

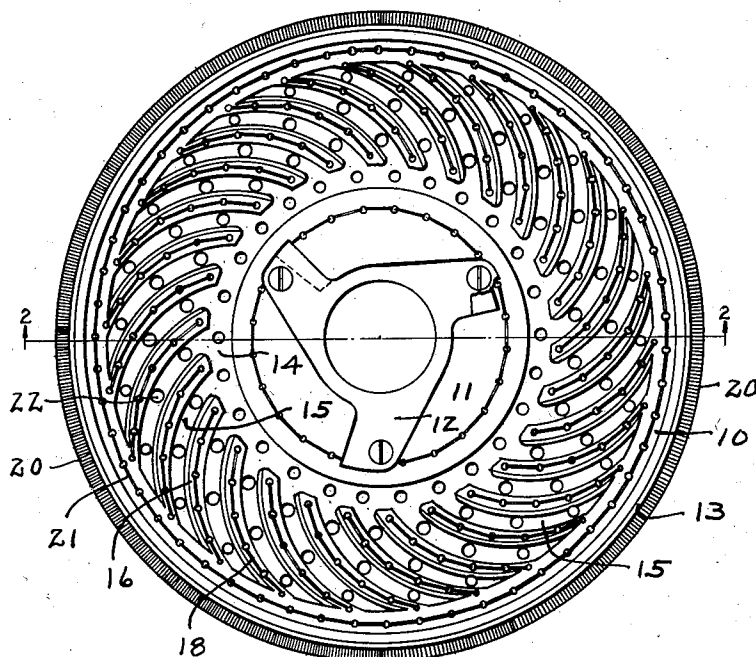
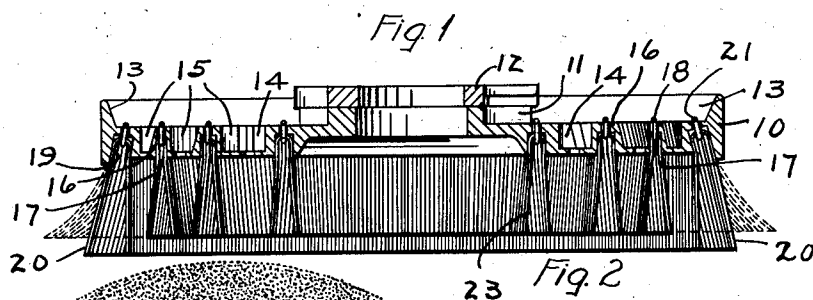
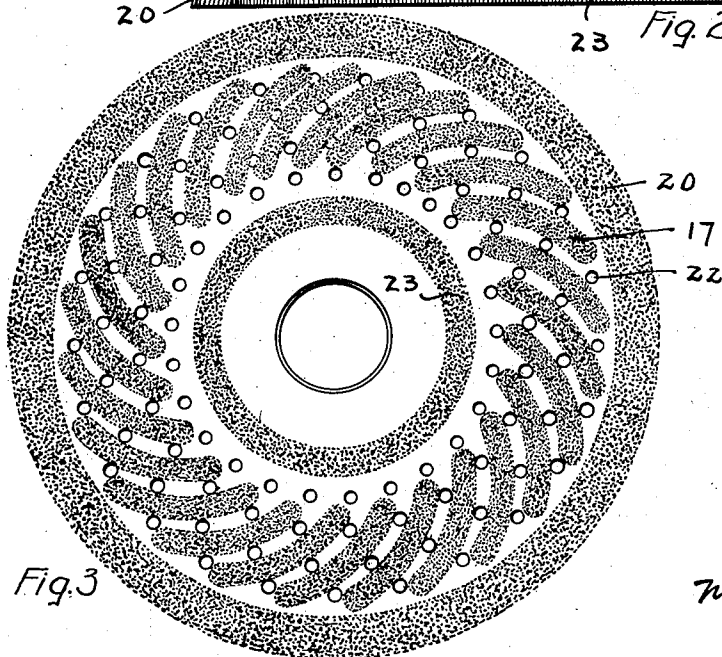
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SCRUBBING BRUSH

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SCRUBBING BRUSH

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4 Claims. (Cl. 15—180)

This invention relates to scrubbing brushes, particularly of the type adapted to be employed in conjunction with power driven portable units for the purpose of scrubbing rugs, floors, and the like. It is a primary object of my invention to provide a brush structure which upon revolving will carry and distribute a washing fluid over the top of the brush to give substantially an equal distribution of the fluid from the inner to the outer portion of the brush regardless of centrifugal action tending to throw the fluid principally to the outer portion of the brush.

It is a further primary object of my invention to provide a mounting of the scrubbing elements on the under side of the brush in such arrangement as to cooperate with the feeding of the fluid so that the tendency of the brush will be to retain the fluid thereunder rather than throwing it out from under the brush.

A still further primary object of the invention is to provide an outer circumferential fringe of bristles which may be depressed to extend laterally from the brush in order to permit the brush to scrub closely against baseboards and the like.

These and other objects and advantages of the invention will become apparent to those versed in the art from the following description of one particular form of my invention as illustrated by the accompanying drawing, in which

Fig. 1 is a top plan view of a brush embodying my invention;

Fig. 2, a central vertical section through the brush on the line 2—2 in Fig. 1, and

Fig. 3, a bottom plan view.

Like characters of reference indicate like parts in the several views in the drawing.

I form a head 10 which has a central boss 11 to which is attached a driving member 12. The head is provided with a peripheral upturned flange 13 and the annular surface between the flange 13 and the boss 11 is formed to have a wide annular groove 14 in which are a plurality of depressed regions 15 each arcuate in formation and being non-radial of the head 10. The regions 15 are in fact arranged in a more or less convoluted manner to leave partitioning ribs 16 therebetween. The inner ends of these regions communicate with an annular depressed region of like depth immediately around the boss 11.

Each of these ribs 16 is hollowed out from the under side of the head 10 to receive therein the upper looped ends of bristles 17 which are secured in place by wire 18 threaded through holes in the ribs 16 and under the looped ends of the bristles. I provide a circumferential groove 19

entirely around the under side of the head 10 adjacent the peripheral edge and insert therein the upper looped ends of bristles 20 and secure them in place by wire 21 passing through holes through the head and down under the loops and back up again. The bristles 20 are preferably made to be longer than the bristles 17 so that a circumferential marginal band of the longer bristles 20 is formed entirely around the brush to enclose the shorter bristles 17 therewithin.

In the groove 14 I provide a plurality of holes through the head. Also in the regions 15 I provide a plurality of holes in spaced apart relation, here shown as three holes 22 in each region 15. In operation, fluid is allowed to drop into the groove 14 and the brush is revolved through the driving member 12 in a counter-clockwise direction so that the outer leading ends of the regions 15 are ahead of the inner ends of the regions 15.

Normally centrifugal action set up by the revolving of the brush throws the fluid outwardly in the groove 14 into each of the regions 15 and would tend to further cause the fluid to travel quickly to the outer ends of those regions 15. However, by reason of the positioning of the regions 15, a certain amount of centripetal action is set up tending to overcome in part the centrifugal action thereby slowing up the travel of the fluid to the outer ends of the regions 15 so that the fluid will drop more or less uniformly downwardly through the head 10 through all of the holes provided in the head. In fact if there be any difference in distribution, more of the fluid will drop through the head toward the inner ends of the regions 15 rather than have a majority of the fluid fly to the outer ends and then drop through.

Since the bristles 17 extending below the head 10 follow the curvature of the regions 15, by reason of their being attached to follow the lanes of the ribs 16, fluid dropping through the holes 22 will drop between the arcuate rows of bristles 17 or flow thereon on the bristles. Now since the outer end of each row of bristles 17 is ahead of its inner end, these various rows of bristles 17 will tend to pull the fluid inwardly toward the center of the brush rather than throw it outwardly were the bristles to be arranged concentrically about the axis of rotation of the brush. Preferably I provide an inner annular row of bristles 23 to trap or rather stop the inward flow of the fluid, this row of bristles 23 being secured within an under annular groove formed in the head. Of course in using the brush, it is moved bodily

along over the floor so that all areas of the floor will be ultimately scrubbed. As above indicated, the outer circumferential bristles 20 will upon pressure being applied to the head 10, tend to spread outwardly to allow the bristles 17 to come into contact with the floor. When these bristles 20 are thus pushed downwardly, they extend outwardly as indicated by the dash lines in Fig. 2 and thus protrude beyond the outer side of the head 10 to permit scrubbing of corners such as those adjacent baseboards and the like. Furthermore this compressing of the bristles 20 to cause them to bend outwardly tends to form a washing fluid seal preventing flowing of the fluid under centrifugal action.

While I have herein shown and described my invention in the best form as now known to me, it is obvious that structural changes may be made without departing from the spirit of the invention and I, therefore, do not desire to be limited to this precise form beyond the limitations as may be imposed by the following claims.

I claim:

1. A revoluble scrubbing brush adapted to be employed with a scrubbing fluid poured onto the top side of the brush, comprising a head having on its upper side a wide annular groove and a plurality of arcuate depressed regions on said upper side within said groove, all of the regions having a plurality of fluid discharge holes in their under sides; an outer annular ring of bristles secured to and extending downwardly from the head; a plurality of arcuate rows of bristles carried by the head to extend downwardly therefrom within said outer ring, each of said arcuate rows being formed and spaced to follow the curvature of the regions on the upper side of the head; and a driving member to revolve the brush, and said regions being formed to have their outer ends spaced around ahead of their inner ends when the head is revolved whereby the side walls of said depressed regions tend in part to overcome the centrifugal effect on fluid in the groove.

2. A revoluble scrubbing brush adapted to be employed with a scrubbing fluid poured onto the top side of the brush, comprising a head having on its upper side a wide annular groove and a plurality of arcuate depressed regions on said upper side within said groove, all of the regions having a plurality of fluid discharge holes in their under sides; an outer annular ring of bristles secured to and extending downwardly from the head; a plurality of arcuate rows of bristles carried by the head to extend downwardly therefrom within said outer ring, each of said arcuate rows being formed and spaced to follow the curvature of the regions on the upper side of the head; and a driving member to revolve

the brush, and said regions being formed to have their outer ends spaced around ahead of their inner ends when the head is revolved whereby the side walls of said depressed regions tend in part to overcome the centrifugal effect on fluid in the groove; and an inner annular row of bristles tending to trap fluid between it and said outer row.

3. A revoluble scrubbing brush adapted to be employed with a scrubbing fluid poured onto the top side of the brush, comprising a head having on its upper side a wide annular groove and a plurality of arcuate depressed regions on said upper side within said groove, all of the regions having a plurality of fluid discharge holes in their under sides; an outer annular ring of bristles secured to and extending downwardly from the head; a plurality of arcuate rows of bristles carried by the head to extend downwardly therefrom within said outer ring, each of said arcuate rows being formed and spaced to follow the curvature of the regions on the upper side of the head; and a driving member to revolve the brush, and said regions being formed to have their outer ends spaced around ahead of their inner ends when the head is revolved whereby the side walls of said depressed regions tend in part to overcome the centrifugal effect on fluid in the groove; said outer row of bristles having bristles longer than those in said arcuate rows whereby, upon contact of the inner bristles with the floor, the outer bristles will be flexed to extend outwardly.

4. A revoluble scrubbing brush adapted to be employed with a scrubbing fluid poured onto the top side of the brush, comprising a head having on its upper side a wide annular groove and a plurality of arcuate depressed regions on said upper side within said groove, all of the regions having a plurality of fluid discharge holes in their under sides; an outer annular ring of bristles secured to and extending downwardly from the head; a plurality of arcuate rows of bristles carried by the head to extend downwardly therefrom within said outer ring, each of said arcuate rows being formed and spaced to follow the curvature of the regions on the upper side of the head; and a driving member to revolve the brush, and said regions being formed to have their outer ends spaced around ahead of their inner ends when the head is revolved whereby the side walls of said depressed regions tend in part to overcome the centrifugal effect on fluid in the groove; said depressed regions being defined by ribs therebetween, and said ribs being grooved from their under sides to receive the upper ends of said arcuate rows of bristles.

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