Nov. 10, 1925. 1,561,280

R. R. RADINSE

ROTARY BRUSH

Filed April 14, 1924

FIG. 1

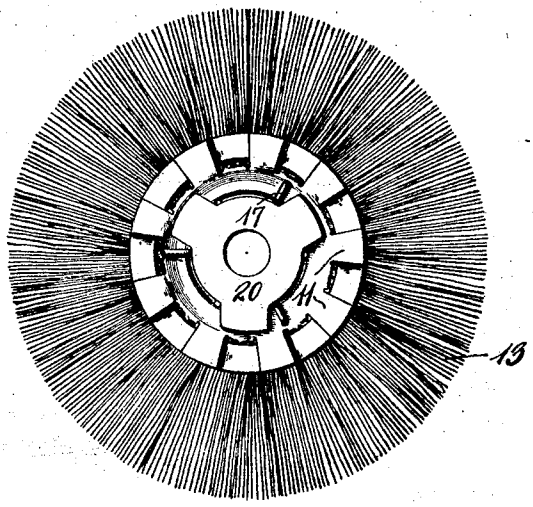


FIG. 2

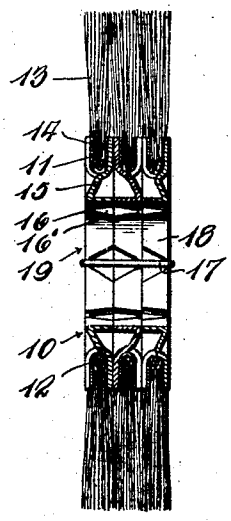
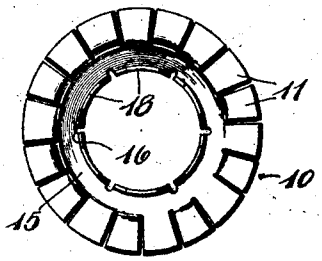


FIG. 3



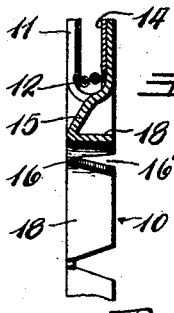


FIG. 4

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UNITED STATES PATENT OFFICE.

RUDOLPH R. RADINSE, OF CLEVELAND, OHIO.

ROTARY BRUSH.

Application filed April 14, 1924. Serial No. 706,333.

To all whom it may concern:

Be it known that I, RUDOLPH R. RADINSE, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Rotary Brushes, of which the following is a specification.

This invention relates to rotary brushes and is an improvement upon the construction disclosed in my Patents Numbered 988,506 and 1,326,372, granted April 4, 1911 and December 30, 1919.

In these patents the construction of the bristle holders or carriers is such as results in relative displacement thereof upon assembling a number of these holders and securing them together with clamping members which obviously are pressed against the opposite sides of the central plates and are arranged upon a shaft. Furthermore the structure employed in brushes made in accordance with these patents must be supplied in numbers and have various sized shaft openings and consequently the cost to the user is unnecessarily great.

It is the primary object of this improvement to eliminate the above faults and provide means for rigidly holding the several bristle holders in proper relative positions and to provide an opening in which may be arranged adapters whereby one brush may be mounted upon shafts or spindles of different diameters.

Other objects will be in part obvious and in part pointed out hereinafter.

In order that the invention and its mode of operation may be readily understood by persons skilled in the art, I have in the accompanying illustrative drawings and in the following detailed description based thereon set out one possible embodiment of the same.

In these drawings:

Fig. 1 is a side elevation of the completed brush with the adapter arranged therein;

Fig. 2 is a sectional view of the brush with the adapter removed therefrom;

Fig. 3 is a detailed plan view of one of the bristle carriers prior to having the bristles clamped therein;

Fig. 4 is a sectional view showing the tongues between which the bristles are clamped and the spacing fingers;

Having more particular reference to the drawings throughout which similar characters of reference designate similar parts, this rotary brush may be stated as comprising a set of individual bristle holders or carriers 10, each identically formed and adapted to be clamped together to form the complete brush.

Each bristle holder or carrier 10 comprises a flat metal ring which is slit radially from its periphery to a point substantially mid-way the width of said ring, thereby forming tongues 11, which are alternately stamped in opposite directions. Between these oppositely stamped tongues is arranged a twisted wire ring 12 in the twists of which are positioned the bristles 13 of wire or other preferred material. As a further means for effectively retaining these bristle carrying rings between the said tongues I arrange upon opposite sides of the twisted ring and beneath the tongues a pair of flat metal bands 14 which are tightly engaged with the bristles through compressing said tongues. In this manner the bristles are securely retained in position and may be readily replaced through bending the tongues outwardly and removing the twisted ring.

The inner portion 15 of each ring forming the body of the bristle holder is bent laterally into the plane of one of the circular rows of tongues and has its inner edge provided with V-shaped notches 16′ to form spacing fingers 18, these fingers being bent axially with their edges lying in the plane of the other row of tongues. Recesses 16 are provided on the inner periphery of the portion 15 at the apices of the notches 16′ and communicate therewith. These recesses 16 are designed to seat lengths of wire 17 or the like by means of which the several bristle holders are clamped together. The spacing fingers 18 retain the several holders against undue displacement when they are clamped together.

It is obvious that no reasonable amount of pressure upon the opposite sides of the assembled brush will cause any relative movement between the several bristle carriers. As illustrated in the accompanying drawings, the spacing members or fingers 18 of each bristle holder 10 contact with the corresponding members of the adjacent holder and thus retain said holder as just stated.

The opening 19 resulting from the formation of these spacing fingers 18 is of such size as to readily accommodate any of the

standard sized shafts or spindles and is also designed to receive an adapter (not shown) by means of which the brush may be securely clamped to a shaft.

Manifestly certain changes in the details of construction may be resorted to as will fall within the scope of the appended claims and such changes I consider within the spirit of my invention.

I claim:

1. A rotary brush comprising a set of bristle carriers clamped together, each carrier consisting of a metal ring having a set of radial tongues at its periphery, a fibre carrying member clamped between the tongues, and a set of axially directed integral spacing fingers formed at the inner edge of the ring and adapted to contact with similarly formed fingers on the next adjacent bristle carrier.

2. A rotary brush comprising a set of bristle carriers clamped together, each carrier consisting of a metal ring having alternately oppositely stamped radial tongues at its periphery to form rows of tongues, means co-acting with the tongues to clamp bristles there between, the material inwardly from the tongues being bent laterally into the plane of one of the rows of tongues, and axially with their edges in a plane with the other row of tongues to form circumferentially spaced spacing fingers, said fingers being adapted to contact with the spacing fingers of the next adjacent ring to prevent undue compression of the carriers.

3. A rotary brush comprising a set of independently formed bristle carriers, each carrier consisting of a metal ring, alternately oppositely directed radial tongues formed at the periphery of the ring in rows, a twisted wire, bristle carrying ring clamped between said tongues, the ring body portion inwardly from the tongues being bent laterally into the plane of one of the rows of tongues circumferentially spaced axially directed fingers formed with said offset portion, said portion having notches between the fingers and means seated in said notches to secure the bristle carriers together.

4. A bristle holding unit for a rotary brush comprising a metal ring having a set of radial tongues arranged to form a circumferential channel at its periphery, and a set of axially directed integral spacing fingers formed at the inner edge of the ring.

In testimony whereof, I affix my signature.

RUDOLPH R. RADINSE.