

March 26, 1929.

E. RICKERSBERG

1,706,862

BRUSH

Filed Oct. 14, 1927

Fig. 1

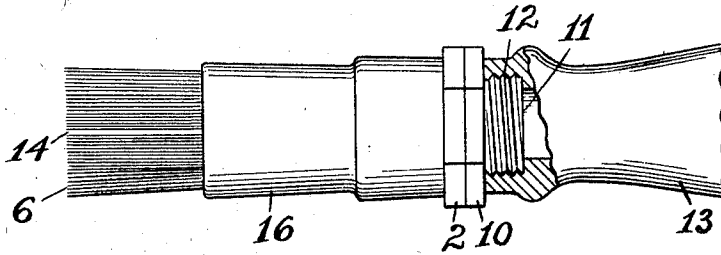


Fig. 2

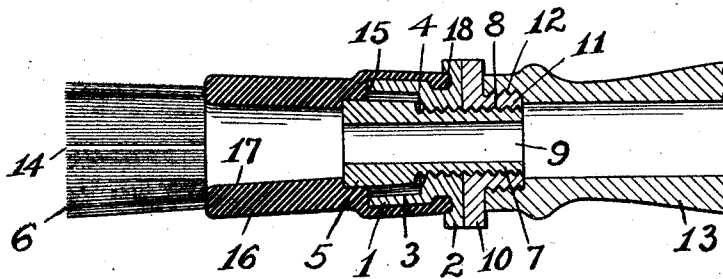


Fig. 3

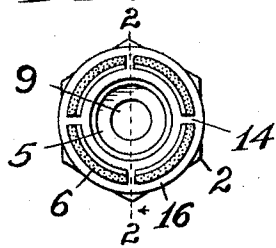
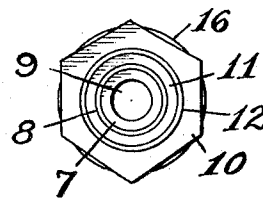


Fig. 4



Inventor

E. Rickersberg

By *W. E. Dunstan,*
his Attorney

UNITED STATES PATENT OFFICE.

EMANUEL RICKERSBERG, OF CLEVELAND, OHIO.

BRUSH.

Application filed October 14, 1927. Serial No. 226,119.

This invention relates to brushes, and has for its main object to provide a brush having metallic bristles, or bristles of other suitable material, arranged in the form of a ring for admitting fluid therethrough and serving as scraping means.

Another object of the invention is to provide a brush of said character, in which the ring of bristles is supported laterally by rubber or other resilient material to permit flexibility of said bristles to prevent injury thereto by sharp bending of the individual bristles when the brush is used for scraping purposes.

A further object of the invention is to provide a brush of said character, in which the opposite sides of the ring of bristles may be compressed when under pressure during the scraping action and will return upon release from the pressure to normal ring position.

In order that the invention may be clearly understood, the same will be hereinafter fully described as illustrated in the accompanying drawings, and the novel features thereof will be distinctly pointed out in the appended claims.

In the drawings similar characters of reference are used to designate corresponding parts.

Figure 1 is a side elevation of a brush constructed in accordance with my invention,

Fig. 2 is a longitudinal sectional view of the brush,

Fig. 3 is an end view of the brush looking towards the bristle end thereof, and

Fig. 4 is an end view of the brush looking towards the opposite end, the handle having been removed.

Referring to the drawings, 1 represents a ferrule formed integrally with a nut 2 for the application of a wrench in assembling the brush. The ferrule 1 is bored at 3 to provide a tapering opening terminating in an annular shoulder 4. A circular wedge member 5 is adapted to co-operate with the bore 3 of the ferrule 1 for securely holding the bristles 6 of the brush, and the straight elongated neck 7 of said wedge member is threaded at 8 for receiving the nut 2 to draw said wedge member therein. This action of the circular wedge member 5 within the ferrule 1 firmly grips the bristles 6 therebetween and will securely hold same in position. The circular wedge member 5 is provided with a central longitudinal opening 9 for admitting fluid therethrough and through the center of the ring of bristles 6. A locking nut 10, similar to the

nut 2, is threaded upon the neck 7, and by engaging the latter nut prevents rotation of the circular wedge member 5 relative to the ferrule 1 and consequent loosening of the bristles of the brush. Formed integrally with the locking nut 10 is a boss 11, which is threaded externally at 12 for the attachment of the brush to a suitable hollow handle 13. The outer end of said handle is connected in any suitable manner to a fluid supply.

In order to prevent the individual bristles 6 of the brush becoming bent at the other peripheral edge of the ferrule 1 by accidentally striking the free ends of the bristles during the scraping action, the means now to be described is provided. The ring of bristles 6 beyond the outer end of the ferrule 1 is provided with a plurality of longitudinal slots 14 by cutting off the bristles at 15 or in any other suitable manner. A casing of rubber 16 is vulcanized to the outside of the ring of bristles 6 and the ferrule 1, and also through the slots 14 of said ring of bristles and to the inside thereof as shown at 17. Said casing of rubber flexibly supports the ring of bristles 6, and under scraping pressure, said bristles will bend in gentle curves instead of at sharp angles, and furthermore will be returned to their normal ring position by the casing of rubber upon releasing of the pressure. The ferrule 1 and the nut 2 are provided with an angular groove 18 for receiving the inner end of the casing of rubber 16 to protect the same at this point.

Although the brush illustrated and described is well adapted to accomplish the intended purpose of providing a simple and practical construction for a brush which will admit fluid therethrough and also serve as a scraper, and the bristles of the brush will not become damaged or ruined by bending at sharp angles and will return to normal position upon release of the scraping pressure, it will be understood that slight changes in the details of construction may be made within the scope of the claims.

Having fully described my invention, what I claim is:

1. In a brush, the combination of a ferrule, a cylindrical member, bristles secured between said ferrule and said cylindrical member, and the bristles beyond said ferrule and said member being supported in a casing of resilient material covering the inner side and the outer side of said bristles.

2. In a brush, the combination of a ferrule,

a cylindrical member, bristles arranged in the form of a ring secured between the outer side of said ferrule and said cylindrical member, and a casing of rubber vulcanized to the ferrule and to the outer and inner sides of said bristles beyond the ferrule.

3. In a brush, the combination of a ferrule, a cylindrical member, bristles arranged in the form of a ring secured between said ferrule and said cylindrical member, the ring of bristles being provided with slots beyond said ferrule, and a casing of rubber vulcanized to the outer side of said ferrule and to the outer side of said bristles and through said slots and to the inner side of said bristles.

4. In a brush, the combination of a ferrule, a circular wedge member adapted to co-operate with the ferrule, bristles arranged in the form of a ring held between said ferrule and said member, means for locking said ferrule and said member against relative movement thereof, and a casing of rubber vulcanized to the outer side of said ferrule and to the outer side and inner side of said bristles beyond said ferrule.

5. In a brush, the combination of a ferrule, a nut formed integrally with the ferrule, a circular wedge member adapted to co-operate

with said ferrule, the circular wedge member having a neck, the neck being threaded for receiving said nut, bristles arranged in the form of a ring and secured between said ferrule and said circular wedge member, the ring of bristles being slotted longitudinally beyond said ferrule, said nut having an annular groove, a casing of rubber vulcanized to the outer side of said ferrule and to the outer side of said bristles and extending through said slot and to the inner side of said bristles beyond said ferrule, and the rubber of the casing filling said groove.

6. In a brush, the combination of a ferrule, a nut formed integrally with the ferrule, a circular wedge member adapted to co-operate with said ferrule, the circular wedge member having a neck, the neck being threaded for receiving said nut, bristles arranged in the form of a ring and secured between said ferrule and said circular wedge member, a nut threaded upon said neck for locking said ferrule and said circular wedge member against rotation, and a casing of rubber vulcanized to said ferrule and to said bristles for flexibly supporting said bristles.

In testimony whereof I affix my signature.
EMANUEL RICKERSBERG.