June 20, 1933. D. J. FOSS 1,915,057

BRUSH FERRULE

Filed Dec. 20, 1930

Fig. 1.

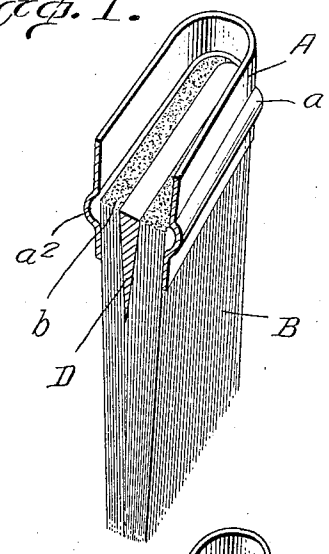


Fig. 2.

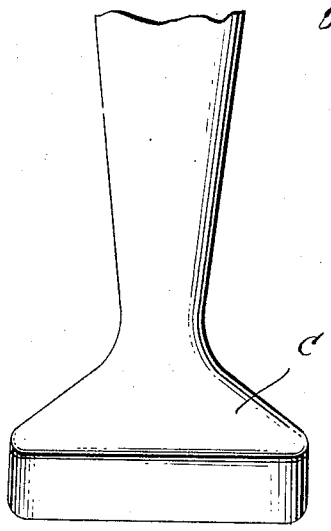


Fig. 4.

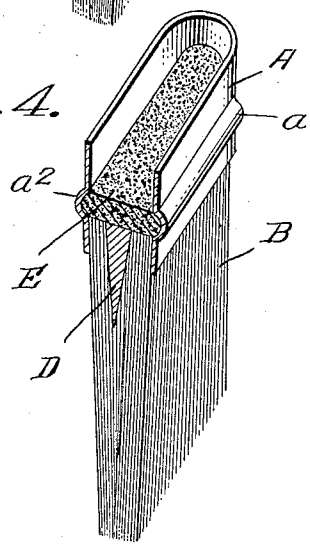
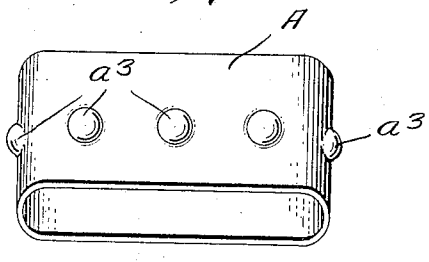


Fig. 3.



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BRUSH FERRULE

Application filed December 20, 1930. Serial No. 503,791.

My invention relates to improvements in brushes, and particularly to an improved ferrule for brushes of all kinds, and means for securing therein knots of bristles, hair, fiber, etc., without the use of nails for the purpose. It consists broadly in the construction of a ferrule adapted to surround and enclose a knot of brush material, but spaced apart therefrom a limited distance above its bottom margin; and expanded outwardly opposite the knot so as to form a closed cavity between the ferrule and knot; the ferrule being adapted to serve as a mold to receive and hold a super-hardening liquid binder poured into said cavity upon and around said knot to form a solid ridge between the ferrule and knot, independently of the cementing material of the brush knot, and to lock the entire mass and knot solidly in the ferrule—all as hereinafter described and stated in the appended claims.

My invention is illustrated by the accompanying drawing in which similar letters and figures of reference indicate like parts. Referring thereto, Fig. 1 is a perspective view of a longitudinal and vertical section of a brush and ferrule embodying my invention, the handle therefor being removed as shown in Fig. 2 for better illustration of the several parts; Fig. 3 is a modification showing intermittent expansions in the ferrule instead of the continuous beading expansion shown in Fig. 1; and Fig. 4 is a perspective view of a section of the brush, showing the cementitious material covering the bristle butts and penetrating the beading in the ferrule.

In the drawing, A indicates the ferrule body, B the mass of brush material, C the handle, and D the parting strip which divides the brush material within the ferrule in the usual way.

The expansion *a* is formed in the ferrule, as shown in section at *a*2, at or near its longitudinal center, and the upper ends of the brush material are so located as to be aligned horizontally with the middle of the expansion, so that when the cement, or other holding compound usually employed in brush construction, is poured into the cavity of the ferrule, it will enter by gravity into the expansion and upon and around the adjacent ends of the brush material and saturate and knot said ends thoroughly therein thereby solidly locking them, when the cement hardens, within the ferrule, without the use of nails or other fastenings heretofore employed in the construction of brushes. The contour of the expansion may also be modified without departing from my invention.

Heretofore, the knot has been formed by dipping the butt ends of brush material in a soft rubber cement, and the soft mass compressed within a perforated band and vulcanized therein, and the brush completed by enclosing the band within an outer ferrule covering the perforations, and supporting the brush handle, and such I do not claim.

My improvement lies chiefly in securing the knot of brush material directly within the ferrule by pouring a super-hardening liquid binder into a cavity between the knot and an expansion in the ferrule opposite the knot, independently of the cement material which solidifies the latter, making it possible to employ a different and harder binding material to secure the knot within the ferrule, than is required for the knot.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is—

1. In a brush, the combination with a knot of brush material, a ferrule surrounding said knot, said ferrule spaced apart from the knot above its bottom margin a limited distance, and expanded outwardly opposite the knot to form a cavity adapted to receive and hold a liquid cementitious binder upon and around the knot, substantially as set forth.

2. In a brush, the combination with a knot of brush material, a ferrule surrounding said knot, said ferrule spaced apart from the knot above its bottom margin a limited distance, and expanded outwardly as a beading opposite said knot, forming a cavity between the beading and knot to serve as a mold, and a cementitious liquid binder poured into said mold upon and around the butt ends of the brush material to form a solid ridge between the ferrule and knot when the cement hardens, substantially as set forth.

3. In a brush, the combination with a knot of brush material, a ferrule surrounding the knot spaced apart therefrom a limited distance above its bottom margin, the ferrule expanded outwardly opposite the knot, forming a cavity serving as a mold; a cementitious liquid binder poured into said mold to cover said brush material butt ends and penetrate said cavity, and an open space in the ferrule above the knot adapted to support a brush handle, substantially as set forth, and for the purpose specified.

In witness whereof, I hereunto set my hand this 19th day of December, A. D. 1930.

D. J. FOSS.