

J. H. ABBOTT.
DENTAL BRUSH.

APPLICATION FILED MAY 4, 1908.

959,416.

Patented May 24, 1910.

Fig. 1.

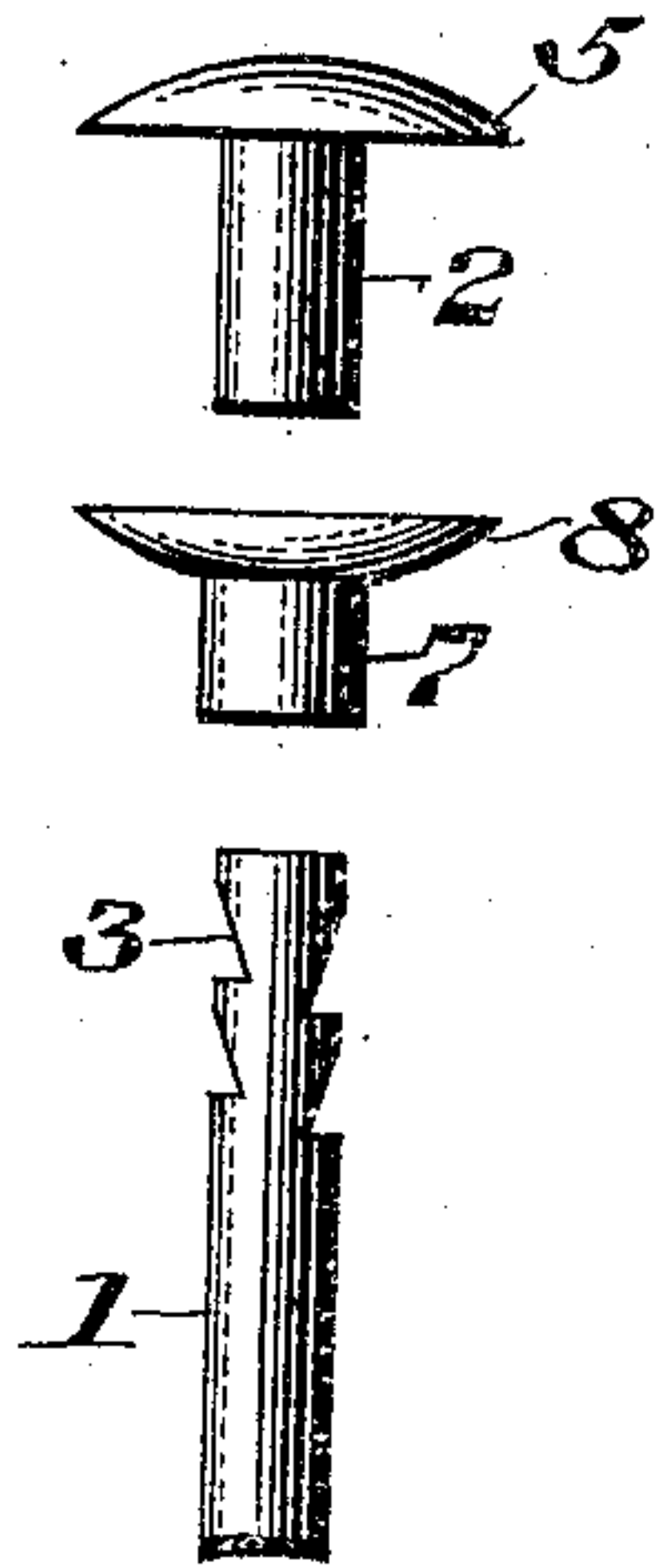


Fig. 2.

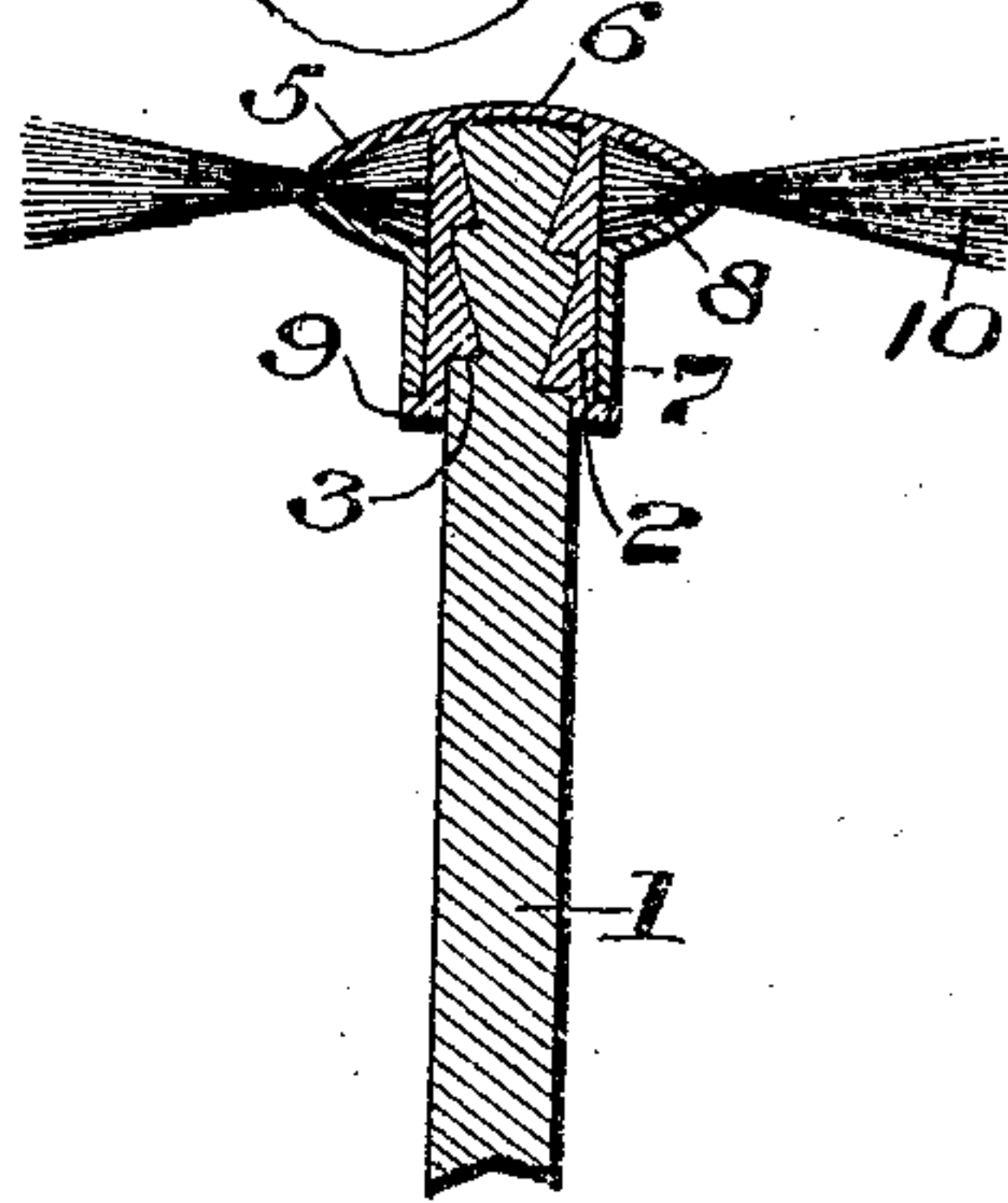


Fig. 3.

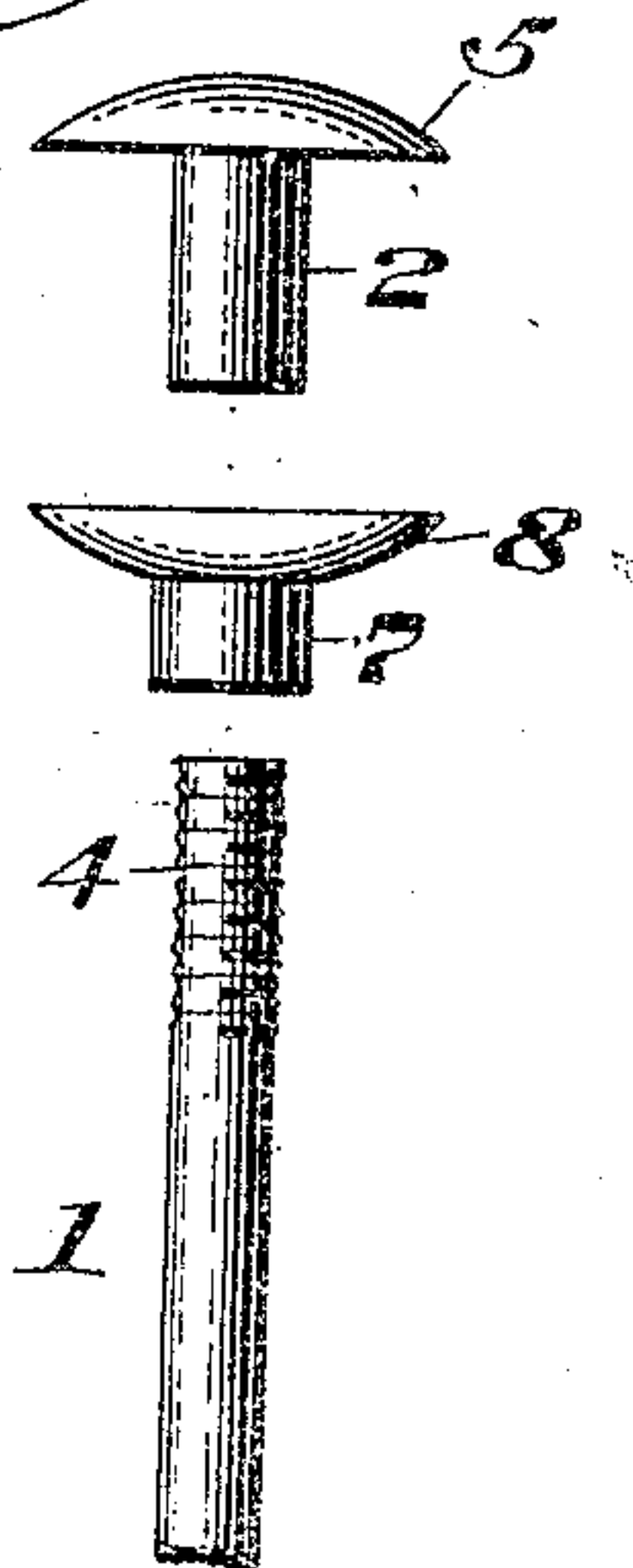
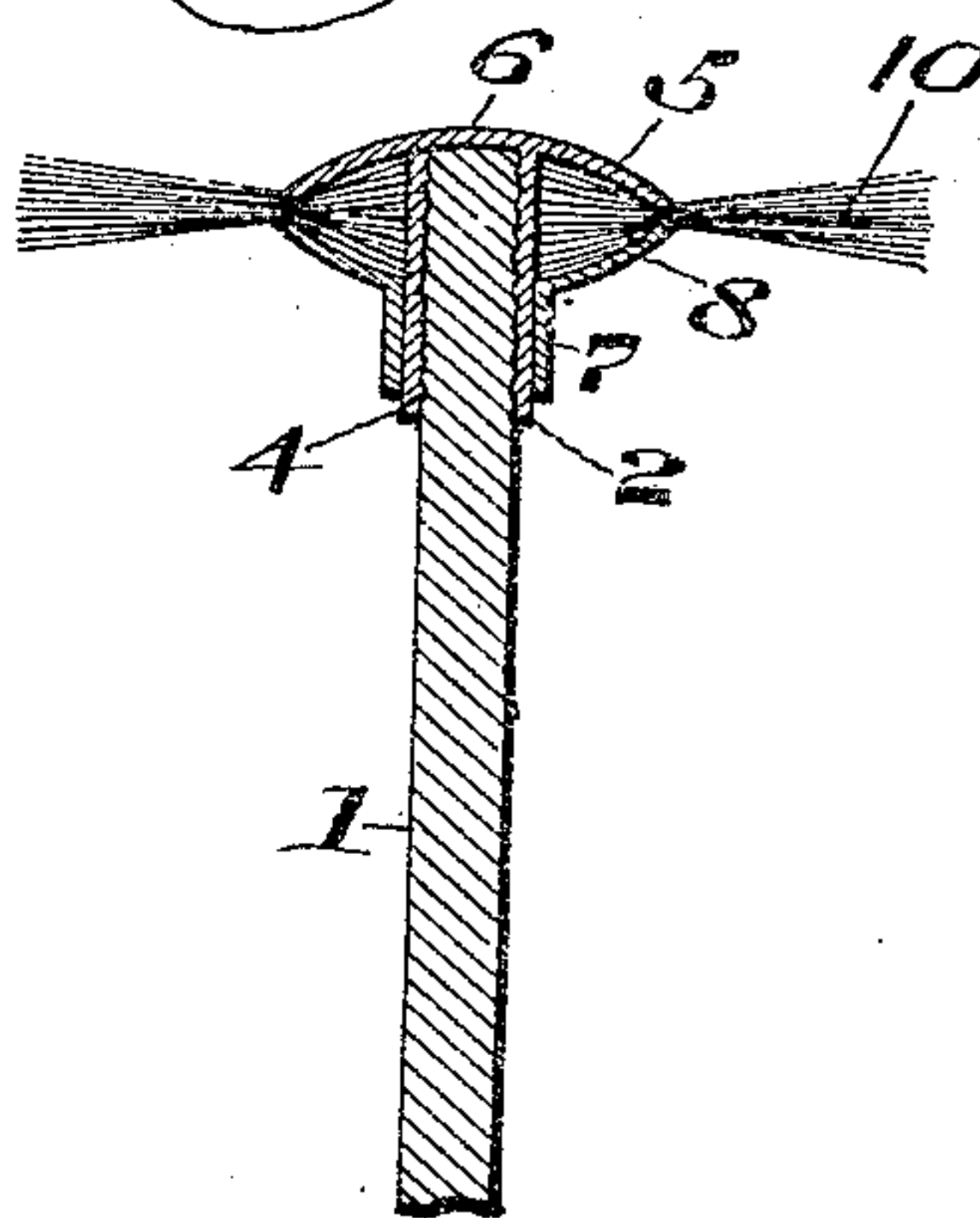


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

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DENTAL BRUSH.

959,416.

Specification of Letters Patent.

Patented May 24, 1910.

Original application filed April 16, 1907, Serial No. 368,457. Divided and this application filed May 4, 1908. Serial No. 430,692.

To all whom it may concern:

Be it known that I, JAMES HERMAN ABBOTT, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Dental Brush, which is disclosed in my application filed April 16, 1907, Serial No. 368,457, of which this is a division.

My invention relates to a new and useful dental brush and consists of new and novel means of securing the parts of the brush to the mandrel and to each other.

It further consists of other novel features of construction, all as will be hereinafter fully set forth.

Figure 1 represents, in elevation, the various parts of a brush embodying my invention in position before assembling. Fig. 2 represents a longitudinal sectional view of parts in assembled position. Fig. 3 represents, in elevation, the various parts of a brush showing the same in position before assembling and with another form for securing the same to the mandrel. Fig. 4 represents a vertical sectional view of the parts shown in Fig. 3 in assembled position.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings, my invention is designed to secure an easy and effective means for fastening the parts of a brush to a mandrel and to simplify the construction of the head of the brush to cheapen the product and at the same time insure that the latter is made more uniform.

In the drawings I have shown devices for carrying out my invention, but it will be evident that other instrumentalities may be employed and changes made in the construction of the parts that will come within the scope of my invention and I do not, therefore, desire to be limited in every instance to the exact construction herein shown and described.

1 designates a mandrel having suitable means on its end for engagement by a sleeve 2 of relatively soft material so that the parts may be assembled advantageously.

Said sleeve 2 and mandrel are securely held with respect to each other, it being seen that in the construction shown in Figs. 1 and 2, I provide a mandrel with serrations 3 and in the construction seen in Figs. 3 and 4, I provide the mandrel with the thread 4 both for the engagement of the sleeve 2. The sleeve 2 is flanged at its upper end as at 5 and preferably for convenience of manufacture and in order to stiffen the flange and head, the said sleeve is closed at the end, as at 6, which closure affords a definite seat for the end of the mandrel within the sleeve.

7 designates a collar having a flange or plate 8 thereon shaped to conform to or co-act with the flange or plate 5 on the sleeve 2, these plates determining the shape of the brush. The collar 8 is passed upon the sleeve 2 and the material of the sleeve is upset, in any desired manner, against the collar as at 9. The bristles 10 are arranged between the plate 5 and plate 8 in any suitable manner before the said plate 8 is forced in place and this plate retained rigidly in position, thus compressing the bristles between itself and the said plate 5.

In the form shown in Figs. 3 and 4, the same form of brush is illustrated and as before stated, the sleeve 2 is in threaded engagement with the mandrel 1, so that the sleeve and head will be held in position while the collar 7 as shown is of such a fit upon the sleeve 2 as to retain the bristles in their compressed position upon the plates.

It will be understood that the said collar is of slightly smaller diameter on the inside than the outside of the sleeve 2 and is forced upon the outside slightly compressing the same against the mandrel 1 resulting in a tight fit upon the threaded mandrel.

It will, of course, be understood that while I have shown in the drawings wheel-shaped or circular brushes, it will be apparent that I can make any style of brush by varying the shape of the plates as desired.

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

1. In a device of the character described,

a mandrel, a sleeve upon the mandrel having a closed head and annular flange thereon, bristles, and a flanged sleeve mounted upon the first sleeve retaining the bristles
5 between the flanges of the two sleeves.

2. In a device of the character described, bristles, a pair of flanged sleeves retaining

the bristles between them, a mandrel within the one sleeve and a closed head for said sleeve.

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