July 3, 1928. 1,675,617

R. R. RADINSE

ROTARY WIRE BRUSH

Filed Sept. 29, 1927



Fig. 1

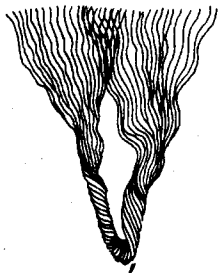


Fig. 2

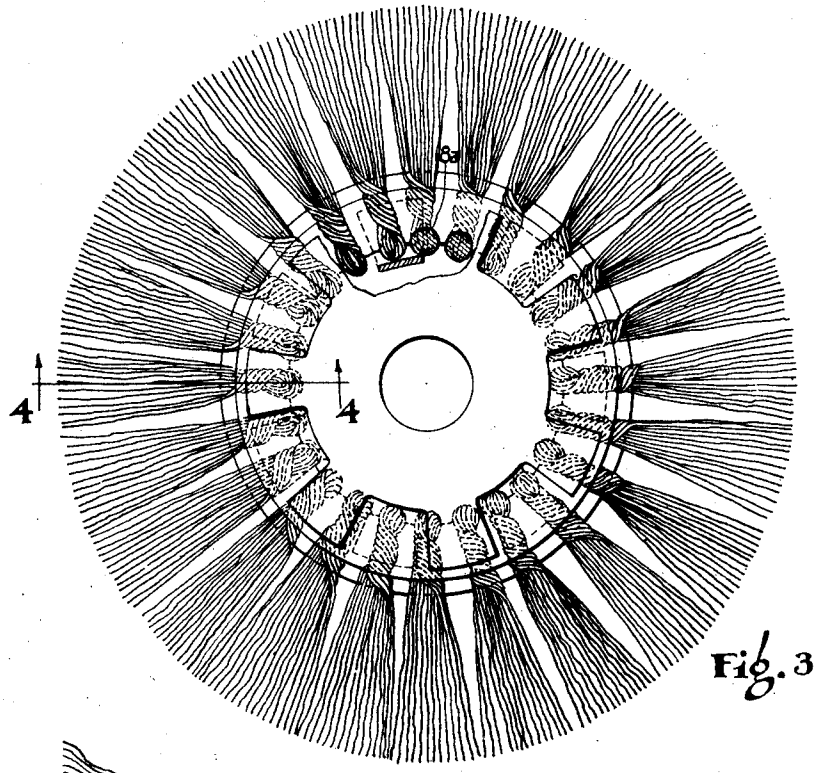


Fig. 3

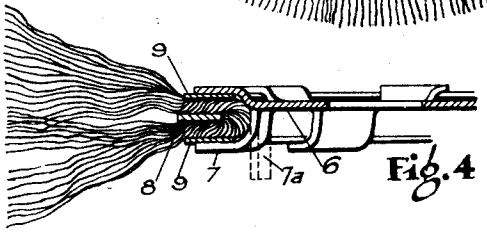


Fig. 4

INVENTOR
R. R. RADINSE.
BY John A. Bommhardt
ATTORNEY

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UNITED STATES PATENT OFFICE.

RUDOLPH R. RADINSE, OF CLEVELAND, OHIO.

ROTARY WIRE BRUSH.

Application filed September 29, 1927. Serial No. 222,800.

This invention relates to improvements in rotary wire brushes such as that shown for example in my Patent No 1,561,280, in which a set of tufts are assembled on a central carrier or holder and project radially therefrom.

The object of the present invention is to form the individual wire tufts in a new way and also to assemble them on the carrier in an improved manner, which will make a stronger and more durable structure and increase the stiffness of the wires so that they will not "lean" or get out of shape so readily as formerly.

A further object of the invention is to so form and hold the tufts that the wires will not slip or become loose.

One form of the invention is shown in the accompanying drawings, in which Fig. 1 is a plan of one of the tufts; Fig. 2 is a similar view of the tuft after it is bent or doubled; Fig. 3 is a plan of an assembled brush; Fig. 4 is a section on the line 4—4 of Fig. 3.

In the form shown, 6 indicates a central disk or hub formed at its outer edge with a series of tongues 7 which are alternately offset in opposite direction. The tufts after being made are assembled around this disk being bent double or folded and placed on a ring 8, the inner periphery of which has semi-circular notches 8^a equally spaced and setting in the bend. The structure thus formed is placed between outer rings 9 and is clamped between the tongues 7, which are bent in or down by pressure to securely clamp the parts. A convenient way to do this is to bend the tongues 7 out on one side at a right angle to the disk, as shown in dotted lines at 7^a, Fig. 4. The assembled ring structure is then slipped on over the said tongues which are then pressed down and clamped with heavy pressure.

Each tuft consists of a group of wire strands which are first twisted together at their middle part, as at 10. The ends of the wires are then crimped or waved as shown at 11 and then the tuft is bent double so that the ends lie beside each other and form a wide brushing surface to be applied to the work after the tufts are assembled as above described.

As the wires are twisted around each other as indicated at 10 and then bent double around the ring 8 and then clamped by rings and tongues at opposite sides the tufts are very tightly held and the wires cannot get loose. The crimping of the ends of the wires increases stiffness and strength. Ring 8 may be notched as shown The notched construction is preferable as it maintains the tufts in position and at the same time allows a slight oscillating motion which tends to improve the wearing qualities of the brush.

I am aware of the patents to Galvin, 1,493,670 and Forward 611,114 which show tufts made of strands first doubled and then twisted, but my tufts are different, being first twisted at the middle and then the twisted part is bent double.

I claim:

A brush comprising a metal plate having oppositely offset tongues at the edge, a plurality of tufts each comprising a plurality of wires twisted together at their middle portion, said portion being bent double, a ring in the bend between said twisted portions, and outer rings on opposite sides of said twisted portions, the tongues being pressed against said outer rings to clamp the parts together, said ring being notched to receive the bend of the tufts.

In testimony whereof, I do affix my signature.

RUDOLPH R. RADINSE.