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2,631,313

ROTARY BRUSH MECHANISM FOR WASHING GLASSES

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2 SHEETS—SHEET 1

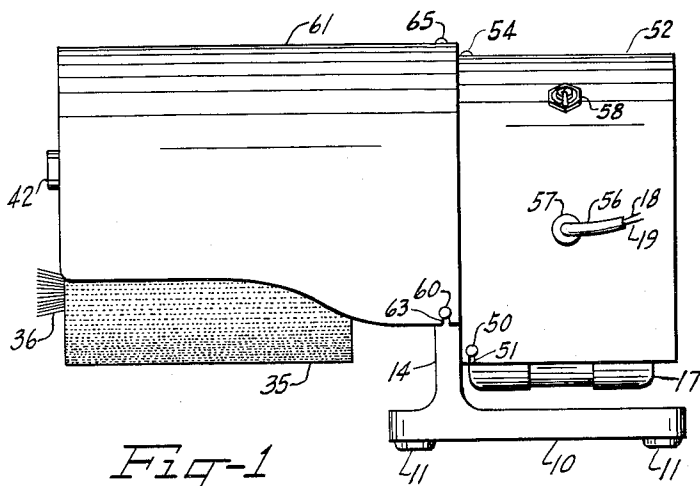


Fig-1

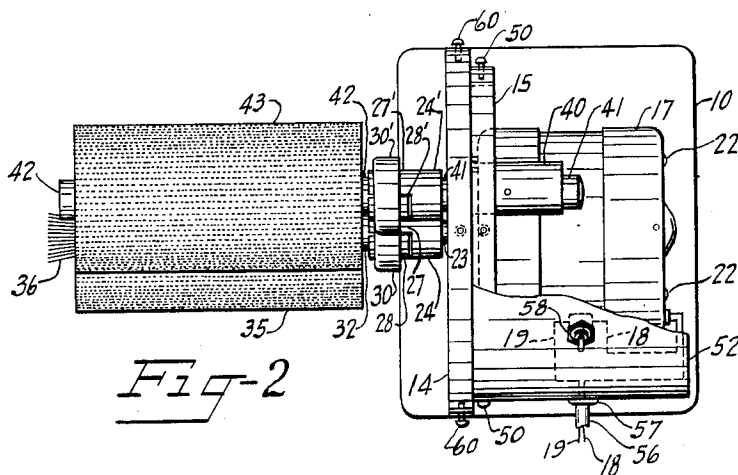


Fig-2

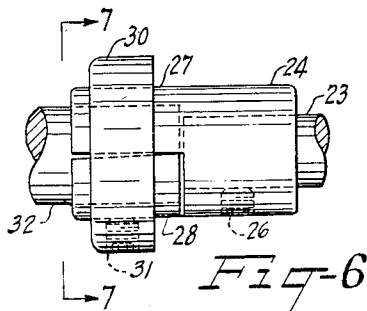


Fig-6

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2 SHEETS—SHEET 2

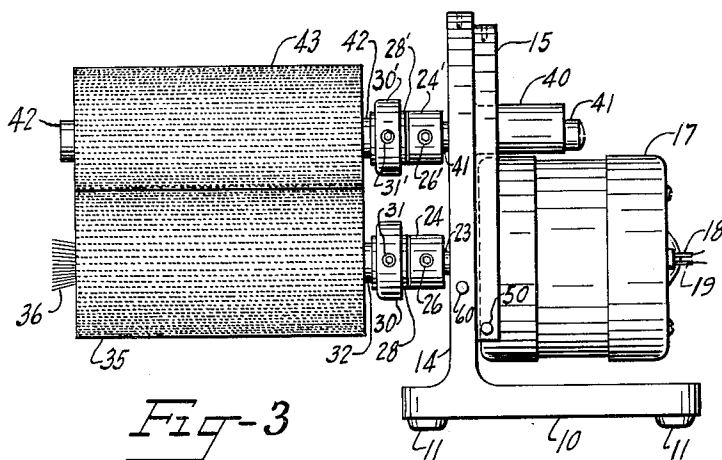


Fig-3

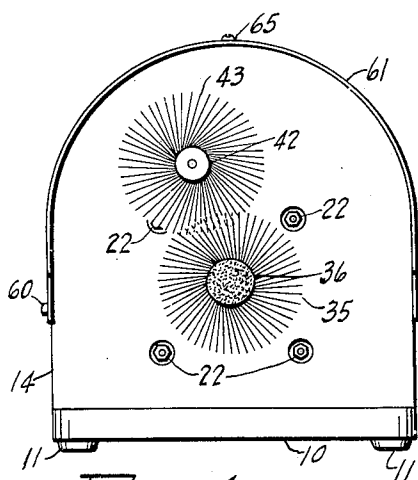


Fig-4

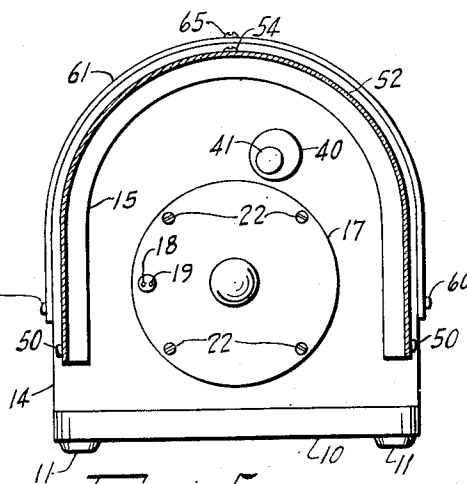


Fig-5

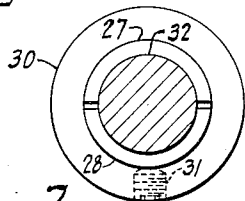


Fig-7

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ROTARY BRUSH MECHANISM FOR
WASHING GLASSES

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1 Claim. (Cl. 15—75)

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This invention relates to an improved machine for washing glasses, tumblers and the like and is especially adapted for use in restaurants and other places where a large number of glasses have to be washed.

It is an object of this invention to provide a glass washer having a motor driven rotary brush which is circular in cross-section and having a plurality of bristles extending radially therefrom, and a second rotary brush mounted for free rotation and having its bristles meshing with the bristles of the driven brush. The length of the bristles of the two brushes are long enough, so that their free ends intermesh with each other. The length of each brush is greater than that of the length of the glass, so that, whether there is a glass in process of being washed disposed on the driven brush, or not, the intermeshing of the brushes on inner ends of the brushes not contacted by a glass disposed on the driven brush, will still cause the freely rotating brush to rotate at approximately the same rate of speed as that of the driven brush.

It is another object of this invention to provide a stand having an uprising portion with a motor mounted on one side of the portion and having a shaft extending through the upstanding portion with a rotary brush detachably secured to the motor shaft and said uprising portion having rotatably mounted therein another shaft having means for detachably securing a second brush thereto and with the bristles of the brushes meshing with each other so as to cause rotation of the driven brush which is mounted on the motor shaft to impart rotation also to the freely rotating brush.

Some of the objects of the invention having been stated, other objects will appear as the description proceeds, when taken in connection with the accompanying drawings, in which

Figure 1 is a side elevation of the glass washing machine;

Figure 2 is a top plan view of Figure 1 with the housing covering the brushes being removed and with a greater portion of the housing covering the motor being broken away;

Figure 3 is a side elevation similar to Figure 1 but showing the covers for the brushes and motor removed;

Figure 4 is a front elevation looking at the left-hand end of Figure 1;

Figure 5 is a rear elevation looking at the right-hand end of Figure 1 but omitting the rear wall of the motor housing;

Figure 6 is an elevation of one of the means

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for detachably securing the brushes to their associated shafts;

Figure 7 is a vertical sectional view taken along the line 7—7 in Figure 6.

Referring more specifically to the drawings, the numeral 10 indicates a base having suitable resilient pads 11 for supporting the same on a surface, and this base 10 has uprising therefrom an upstanding support portion 14 which has a substantially semi-circular rib portion extending from the right-hand side thereof in Figure 3. The upstanding portion 14 has a pair of bores there-through for purposes to be presently described. Secured to the rear surface or right-hand surface in Figure 3 of the upstanding portion 14 is an electric motor 17 having suitable wires 18 and 19 leading therefrom to a suitable source of electrical energy, not shown. The motor 17 is secured to the upstanding portion 14 by any suitable means such as screws 22. The motor 17 has extending through a suitable bore in the upstanding portion 14 a motor shaft 23 which has detachably secured thereon a sleeve member 24 by means of a set screw 26. This sleeve member 24 has a cut away portion leaving a semi-circular extension 27 on its outer end and a complementary semi-circular portion 28 is adapted to fit in this cut away portion in the member 24. Surrounding the semi-circular portions 27 and 28 is a collar 30 which is secured in position by means of a set screw 31. A brush shaft 32 is adapted to be inserted between the semi-circular portions 27 and 28 and then when the set screw 31 is tightened, it will clamp the semi-circular portion 28 against the brush shaft 32 to hold it securely in position. The brush shaft 32 has a plurality of radially extending bristles 35 extending therefrom, and preferably a tuft of bristles 36 extending from its outer free end for washing the bottom portion of a glass 40 which is inserted over the brush 32.

The upstanding support 14 has integrally cast therewith a rearwardly projecting boss 40 which is bored for rotatably receiving a shaft 41 and this shaft 41 has secured thereon a member 24' identical to member 24 and is secured on the shaft by means of a set screw 26'. This portion 24' is identical in all respects to the part 24 described in Figure 6 and like reference characters will apply to the member 24' as well as the semi-circular portion 28' and the collar 27' with the prime notation added.

This arrangement, clearly shown in Figures 6 and 7, is adapted to removably confine an upper brush shaft 42 in the same manner that the brush shaft 32 is confined, the upper brush shaft

having extending therefrom a plurality of radially disposed bristles 43.

The shaft 42 does not have any brushes extending from the outer end thereof, since a glass is always placed over the driven brush 35 which in turn drives the upper freely rotating brush 43 by peripheral intermeshing of the free ends of the bristles 35 and 43 on the lower and upper brushes.

In order to shield the working parts of this mechanism from the hands of operators, the projection 15 has a screw 50 on each side thereof over which a slot 51 in a substantially semi-circular housing 52 is adapted to fit, and the portion 15 at its topmost portion has a threaded bore to receive a screw 54 which penetrates the cover 52 and holds the cover in position.

The wires 18 and 19 are mounted within a cable 56 which passes through a grommet 57 in one of the side walls of the cover 52 and then one of these wires is passed through a toggle switch 58 in a conventional manner and then the two wires 18 and 19 are connected to the electric motor as shown in Figure 3.

The upstanding support member 14 also has a screw 60 on each side thereof and the cover 61 is provided for the brushes 35 and 43 and this cover 61 is slotted as at 63 to fit down over the screws 60 and the upper portion of the upstanding support 14 has a threaded bore to receive a screw 65 which slidably penetrates the cover 61 and is threaded into the upstanding support 14 to removably secure the cover 61 in position.

It is thus seen that I have provided a glass washing machine which can be mounted on one of the ledges of a sink or on a table or any other suitable support, preferably with the brushes projecting out over a sink, and a glass at a time can be inserted over the brush 35 to wash the interior thereof, including the bottom portion thereof, and the intermeshing of the bristles 35 and 43 will rotate the topmost brush and thus the exterior of the glass will also be washed at the same time.

In the drawings and specification there has been set forth a preferred embodiment of the invention, and although specific terms are employed, they are used in a generic and descrip-

tive sense only, and not for purposes of limitation, the scope of the invention being defined in the claim.

I claim:

5 A frame for a glass washing machine having a horizontally disposed base, an upstanding motor support integrally cast with the base and rising from an intermediate portion of the base, a motor secured to one side of the support and having a driven motor shaft penetrating and projecting through the support, a first brush having radially projecting bristles secured to the projecting end of the motor shaft, a second brush having one end rotatably mounted in the support and having radially projecting bristles intermeshing with the bristles of the first-named brush, the intermeshing of the bristles on the first and second brushes forming the sole means for imparting rotation to the second brush, said support having vertically disposed side edges and a semi-circular top portion, a first shield substantially semi-circular in cross-section in its topmost portion and having vertical side walls integral with the topmost portion and adapted to fit over the upstanding support and to extend over and cover the brushes, means for securing the first shield to the upstanding support, said upstanding support having an inverted U-shaped rib extending from its side remote from the brushes and within the confines of which rib the motor is mounted, and a second shield substantially semi-circular in cross-section and having one end of the same secured on said rib.

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