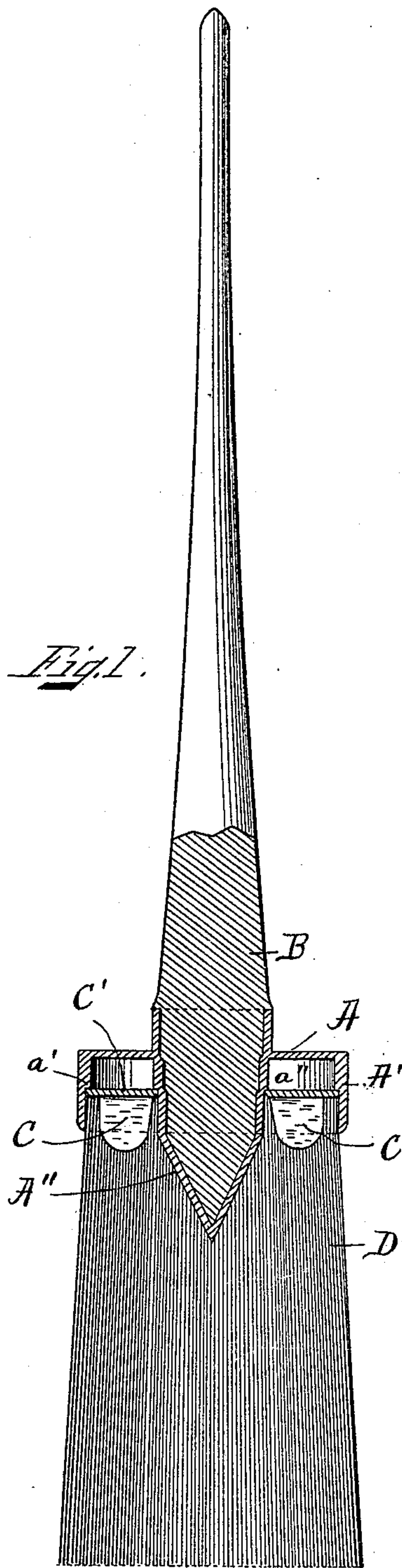


(Model.)

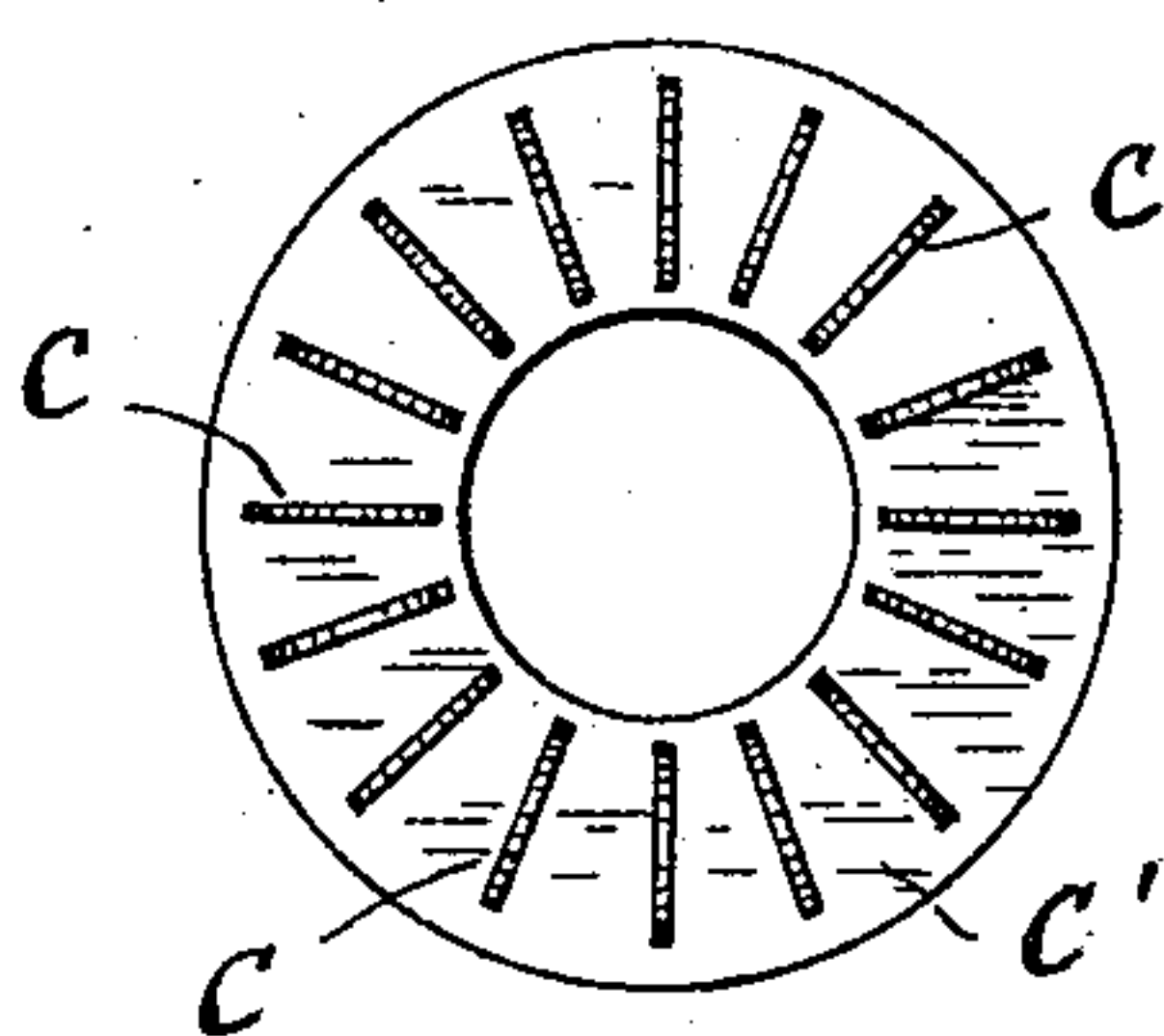
A. H. WOLCOTT.  
BRUSH AND MODE OF MAKING THE SAME.

No. 449,061.

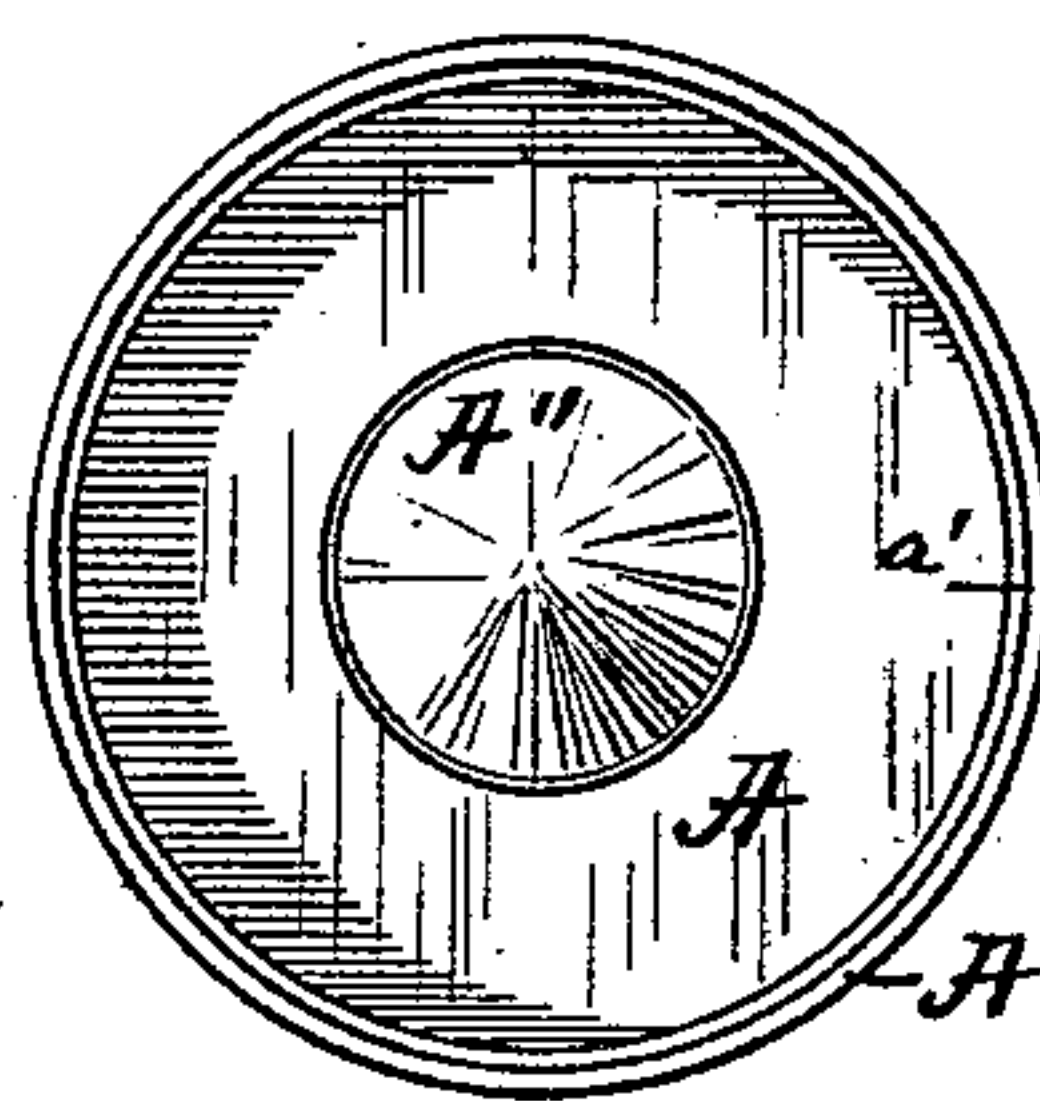
Patented Mar. 24, 1891.



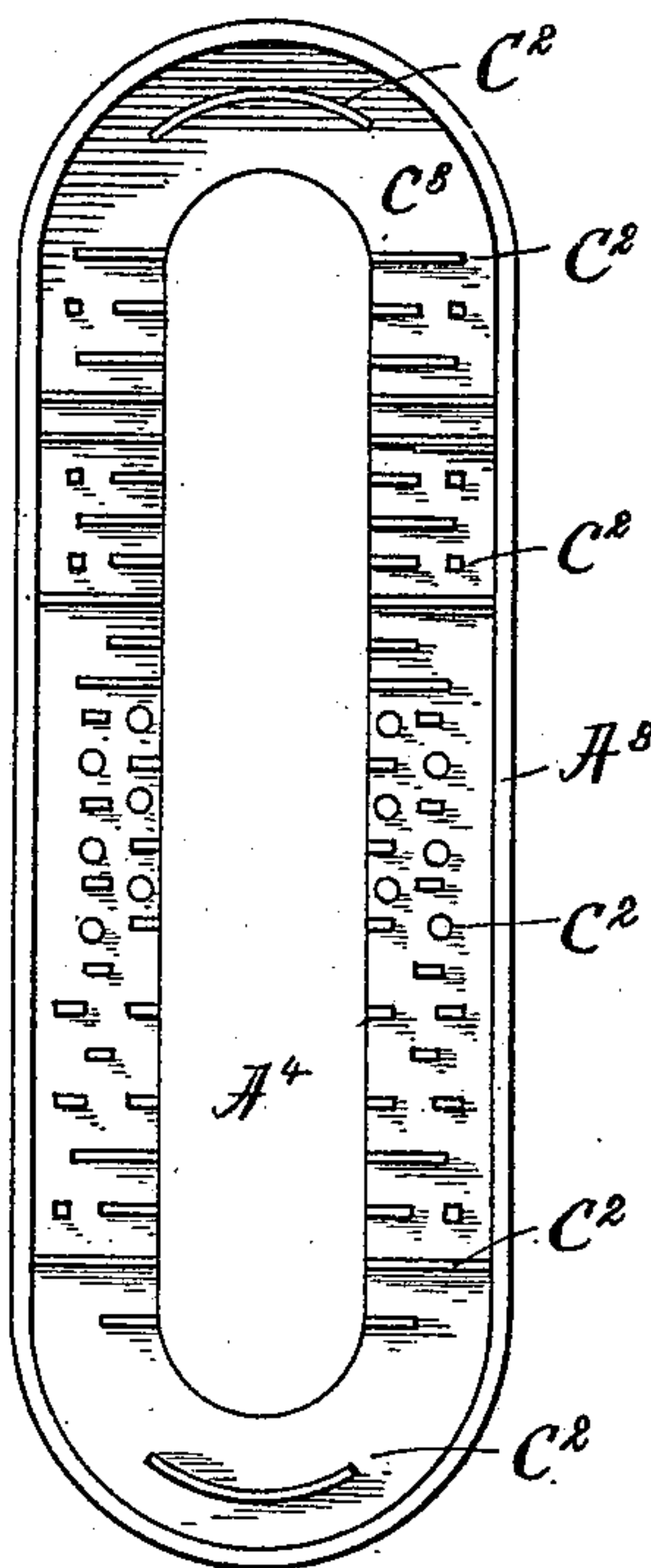
*Fig. 1.*



*Fig. 3.*



*Fig. 2.*



*Fig. 4.*

*Witnesses.*  
*Alice A. Perkins.*  
*Francis R. Chapman.*

*Inventor.*  
*Arthur H. Wolcott.*  
*by Allan Andrew, his atty.*



# UNITED STATES PATENT OFFICE.

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

## BRUSH AND MODE OF MAKING THE SAME.

SPECIFICATION forming part of Letters Patent No. 449,061, dated March 24, 1891.

Application filed July 3, 1890. Serial No. 357,627. (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 Brushes and Mode of Making the Same, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in brushes and mode of making the same, and it is carried out as follows, reference being had to the accompanying drawings, wherein—

Figure 1 represents a central longitudinal section of the improved brush. Fig. 2 represents a bottom view of the improved head and ferrule. Fig. 3 represents a bottom view of the bristle-expander, and Fig. 4 represents a bottom view of a modification of said ferrule and its bristle-expander.

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

The improved brush consists of the following parts, namely: a metal head A, having a central perforation for receiving the handle B. In one piece with the metal head is made the bristle-inclosing ferrule A', as shown in Figs. 1, 2, and 4. In practice I make in one piece with the head A a central hollow and tapering bristle-expander A'', the interior of which is adapted to receive and hold the handle B, as shown in Fig. 1.

On the interior of the ferrule A', I make a shoulder a', on which is made to rest the metal plate C', having a central perforation for receiving the central bristle-expander A'', and in one piece with said metal plate C' are made a series of longitudinal bristle-expanders C C, each of which is preferably made slightly tapering from its base to its point, so as to permit their being easily driven in and between the mass of the bristles D, as shown in Fig. 1.

The invention is equally useful for round, oval, or flat brushes. In Fig. 4 I have represented a flat-brush ferrule a<sup>3</sup>, with an elongated central expander a<sup>4</sup>, made according to my invention, and in said figure I have represented modified forms of bristle-expanders C<sup>2</sup>, extending from the plate C<sup>3</sup>. The ex-

panders may be made of any suitable form or cross-section—such as, for instance, circular, square, rectangular, polygonal, or other forms grouped together with suitable spaces between them, as may be found most practical and desirable, or they may be arranged in the form of annular rings, without departing from the spirit of my invention.

Back of the plate C' is left a hollow chamber a'', as shown in Fig. 1, which adds to the length of the ferrule and serves to give a longer bearing to the handle end when driven into the socketed central expander A'', or directly in and between the central portion of the bristles, as shown.

In making the brush I proceed as follows: The handle B is preferably first driven into the socketed part A'', and the plate C' is driven into the ferrule A' and against the shoulder a', after which the bristles D are firmly secured between clamps, as is common in the art of making brushes, and a suitable gum or adhesive substance applied to the upper ends of the said bristles, after which the ferrule A' is placed above the bristles and driven around the same, causing the central expander A'' or handle end, as well as the expanders C C, to be driven into and between the mass of the bristles, as shown in Fig. 1, by which the bristles are most firmly secured to the ferrule and the bristle-expanders.

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

1. The combination, in a brush, of the metallic head formed integral with a pendent ferrule having a shoulder on its inner surface, the metallic plate seated against said shoulder having a central perforation and formed integral with pendent bristle-expanders which enter the brush-bristles between the central perforation in the said metallic plate and the inner surface of the ferrule, and the brush-handle extending through the metallic head and the perforation in the metallic plate, substantially as described.

2. A brush consisting of the metallic head A, formed integral with the pendent hollow bristle-expander A'', and the ferrule A', having its internal surface provided with the shoulder a', the metallic plate C', resting

against the shoulder, having a central perforation through which the hollow expander extends and formed integral with the bristle-expanders C, entering the bristles between  
5 the ferrule and the hollow expander, and the handle B, passing through the metallic head and engaging the hollow expander, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of 10 two subscribing witnesses, on this 25th day of June, A. D. 1890.

ARTHUR H. WOLCOTT.

Witnesses:

ALBAN ANDRÉN,  
ALICE A. PERKINS.