(No Model.) 2 Sheets—Sheet 1.

A. H. WOLCOTT.

BRUSH MACHINE.

No. 490,181. Patented Jan. 17, 1893.

Fig. 2.

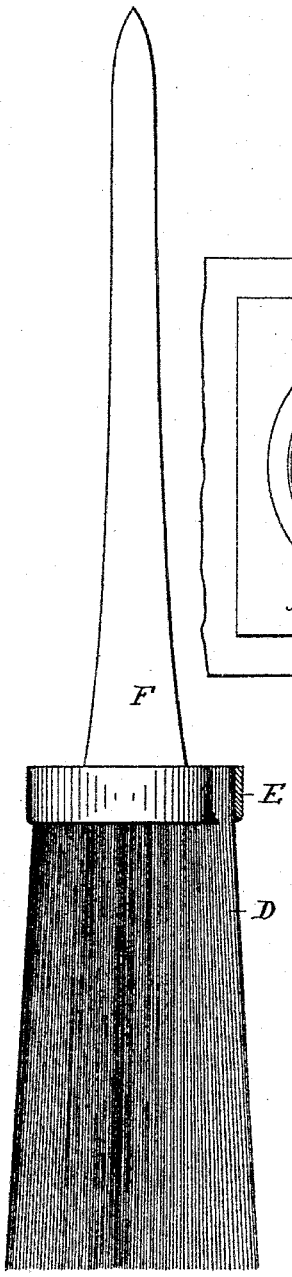


Fig. 3.

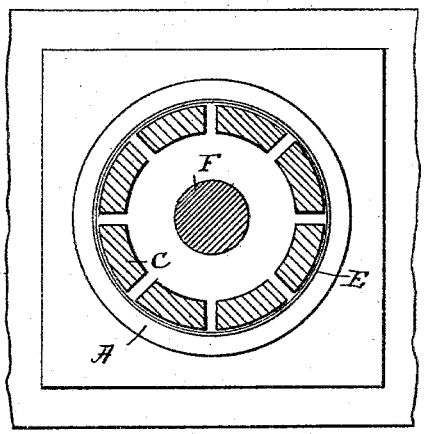
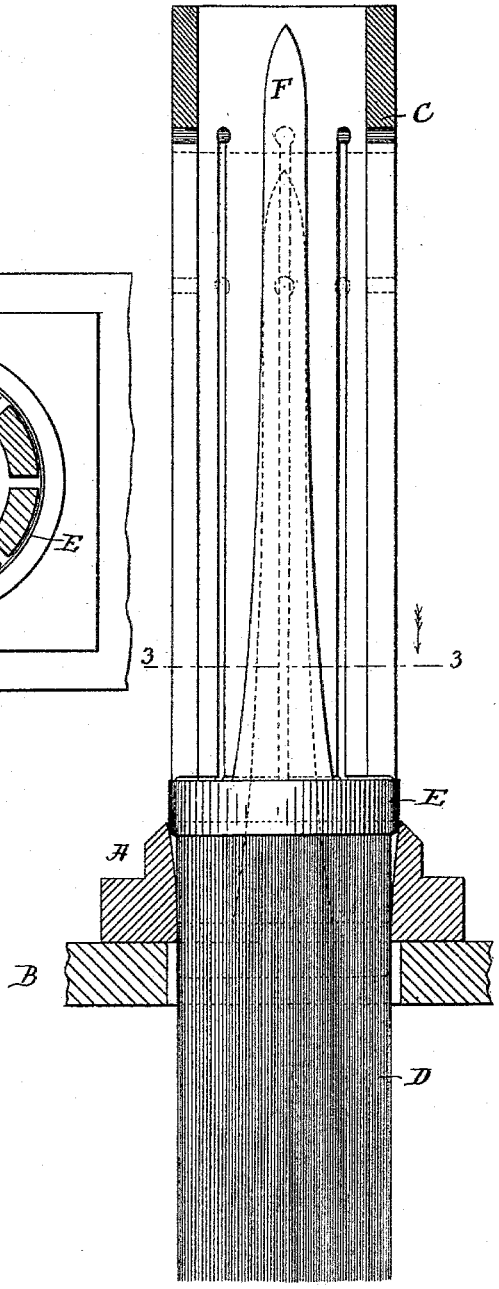


Fig. 1.



Witnesses.

Lainity N. Möller.

Alice A. Perkins.

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his attys.

(No Model.) 2 Sheets—Sheet 2.

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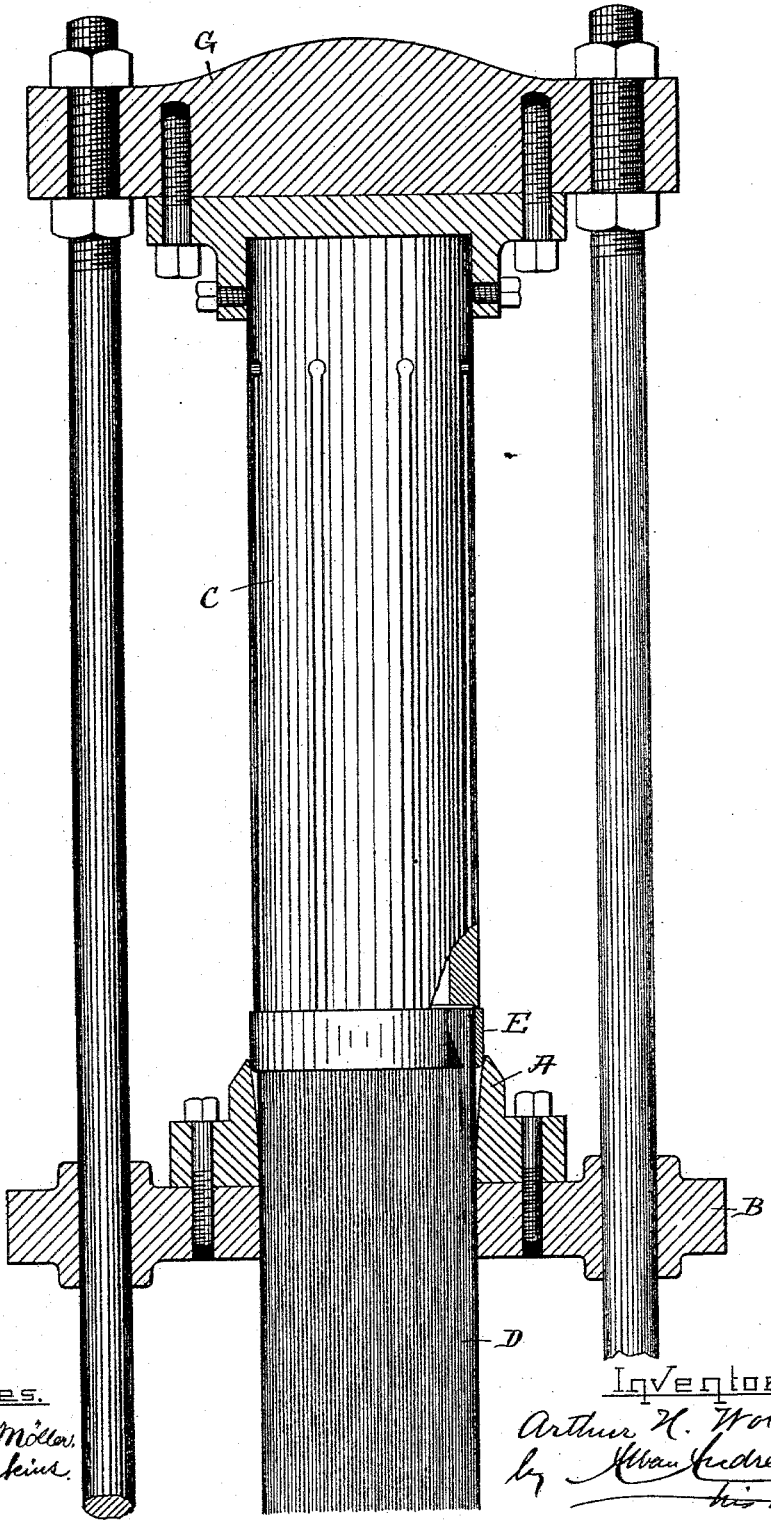
Fig. 4.



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UNITED STATES PATENT OFFICE.

ARTHUR H. WOLCOTT, OF WINTHROP, ASSIGNOR TO JOHN L. WHITING & SON, OF BOSTON, MASSACHUSETTS.

BRUSH-MACHINE.

SPECIFICATION forming part of Letters Patent No. 490,181, dated January 17, 1893.

Application filed June 13, 1892. Serial No. 436,549. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR H. WOLCOTT, a citizen of the United States, and a resident of Winthrop, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Apparatus for Making Brushes, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in apparatus for making brushes, round, flat or oval, and it has for its object to more firmly secure the bristles within the ferrule for which purpose my invention is carried out as follows, reference being had to the accompanying drawings, wherein—

Figure 1 represents a sectional view of the apparatus showing a brush in the act of being driven; Fig. 2 represents a side view of a finished brush shown partly in section; Fig. 3 represents a cross-section of the driver tube on line 3—3 in Fig. 1; and Fig. 4 represents a vertical section of the brush making apparatus adapted to be driven by power.

Similar letters refer to similar parts wherever they occur on the differents parts of the drawings.

My improved apparatus consists of a hollow tapering hard metal die A which may be supported on a suitable work table, bench or plate B during the operation of driving the brushes. In connection with such tapering die, I use a hollow driver tube C which is constructed with a series of longitudinal slots C′ which extend from the lower extremity of the driver tube to a point in proximity to the upper end thereof. The longitudinal slots render the driver tube elastic so that it is susceptible of being compressed radially for the purpose of conforming to the inner tapering surface of the die A when said driver tube is forced through said die.

D are the bristles of the brush, E its ductile metal ferrule and F the handle having any of the well known forms of bristle expander and I wish to state that in the use of this apparatus, I do not wish to confine myself to any particular form of bristle expanders as such does not form any part of my present invention.

In using the apparatus, I prefer first to drive the butt ends of the bristles into the ductile metal ferrule after which the handle is driven in and between the mass of the bristles causing them to be compressed between the expander portion of the handle and the interior of the ferrule. The brush is then inserted in the tapering die A as shown in Fig. 1 and by means of the driver tube C and suitable pressure exerted thereon the ductile ferrule is driven through such die causing the said ferrule to be uniformly compressed inwardly against the mass of the bristles by which the bristles are caused to be firmly secured between the ferrule and handle of the brush.

The apparatus may, if so desired, be operated by suitable power as shown in Fig. 4 in which the driver tube C is secured to a vertically or longitudinally movable head G adapted to be moved to and from the stationary die or the latter may be made movable toward the driver tube, or both may be movable, one toward the other without departing from the spirit of my invention.

Having thus fully described the nature, construction and operation of my invention, I wish to secure by Letters Patent and claim.

The herein described apparatus for securing brush bristles to a brush handle, consisting of a tapering hollow die adapted to receive a ductile brush ferrule, and a tubular driver provided with a series of longitudinal slots whereby said driver is adapted to conform to the inner tapering surface of the die when driven therethrough to compress the ferrule upon the butt ends of the bristles, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 3d day of June, A. D. 1892.

ARTHUR H. WOLCOTT.

Witnesses:

ALBAN ANDRÉN,

ALICE A. PERKINS.