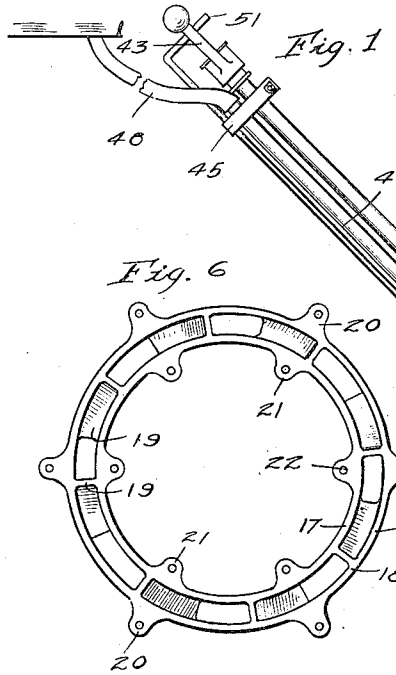
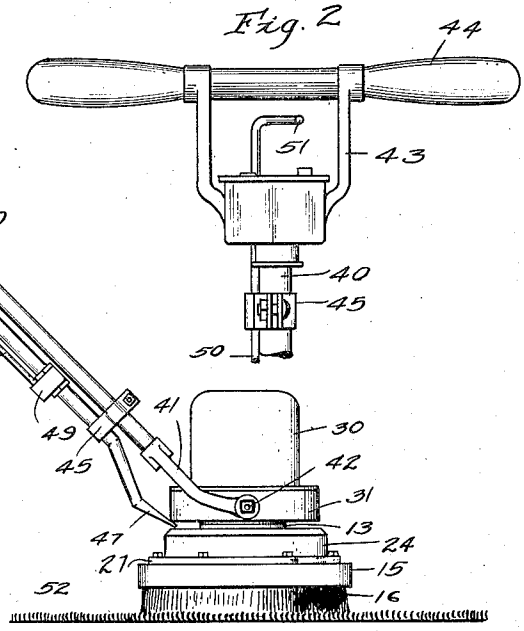
March 23 , 1926. 1,577,856

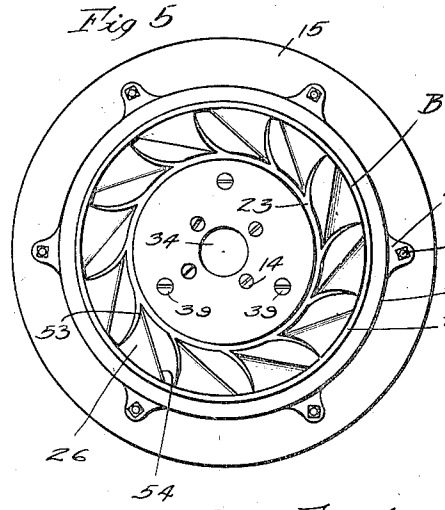
S. A. WINGERT

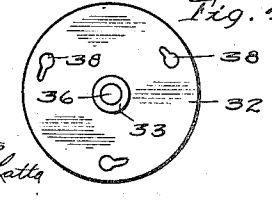
SCRUBBING MACHINE

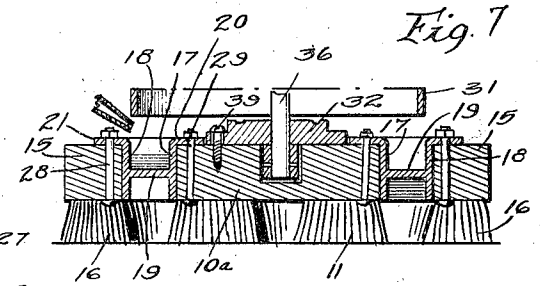
Filed Oct. 24 , 1923

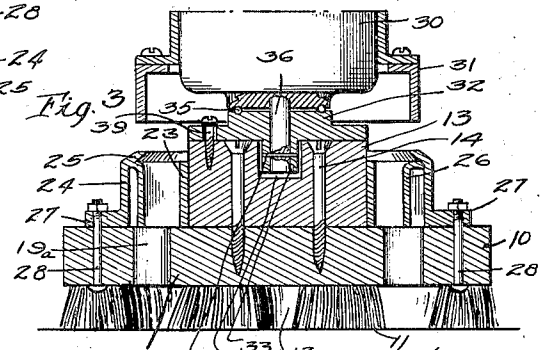












Witness
Lynn Latta

Inventor
Samuel A. Wingert
By Bair & Freeman Attys

Patented Mar. 23, 1926. 1,577,856

UNITED STATES PATENT OFFICE.

SAMUEL A. WINGERT, OF DES MOINES, IOWA.

SCRUBBING MACHINE.

Application filed October 24, 1923. Serial No. 670,495.

To all whom it may concern:

Be it known that I, SAMUEL A. WINGERT, a citizen of the United States, and a resident of Des Moines, in the county of Polk and State of Iowa, have invented a certain new and useful Scrubbing Machine, of which the following is a specification.

The object of my invention is to provide a scrubbing machine of simple, durable and inexpensive construction, especially designed and adapted for use for scrubbing carpets, rugs and the like.

More particularly, it is my object to provide such a machine, which can be readily moved from place to place by hand, and which is provided with a power-driven rotary element and with suitable novel means for supplying liquid soap or the like to the brush elements.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my device, whereby the objects contemplated are attained as hereinafter more fully set forth, pointed out in my claim, and illustrated in the accompanying drawings, in which:

Figure 1 shows a side elevation of a scrubbing machine embodying my invention.

Figure 2 shows an enlarged, detail view of the handle.

Figure 3 shows a vertical, detail, sectional view of the lower part of the scrubbing machine.

Figure 4 shows an inverted plan view of the plate on top of the rotary member.

Figure 5 shows a top or plan view of the rotary part of the brush with the motor and casing removed.

Figure 6 shows a plan view of a modified form of one of the elements; and

Figure 7 shows a vertical, central, sectional view of the lower portion of a scrubbing machine utilizing the modified element shown in Figure 6.

I will describe first the rotary portion of my improved scrubbing machine. This portion consists of a disc, indicated in the accompanying drawings by the reference character 10, which may be of wood or other similar material, and has the brush elements 11, extending downwardly therefrom, an open space 12 being left in the center.

Extending upwardly from the brush supporting disc 10 is an extension 13 of smaller diameter than the disc 10, which may be a separate piece secured to the disc 10 by means of screws 14.

I provide a liquid soap conducting member or an inner annular band 23 and an outer, concentric, parallel, annular band or wall 24, the upper end of which is provided with an inwardly and upwardly inclined flange 25.

The walls of bands 23 and 24 are rigidly connected by conducting vanes or the like 26, the upper edges of which are horizontal and flush with the upper edge of the wall 23.

The vanes or liquid conducting members 26 are inclined downwardly from their upper edges and are curved to form channels inclined and tapered downwardly and toward the lower edge of the wall 24 and terminate at their tapered discharge ends at points spaced circumferentially around the wall 24 from the upper edges of said vanes 26.

The inclination of the vanes 26 from their upper edges toward their lower tapered discharge points is away from the direction of advance of the rotating device during its rotation, so that liquid soap or the like, discharged downwardly, between the successive vanes 26, will tend to travel down the underside of the vanes 26 to the lower edges thereof and toward the wall 24 to points immediately above the opening 19ª extending through the disc 10.

The wall 24 has at its lower end outwardly, laterally extending ears 27 secured to the member 10 by means of bolts 28.

I provide an encased motor 30, having at its lower part a downwardly hanging apron 31. Below the casing of the motor 30 is mounted a plate 32, having a central downward extension 33 adapted to project into a socket 34 in the upper face of the member 13.

Between the lower part 34 of the motor casing and the plate 32 are ball bearings 35.

The motor shaft 36 extends through the plate 32 and is fixed to the extension 33 by means of a pin 37.

The plate 32 has extending through it keyhole slots 38 to receive the headed bolts 39 extending upwardly from the member 13.

A handle for manipulating the scrubbing brush is provided and consists of a tubular

rod or the like 40, having at its lower end the bifurcated arms 41 pivoted at 42 to the opposite side of the apron 31.

At the upper end of the rod 40 are the bifurcated arms 43, which support the double handle 44. Clamp brackets or the like 45 are mounted on the tubular rod 40 and support a soap conducting pipe 46, parallel with the rod 40 as shown in Figure 1.

The pipe 46 has a spout 47 at its lower end arranged with its discharge end just above the space between the walls 23 and 24 just inside the flange 25, as shown for instance in Figure 1.

The pipe 46 is designed to be connected by means of a flexible tube 48 with a suitable elevated source of liquid soap supply.

In the pipe 46 is a suitable shut-off valve 49 of any proper construction. The valve 49 may be controlled by a rod 50 mounted in suitable bearings and extending alongside the pipe 46 to a point near the handles 44, where the control rod 50 is provided with a right-angled extension 51, where it is readily accessible to the user of the machine.

I will now describe the practical operation of my machine and explain some of its advantages.

It will, of course, be understood that suitable connections are provided for supplying current to the motor 30. Such connections, however, form no part of my present invention.

In the actual use of the machine, the rug 52 is laid on the cleaning floor.

The tube 48 is connected with the source of soap supply and the machine is ready for use. The operator manipulates the extension 51 for opening the valve 49 and turns on the current, whereupon the machine can be moved about on the rug for thoroughly washing and scrubbing it.

The motor is held steady by means of the handle structure.

The rotation of the motor shaft 36 causes the plate 32 to rotate and the rotation of that plate is imparted to the rotary part of the device through the engagement of the plate 32 with the screws 39.

I have found considerable difficulty in building a machine of this type, which would not splash or scatter the liquid soap as the soap was being furnished to the machine.

To avoid such a disadvantage and to insure the proper feeding of the soap from the discharge spout 47 of the pipe 46, I have provided the member B with the peculiar construction of the vanes 26, whereby the soap discharged downwardly from the spout 47, will be caught by the vanes 26.

The device as viewed in Figure 5 rotates clockwise, and the soap is caught near the upper edge 53 of the vanes 26, then travels downwardly toward the tapered discharge ends 54 thereof on the underside of the vanes. There is no danger of the soap splashing out and any centrifugal power tends to throw or move the soap along the under surface of the vane 26, which is shaped to correspond with what would be the normal path of the soap at the ordinary rotating speed of the machine.

The soap is discharged at the lower edge of the wall 24 into the openings 19^a in the disk 10 then to the brush.

In Figures 6 and 7, I have shown a modified form of structure utilizing the member shown in Figure 6 to replace the member B shown in Figure 5. In this form the brush is formed in concentric portions, the inner one being designated by the reference numeral 10^a.

Arranged outside the disc 10^a and concentric therewith and spaced therefrom is an annular brush holding member 15 made of wood or similar material, having the downwardly extending brush elements 16.

I provide a member arranged between the members 10 and 15, which form a conducting element and also a means for connecting and supporting the members 10 and 15 with relation to each other. The member under consideration is shown in Figure 6 and is indicated generally by the character A.

The member A may be a casting and has the form of a pair of spaced concentric bands 17 and 18 connected by a series of cross members 19, substantially inclined from the vertical as shown in Figure 7.

At the upper edges of the bands 17 and 18 are horizontally extending ears 20 and 21 provided with screws or bolt holes 22.

The inner ears 22 are secured to the member 10 by means of screws or the like 29.

The ears 20 are secured to the annular brush supporting member 15 by the bolts 28. The plate 32 is received directly against the disk 10^a, the portion 33 being received in the cavity 34^a. The soap conducting nozzle extends between the apron 31 and the member. It will be seen that the inclined vanes 19 will catch the soap solution as it issues from the nozzle and direct it downwardly to the brush.

I find that the construction here shown gives a natural and even and efficient feed for the soap to the brushes.

Some changes may be made in the details of the construction and arrangement of the parts of my improved scrubbing machine without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims, any modified forms of structure or use of mechanical equivalents, which may be reasonably included within their scope.

I claim as my invention:

In a device of the class described, a brush supporting element, a second brush supporting element, said first element spaced

therefrom, brushes supported on said elements and conducting and supporting means arranged between said elements, comprising spaced annular walls connected by cross members inclined away from the vertical from their upper ends in a direction opposite the rotation of the device whereby fluid may be caught under their upper edges in the rotation of the brush supporting elements and guided downwardly without being permitted to splash up and out, means for rotating said brush supporting elements and means for supplying fluid soap or the like between them.

Des Moines, Iowa, March 13, 1923.

SAMUEL A. WINGERT.