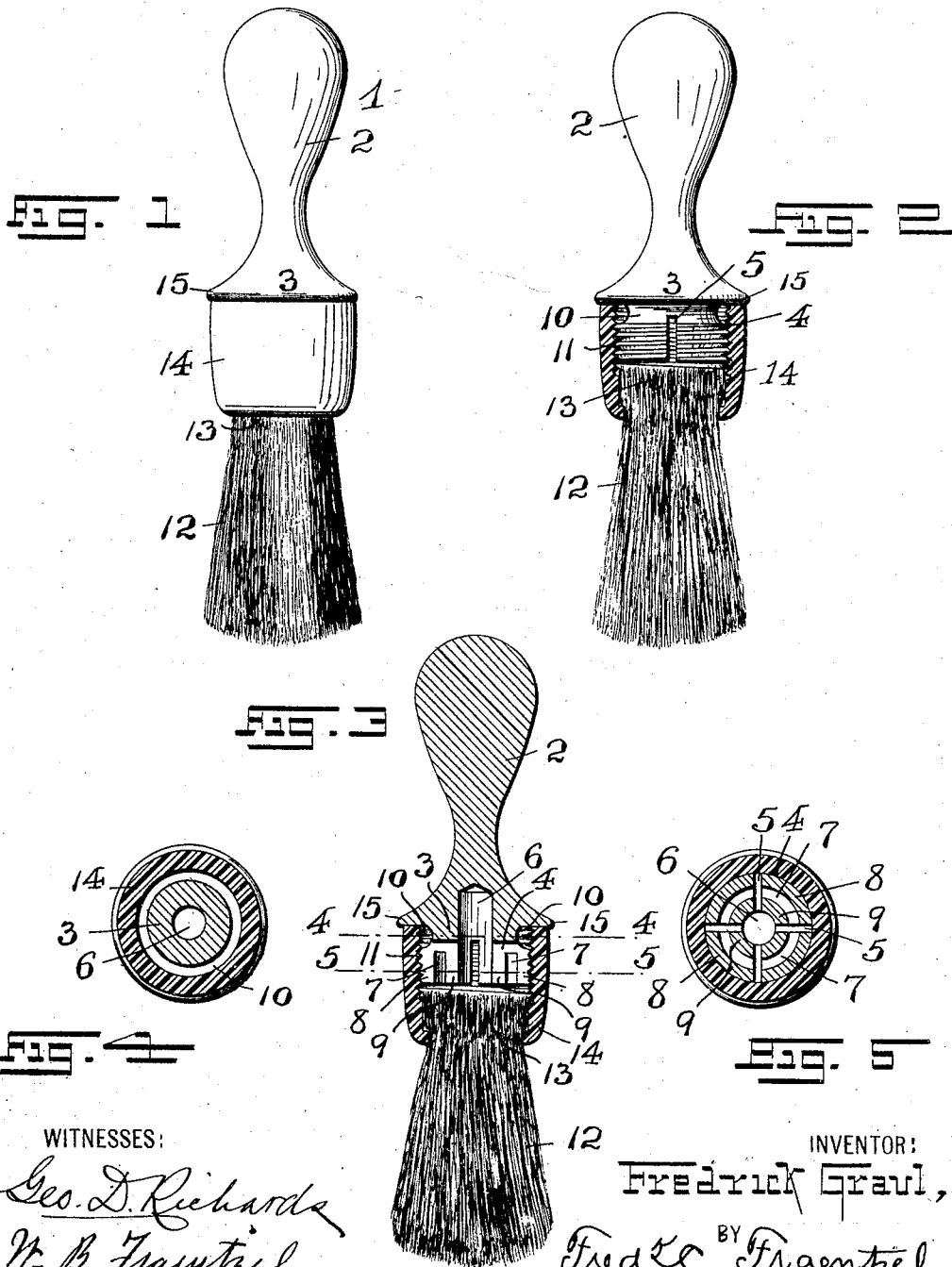


No. 800,291.

PATENTED SEPT. 26, 1905.

F. GRAUL.
BRUSH.

APPLICATION FILED NOV. 27, 1903.



WITNESSES:

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FREDRICK GRAUL, OF NEWARK, NEW JERSEY, ASSIGNOR TO RUBBER AND CELLULOID HARNESS TRIMMING CO., A CORPORATION OF NEW JERSEY.

BRUSH.

No. 800,291.

Specification of Letters Patent.

Patented Sept. 26, 1905.

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To all whom it may concern:

Be it known that I, FREDRICK GRAUL, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Brushes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to numerals of reference marked thereon, which form a part of this specification.

The present invention is in the nature of improvements in that class of shaving and other brushes set forth in Letters Patent of the United States granted September 23, 1902, to Joseph Schreiner, and numbered 709,610; and this invention has for its primary object to provide a shaving-brush in which the butt portion or end of the handle will expand inwardly with the constant use of the brush with soap and water, the construction and arrangements of the parts of the butt portion or end of the handle being such that there is positively no outward expansion, and the danger of the cracking or breaking of the hard rubber, celluloid, or other plastic ferrule employed with this class of brushes is absolutely overcome. With these facts in view by means of the present invention I have provided the butt portion or end of the handle with a number of concentric and resilient butt members, having an arrangement of one or more circular depressions or grooves between them and across which may extend a diametrical slot or slots. In this manner the butt portion or end of the handle is provided with a series of concentric and arc-shaped butt members, having great resiliency and spring-action, against which the knot or bunch of bristles and about which the plastic ferrule is arranged, so that the expansion of the said arc-shaped butt members caused by the moisture from constant use with the soap and water will positively not be in an outward direction against the inner surface of the ferrule, but will be in the form of a contraction of the butt portion or end of the handle because of the arrangement of the said arc-shaped butt members, and whereby all internal pressure is removed from the inner cylindrical surface of

the hard rubber, celluloid, or other plastic ferrule employed.

Another object of the present invention is to provide a brush-handle and butt portion or member comprising an arrangement of arc-shaped butt members integrally united with the handle and provided with an external screw-thread and annular depression or groove, whereby the holding contact between the screw-threaded ferrule and the screw-threaded arc-shaped butt members is more positive, because of the fact that there is sufficient spring-action to the said members that when the ferrule is screwed home the said members are forced in their inward directions toward their common central axis, whereby the parts are more positively and firmly locked or held together.

Other objects of the present invention not at this time more particularly specified will be clearly understood from the following detailed description of my invention.

The invention consists, therefore, in the novel construction of brush hereinafter set forth; and, furthermore, this invention consists in the various arrangements and combinations of parts, all of which will be fully described in the following specification, and then finally embodied in the clauses of the claim, which are appended to and form an essential part of this specification.

The invention is clearly illustrated in the accompanying drawings, in which—

Figure 1 is a side view of a brush embodying the principles of the present invention, and Fig. 2 is a face view of the handle and its butt portion or end with the bunch of bristles and the ferrule of the brush being represented in vertical section. Fig. 3 is a longitudinal vertical section of all of the parts of the brush; and Figs. 4 and 5 are two horizontal sections of the ferrule and the butt portion or end of the handle, said sections being respectively taken on line 4 4 and 5 5 in said Fig. 3.

Similar characters of reference are employed in the above views to indicate corresponding parts.

Referring to the said drawings, the reference character 1 indicates the complete brush, the same comprising a handle 2 of any suitable and desirable configuration and which may be made of any suitable material, pref-

erably wood. Extending from a portion 3 of the said handle is a butt portion or end 4, which is preferably provided with one or more diametrically-extending slots or saw-cuts 5 of any suitable depth and with a centrally-disposed socket or similar depression 6 and an annular or ring-shaped slot or depression 7. Thus it will be evident that the said butt portion or end 4 of the handle is made up of a number of concentrically-disposed arc-shaped butt members 8 and 9, substantially as illustrated in Figs. 3 and 5 of the drawings. At the junction of the outer circle of the said arc-shaped butt members 8 with the portion 3 of the handle 2 these parts are preferably formed with an annular depression or groove 10, and upon the outer surfaces of the said arc-shaped butt members 8 the cylindrical surface of each member is provided with a screw-thread 11, extending from the lower edges of said members 8 to the said annular depression or groove 10, as will be clearly seen from an inspection of Figs. 2 and 3 of the drawings. Screwed upon the said thread 11 of said butt members 8 and embracing the cured end or knot 13 of a bunch of bristles 12 is a ferrule 14 of a plastic material, such as celluloid, hard rubber, or the like. The manner of curing the knot of bristles and arranging it within and uniting it to the lower and preferably smaller end portion is well known, and when the ferrule is secured in place with its upper portion against the bead or shoulder 15 of the handle 2 a complete and effective brush is the result.

From the arrangement of the arc-shaped butt members 8 and 9 when made in the manner as hereinabove described and the arrangement of the annular groove or depression 10 it will be clearly evident that the said members 8 will have a certain spring-action, and when the preferably tapered and screw-threaded inner portion of the ferrule 14 is screwed home the said members 8 will become sufficiently compressed that a tight and permanent fit will be the result. The arrangement of the annular depression or groove 5 between the butt members 8 and 9 and the centrally-disposed socket 6 also allows for the expansion or forcing of the members in an inward direction toward the vertical central axis of the brush when the parts expand or swell with constant contact with the moisture from the soap and water to which shaving-brushes are subjected, and this swelling or expanding of the butt portion or end of the handle being in inward directions it will be clearly evident that all possibility of the breaking, splitting, or cracking of the ferrule due to outward expansion is clearly overcome.

My invention hereinabove described may be used with the handles and ferrules of all kinds of brushes that may be put to various uses and is not limited solely to shaving-brushes.

I am aware that some changes may be made in the details of the arrangement of the arc-

shaped butt members without departing from the scope of my present invention. Hence I do not limit my invention to the exact arrangements and combinations of the parts as described in the foregoing specification and as illustrated in the accompanying drawings, nor do I confine myself to the exact details of the construction of the said parts.

Having thus described my invention, what I claim is—

1. A brush comprising a handle having a butt portion or end, said butt portion or end consisting of concentric and resilient butt members, said members having an annular or ring-shaped depression between them to allow for an inward contraction of said butt members toward the center of the butt portion or end of the handle when moist, a knot or bunch of bristles arranged in close proximity to the ends of said butt members, and means for securing said knot or bunch of bristles to the brush-handle, substantially as and for the purposes set forth.

2. A brush comprising a handle having a butt portion or end, said butt portion or end consisting of concentric and resilient butt members, said members having an annular or ring-shaped depression between them, and said butt portion or end being also provided with a centrally-disposed socket, all arranged to allow for an inward contraction of said butt members toward the center of the butt portion or end of the handle when moist, a knot or bunch of bristles arranged in close proximity to the ends of said butt members, and means for securing said knot or bunch of bristles to the brush-handle, substantially as and for the purposes set forth.

3. A brush comprising a handle having a butt portion or end, said butt portion or end consisting of concentric and resilient butt members, said butt members having an annular or ring-shaped depression between them, and said members being also provided with diametrically-disposed slots, all arranged to allow for an inward contraction of said butt members toward the center of the butt portion or end of the handle when moist, a knot or bunch of bristles arranged in close proximity to the ends of said butt members, and means for securing said knot or bunch of bristles to the brush-handle, substantially as and for the purposes set forth.

4. A brush comprising a handle having a butt portion or end, said butt portion or end consisting of concentric and resilient butt members, said butt members having an annular or ring-shaped depression between them, said members being also provided with diametrically-disposed slots, and said butt portion or end being provided with a centrally-disposed socket, all arranged to allow for an inward contraction of said butt members toward the center of the butt portion or end of the handle when moist, a knot or bunch of

bristles arranged in close proximity to the ends of said butt members, and means for securing said knot or bunch of bristles to the brush-handle, substantially as and for the purposes set forth.

5 5. A brush, comprising a handle, and a series of concentric and resilient arc-shaped butt members extending from one end of the handle and forming a butt portion or end, a knot
10 or bunch of bristles arranged in close proximity to said butt members, and a ferrule surrounding the knot or bunch of bristles and the outer surfaces of the outer row of said arc-shaped butt members, substantially as and
15 for the purposes set forth.

6. A brush, comprising a handle, and a series of concentric and resilient arc-shaped butt members extending from one end of the handle and forming a butt portion or end, a screw-
20 thread formed upon the outer surfaces of the outer row of said arc-shaped butt members, a knot or bunch of bristles arranged in close proximity to said butt members, and a screw-threaded ferrule surrounding the knot or

bunch of bristles and screwed upon the screw- 25 thread of said arc-shaped butt members, substantially as and for the purposes set forth.

7. A brush, comprising a handle, and a series of concentric and resilient arc-shaped butt members extending from one end of the han- 30 dle and forming a butt portion or end, a screw-thread formed upon the outer surfaces of the outer row of said arc-shaped butt members, and an annular groove 10 at the juncture of said outer row of arc-shaped butt members 35 with the handle, a knot or bunch of bristles in close proximity to said butt members, and a screw-threaded ferrule surrounding the knot or bunch of bristles and screwed upon the screw-thread of said arc-shaped butt members, 40 substantially as and for the purposes set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 25th day of November, 1903.

FREDRICK GRAUL.

Witnesses:

FREDK. C. FRAENTZEL,
ANDREW ALBRIGHT.