Jan. 23, 1934. I. A. JOHNSON 1,944,322

DISHWASHING MACHINE

Filed July 14, 1932

Fig. 1.

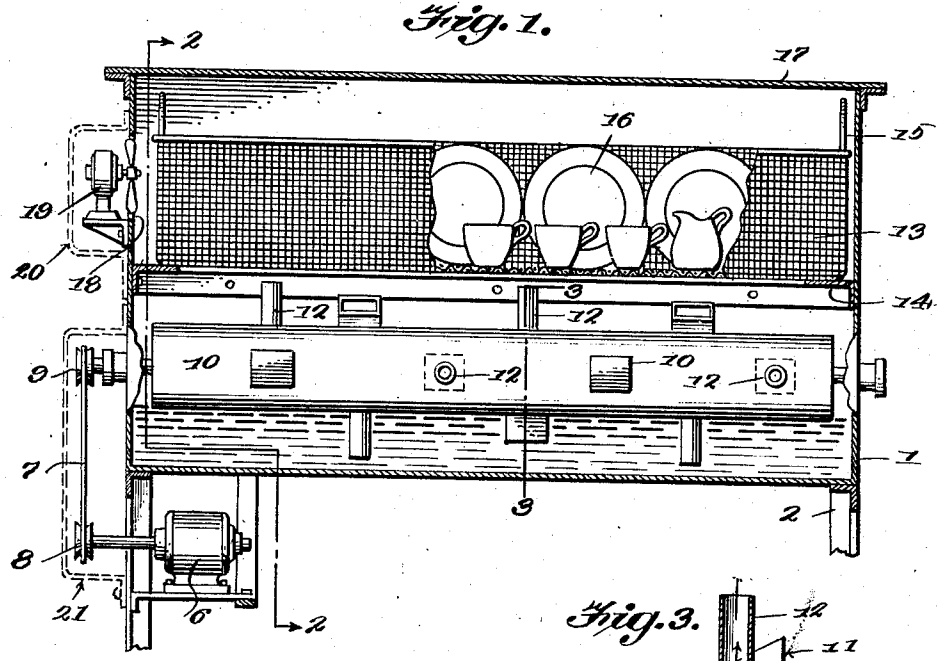


Fig. 2.

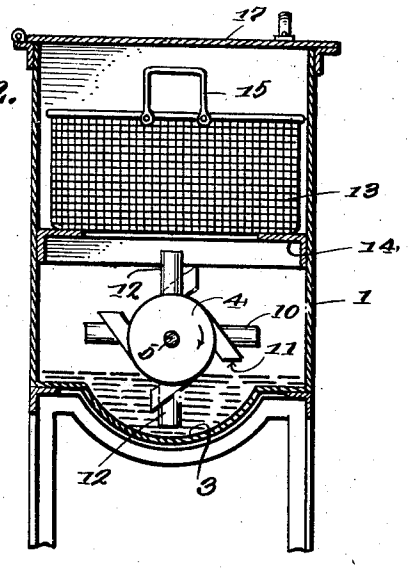


Fig. 3.

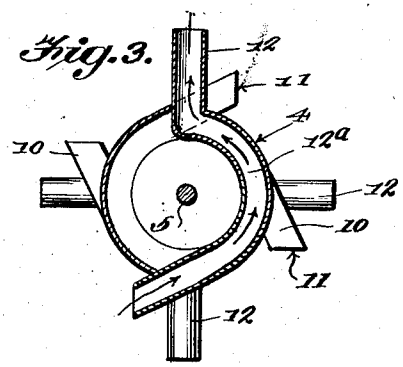
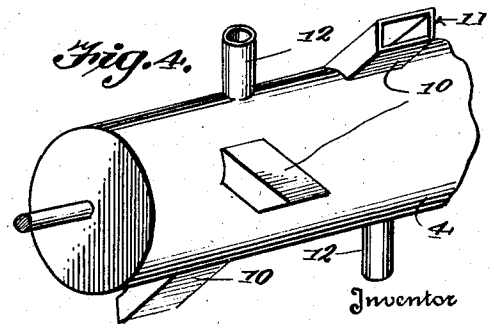


Fig. 4.



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DISHWASHING MACHINE

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Application July 14, 1932. Serial No. 622,535

1 Claim. (Cl. 299—63)

This invention relates to dishwashing machines, and has for its object the production of a simple and efficient machine which is so constructed as to provide a constant spray within the body of the machine during the operation of the machine.

Another object of this invention is the production of a simple and efficient dishwashing machine having a rotor or agitator in the lower end thereof, which rotor or agitator when operated will pump or cast a series of streams or sprays upward and over the articles to be washed which are carried within the machine.

Another object of this invention is the production of a simple and efficient agitator for a dish or other article washing machine which is so constructed as to pick up the water from the bottom of the container and spray the water upward into an article supporting basket whereby the articles will be efficiently washed and the water will be kept constantly agitated.

A still further object of this invention is the production of a simple and efficient dish or other article washing machine which is provided with means for efficiently supporting the article to be washed, means for spraying a washing liquid over the article to be washed, and means for facilitating the drying of the objects.

With these and other objects in view this invention consists in certain combinations, arrangements and formations of parts as will be hereinafter fully described and claimed.

In the drawing:—

Figure 1 is a longitudinal sectional view of the improved machine;

Figure 2 is a section taken on line 2—2 of Figure 1;

Figure 3 is an enlarged transverse sectional view through the agitator taken on line 3—3 of Figure 1, the casing or exterior of the washing machine being eliminated; and

Figure 4 is a detail perspective of one end of the improved agitator.

By referring to the drawing, it will be seen that 1 designates the casing or frame of the washing machine which may be supported or carried by the supporting standards 2. The casing or frame 1 is provided with a longitudinally extending dished or depending channel 3 extending longitudinally of the bottom of the casing and mounted above this channel 3 and extending longitudinally of the casing 1 is a rotating agitator 4. This rotating agitator 4 is journaled upon the supporting shaft 5 at each end, which shaft is journaled in any suitable or desired manner upon the casing 1. The rotating agitator 4 may be operated by means of an electric or other motor 6, a driving belt 7 being interposed between the pulleys 8 and 9 carried by the motor, and rotating agitator, respectively, as shown in Figure 1. This rotating agitator 4 preferably comprises an elongated hollow cylindrical tube which carries upon the periphery thereof a plurality of spaced staggered liquid lifting spouts 10, these spouts 10 being offset from the longitudinal center of the rotating agitator 4, as shown in Figures 2 and 3, and being provided with entrance openings 11 the peripheries of which are cut at an incline to the longitudinal axis of the spouts 10, the edge inclining from the outer side toward the center of the agitator 4, as shown. Consequently, as the rotating agitator 4 rotates in the direction of the arrow shown in Figure 2, the spouts 10 will pick up the liquid or scoop up the liquid within the channel 3 and draw the liquid into the interior of the passages 12^a. These spouts 10 will therefore constitute efficient scooping spouts for filling the passages 12^a.

Arranged along the length of the rotating agitator 4 and radiating from the center thereof are a plurality of spaced discharged spray spouts 12, which spray spouts 12 are adapted to spray the liquid from the rotating agitator 4 upward into the dish-containing tray or basket 13. Each of the scoop spouts 10 is connected to the diametrically opposite spray spout 12, as shown in Figure 3, by means of a tube or channelway 12^a to cause the liquid to be forced up through the spray tubes 12 as the liquid is being scooped by the liquid lifting scoops 10.

Mounted within the casing 1 and above the rotating agitator 4 is a suitable shelf or ledge 14 upon which a wire fabric or other perforated basket 13 is mounted, the basket 13 being provided with suitable handles 15 to facilitate the lifting of the basket from the casing 1, or the placing of the basket within the casing.

In actual operation, the dishes 16 or other articles to be washed, are placed within the basket 13 and the basket 13 is then placed upon the shelf or supporting ledge 14 whereupon the cover 17 of any suitable or desired structure is closed over the top of the casing 1. Within one end of the casing 1 and adjacent one end of the basket 13 is formed an opening 18 in which is mounted a hot-air fan 19 around which may be placed a suitable casing 20 if desired, and the belt 7 and pulleys 8 and 9 may also be enclosed by means of a suitable casing 21. The fan 19 may be con-

trolled in any suitable or desired manner as is the custom of the trade in such devices.

From the foregoing description, it will be seen that a very simple and efficient means has been produced in the nature of a rotary pump located in the lower portion of the casing 1, which pump is provided with a plurality of scoop spouts for scooping up the cleansing liquid and the constant rotation of the rotating agitator 4 which constitutes a rotary pump will create sufficient pressure due to the scooping of the water into the interior of the rotor to discharge the liquid under pressure up through the spraying spouts 12 through the bottom of the basket 13 and over the dishes or other articles 16 carried within the basket 13. After the dishes or other articles have been satisfactorily cleansed by the cleansing liquid, the hot air fan 19 may be set in operation for discharging a blast of air across the length of the basket 13 and thereby efficiently and quickly evaporating or drying the liquid from the surface of the articles which have been thoroughly washed.

It should be understood that certain detail changes in the mechanical construction may be employed without departing from the spirit of the invention, so long as these changes fall within the scope of the appended claim.

Having described the invention, what is claimed as new is:—

An agitator for a machine of the class described comprising a hollow cylindrical body closed at its ends and having an axially extending shaft to rotatably mount the body, and tubes spaced from each other longitudinally of the body and each extending through the body circumferentially thereof for a portion of its circumference, each tube having one end portion projecting out of the body at a tangent thereto to form a scoop and the other end portion of each tube projecting out of the body radially thereof to provide a discharge spout.

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