

S. BARNES.
Brush Machine.

No. 21,464.

Patented Sept. 7, 1858.

Fig. 1.

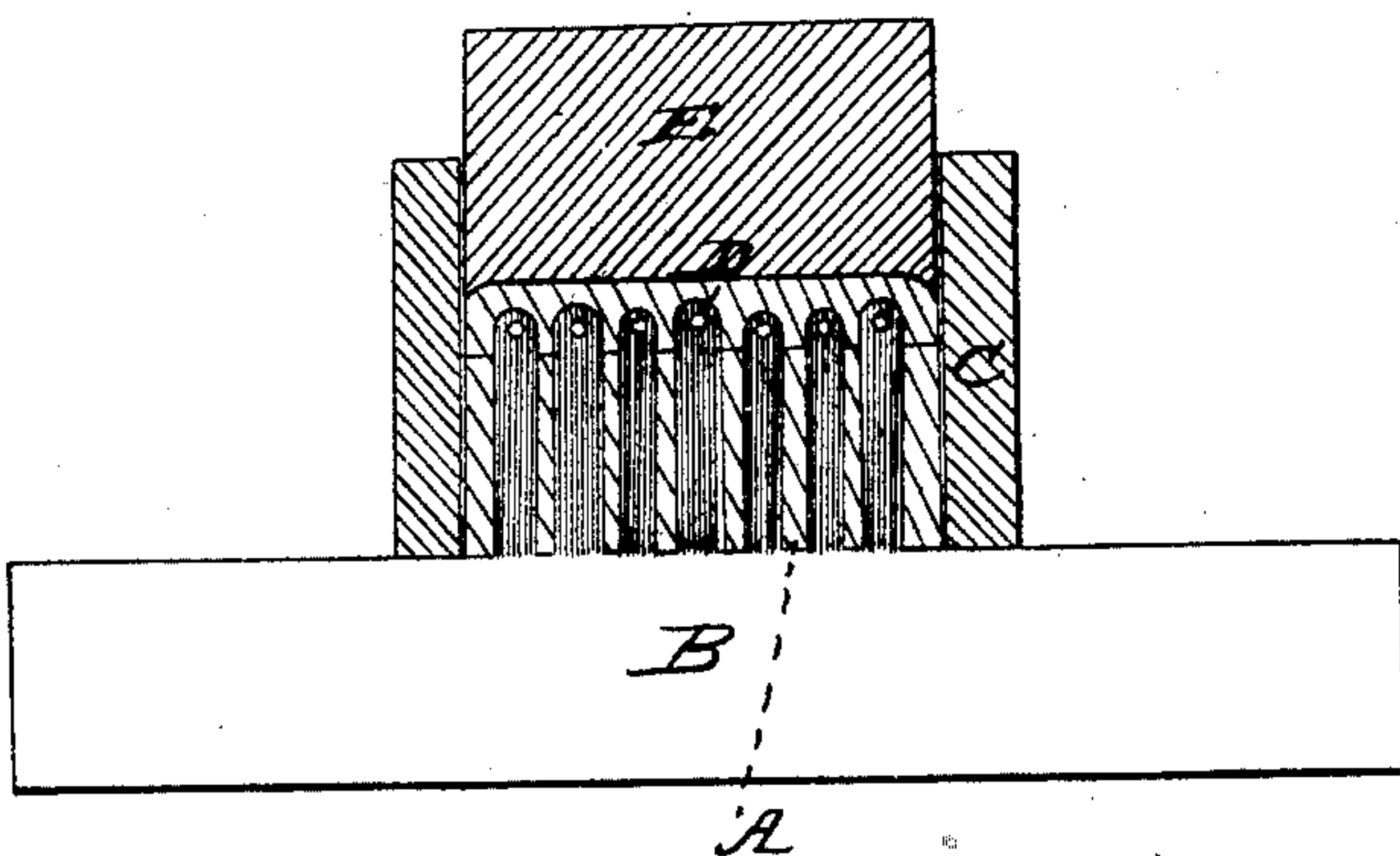


Fig. 2.

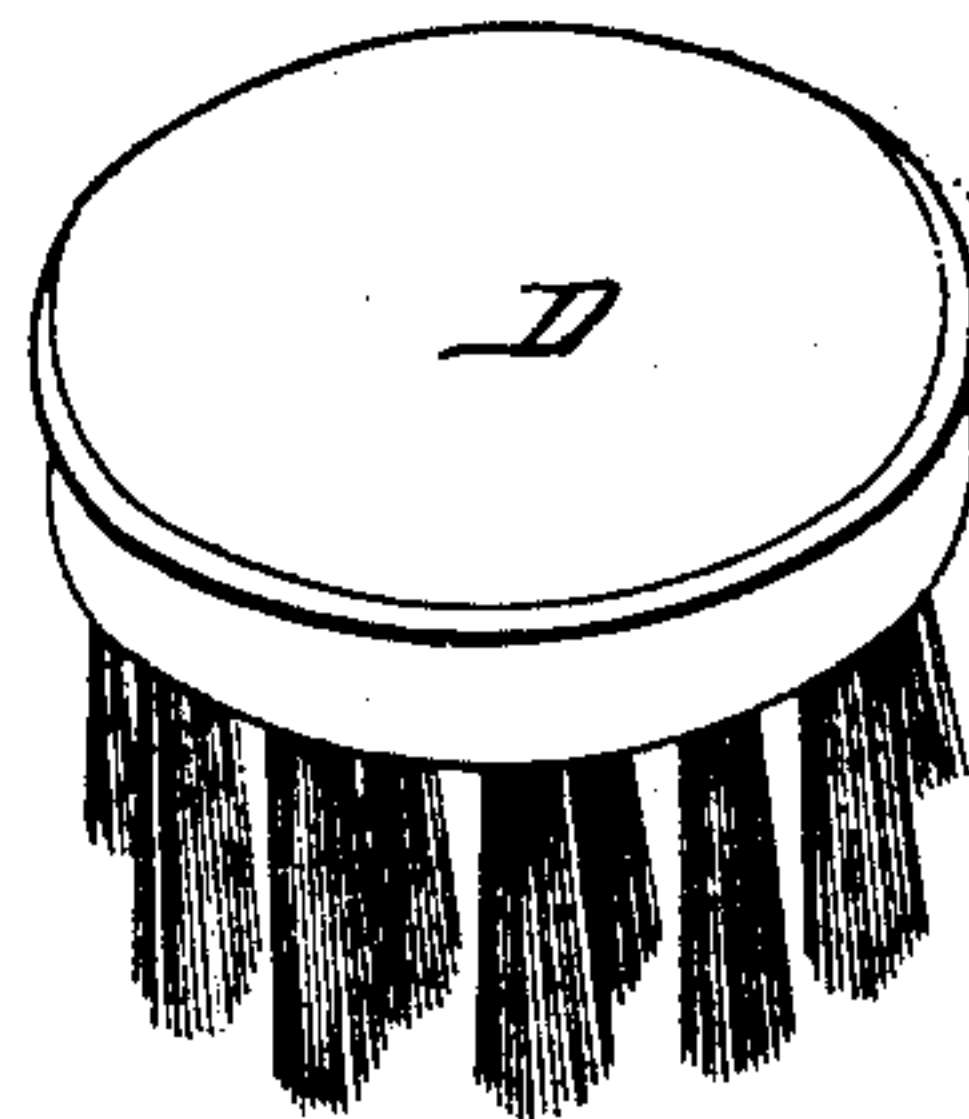


Fig. 3.

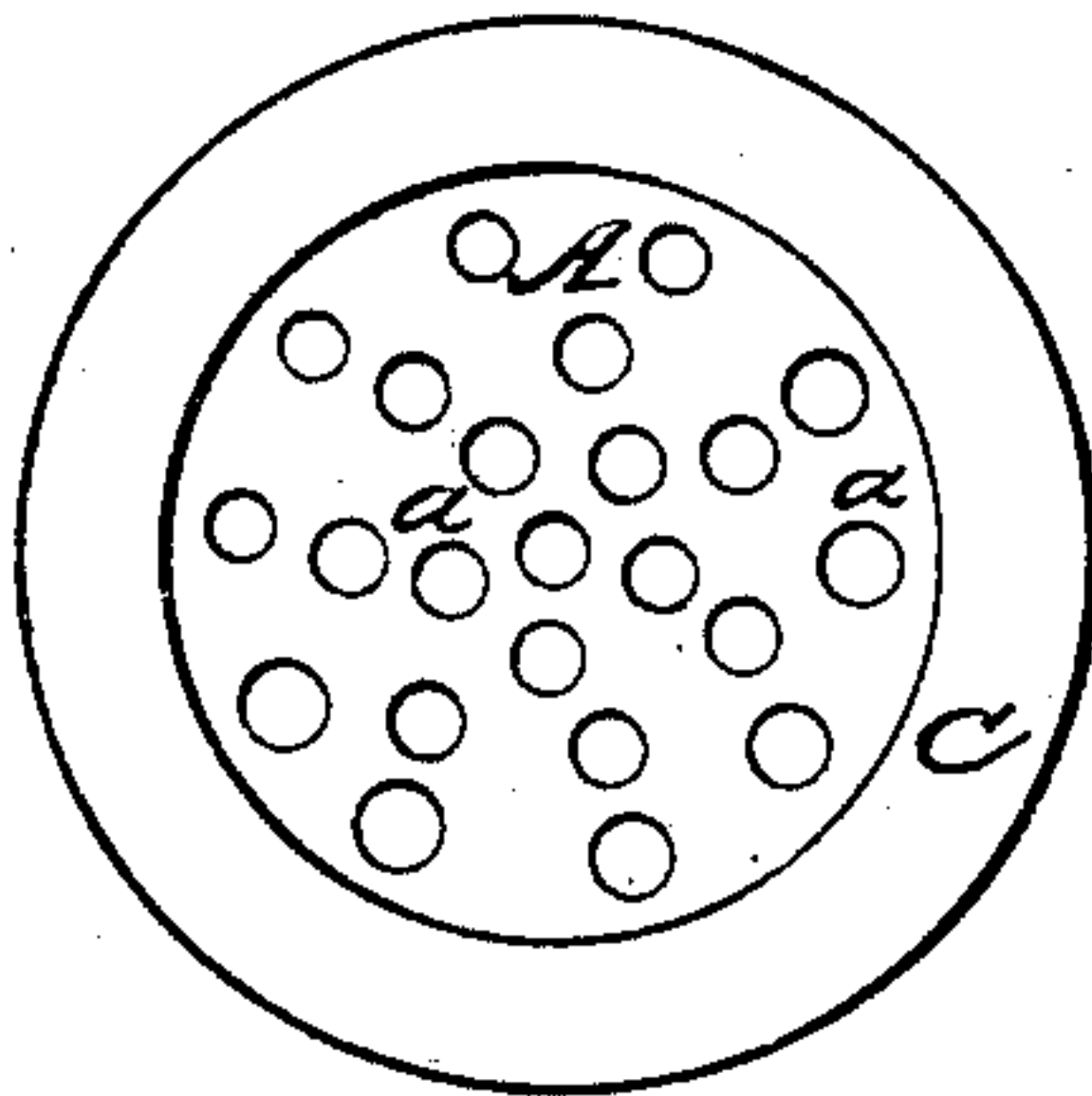
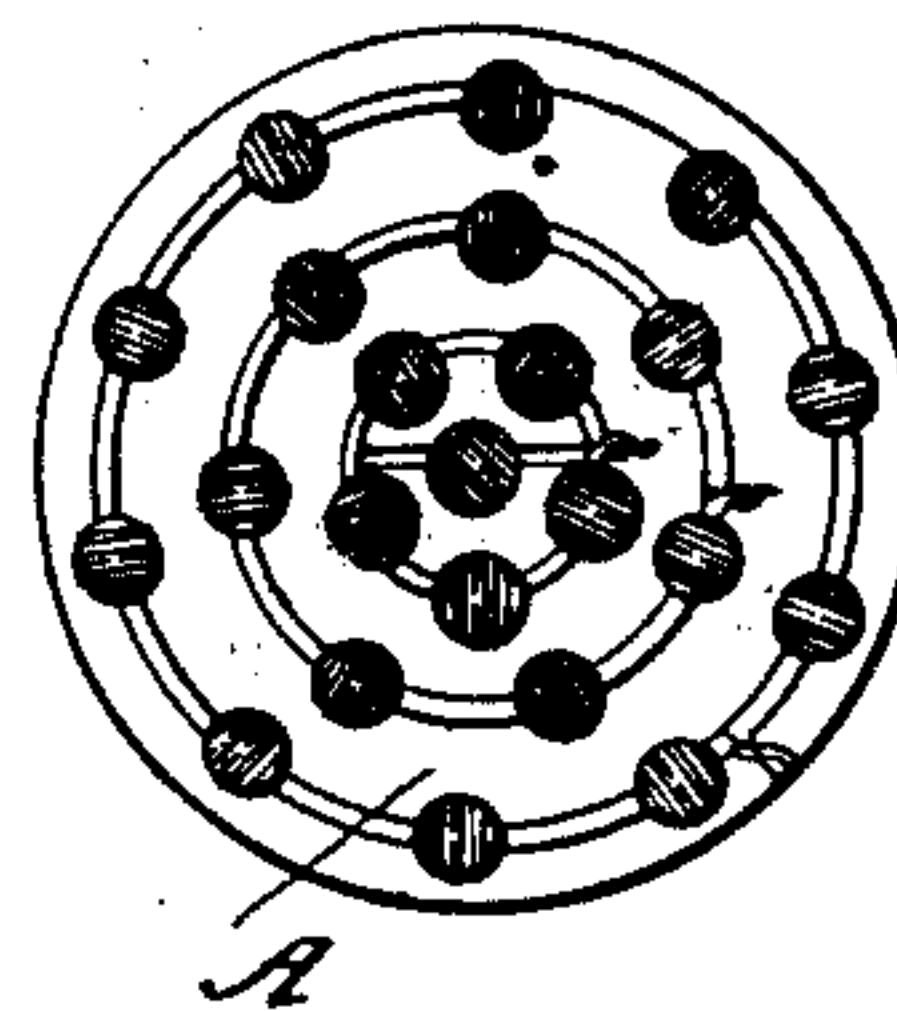


Fig. 4.



UNITED STATES PATENT OFFICE.

STEPHEN BARNES, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO HIMSELF, HENRY S. PARSONS, AND SAMUEL ROWLAND, OF SAME PLACE.

MANUFACTURE OF BRUSHES.

Specification forming part of Letters Patent No. 21,464, dated September 7, 1858; Reissued December 3, 1872, Nos. 5,168 and 5,169.

To all whom it may concern:

Be it known that I, STEPHEN BARNES, of New Haven, in the county of New Haven and State of Connecticut, have invented a
5 new and useful Improvement in Making Brushes, the construction and operation of which I have described in the following specification and illustrated in the accompanying drawings with sufficient clearness
10 to enable competent and skilful workmen in the arts to which it pertains or is most nearly allied to make and use my invention.

My said invention consists in the employment of a removable tubular block constructed as described to hold the bristles in
15 tufts as required for toilet brushes, as hereinafter more fully set forth.

In the accompanying drawings Figure 1, is a sectional elevation of my apparatus,
20 showing the brush in a state of completion. Fig. 2, is a perspective view of a brush when completely formed though it is not of any of the forms in most common use for a toilet brush. Fig. 3 is a plan of the ap-
25 paratus. Fig. 4 is a plan of the tubular block or die with the bristles inserted and secured ready for cementing.

A is the removable block or die in which the bristles are inserted and held while be-
30 ing secured on the back by cement. This block has small holes *a a* as shown in Fig. 3, for the reception of the bristles in tufts as above stated. The most convenient way of inserting the bristles is by drawing them
35 in with a string or wire in the same manner that they are very commonly drawn into a brush handle after doubling them so that they may be taken hold of in that way. After the holes *a* have been filled with
40 bristles as shown in Fig. 4, the block A with the bristles in it are placed upon the bed B or its equivalent, the bristles having been first cut off the proper length to form the brush. The hoop C is then placed in
45 position as shown in Figs. 1 and 3, and the cement D put in in a melted or plastic state after which it is pressed into form by means of the follower E. The hoop C and follower E should be hot when the cement

is introduced and the pressure applied; but 50 the block A must not be so hot as to burn or curl the bristles.

The form represented is not a very common one for toilet brushes; but is chosen for this representation on account of its sim- 55 plicity and the ease with which it may be represented. Of course other forms may be made by constructing the dies to correspond with the article required.

The cement of which I make the handle 60 of the brush and secure the bristles is made by mixing two parts of gum shellac with one part of Breckenridge coal—the latter pulverized and both hot when mixed, to which is added one eighth part plumbago. 65

In making the brushes, sufficient pressure must be given to fill the dies with certainty and it should also be sufficient to impart a polish upon parts where the dies are
70 polished.

It will be observed that in the construction here shown the bristles are fully supported by their ends resting upon the bed B while at the same time the sides are so supported by the tubes as to protect them 75 from crippling. By this means the bristles are made to support themselves with sufficient firmness against the pressure to which they are exposed in the formation of the handle of the brush or in other words of 80 the backing of cement in which the bristles are secured.

Having thus fully described my said invention, I wish it distinctly understood that I do not claim to be the first to secure bristles 85 in a clamp or its equivalent while their tops are cemented together, for this has already been done; but

I do claim—

The securing of the bristles in separate 90 tufts in the manner described by the employment of the tubular block A or its equivalent substantially as herein set forth.

New Haven Ct. July 27 1858.

STEPHEN BARNES.

Witnesses:

H. S. PARSONS,
WILLIAM R. GILLETTE.