable with said conduit relative to said tube; and a flexible sheath covering said projecting portion of said flexible conduit and connected at one end to said discharge means and extending into said other end of said tube and being rotatable with said conduit relative to said tube.

2. In a rinsing device, the combination of: a support; a rigid tube having an end rotatably mounted on said support; a flexible conduit in said tube and having an end anchored relative to said support, said conduit being rotatable relative to said tube and being longer than said tube so that a portion of said conduit projects from the other end of said tube a substantial distance; discharge means connected to the other end of said flexible conduit at the

end of said projecting portion thereof and rotatable with said conduit relative to said tube; and a flexible sheath covering said projecting portion of said flexible conduit and connected at one end to said discharge means and extending into said other end of said tube and being rotatable with said conduit relative to said tube.

3. In a rinsing device, the combination of: a support including a tubular vertical shaft; a rigid tube having an end rotatably mounted on said shaft, said tube including a vertical portion extending upwardly from said shaft and including a generally semicircular portion forming a continuation of said vertical portion, said tube being rotatable relative to said shaft about the axis of said vertical portion thereof; a flexible conduit in said tube and having an end secured to the upper end of said shaft in communication with the interior thereof, said conduit being rotatable relative to said tube and being longer than said tube so that a portion of said conduit projects downwardly from said generally semicircular portion of said tube a substantial distance; a discharge means connected to the other end of said flexible conduit at the end of said projecting portion thereof and rotatable with said conduit relative to said tube; and a flexible sheath covering said projecting portion of said flexible conduit and connected at one end to said discharge means and extending into said generally semicircular portion of said tube and being rotatable with said conduit relative to said tube.

4. A rinsing device as defined in claim 3 wherein said discharge means includes a spray head and a valve controlling flow therethrough.

5. In a rinsing device, the combination of: a table having a sink therein; a support mounted on said table adjacent said sink and including a tubular vertical shaft; a rigid tube having an end rotatably mounted on said shaft, said tube including a vertical portion extending upwardly from said shaft and including a generally semicircular portion forming a continuation of said vertical portion, said tube being rotatable relative to said shaft about the axis of said vertical portion thereof; a flexible conduit in said tube and having an end secured to the upper end of said shaft in communication with the interior thereof, said conduit being rotatable relative to said tube and being longer than said tube so that a portion of said conduit projects downwardly from said generally semicircular portion of said tube a substantial distance; a discharge means connected to the other end of said flexible conduit at the end of said projecting portion thereof and rotatable with said conduit relative to said tube; and a flexible sheath covering said projecting portion of said flexible conduit and connected at one end to said discharge means and extending into said generally semicircular portion of said tube and being rotatable with said conduit relative to said tube.

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