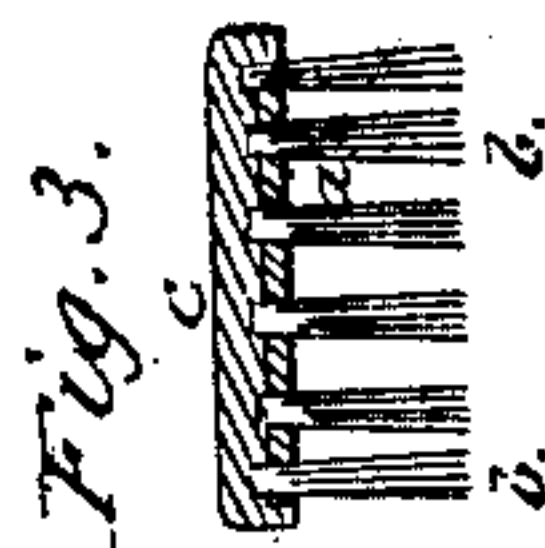
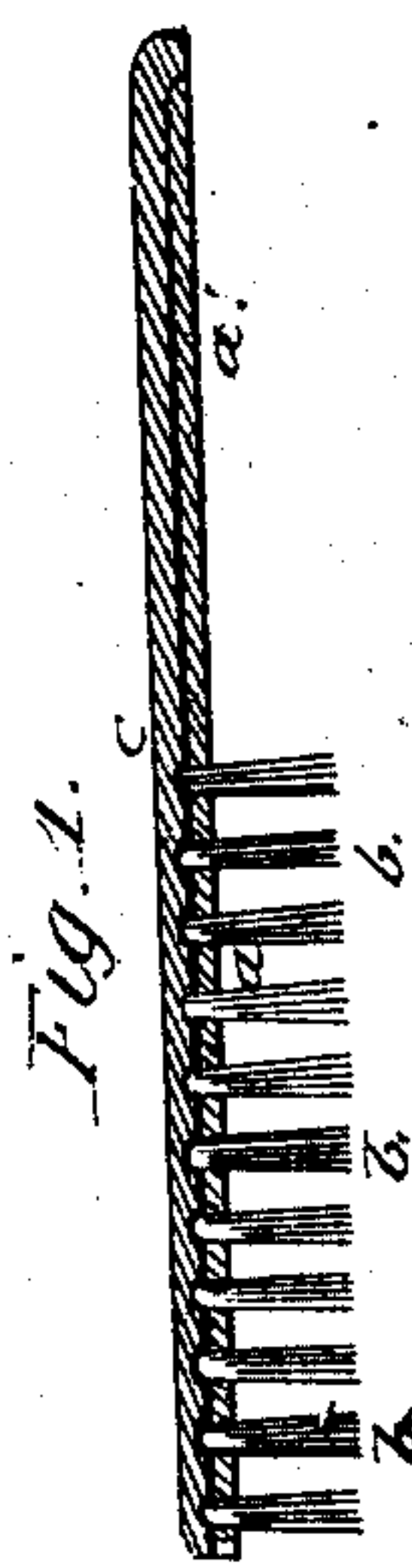
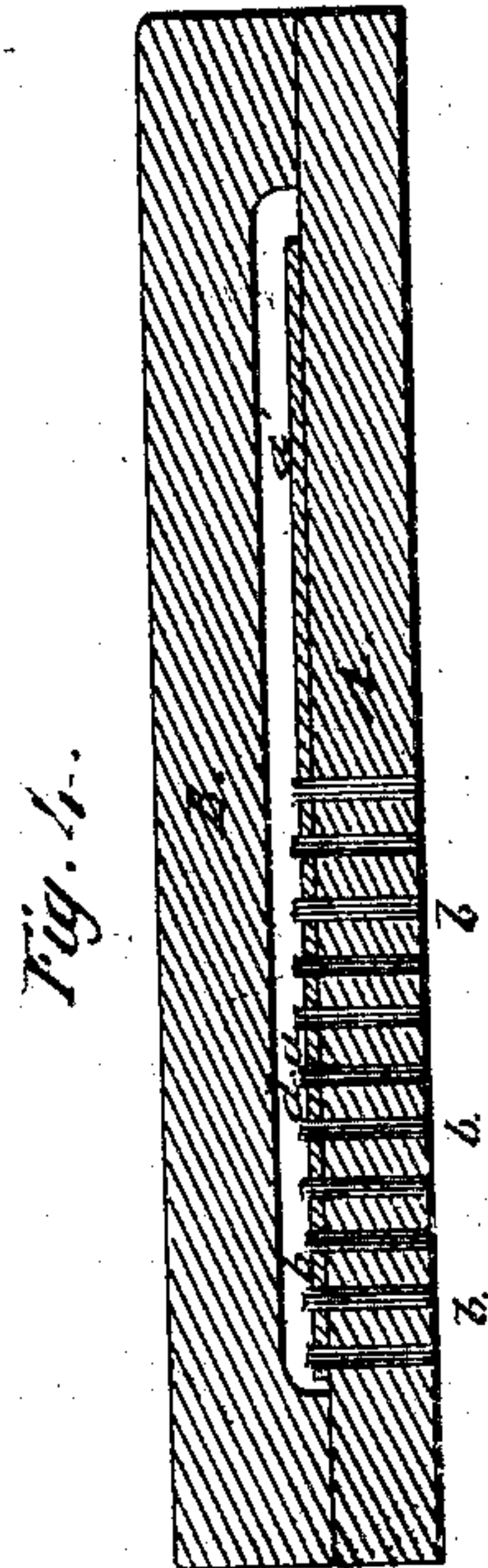
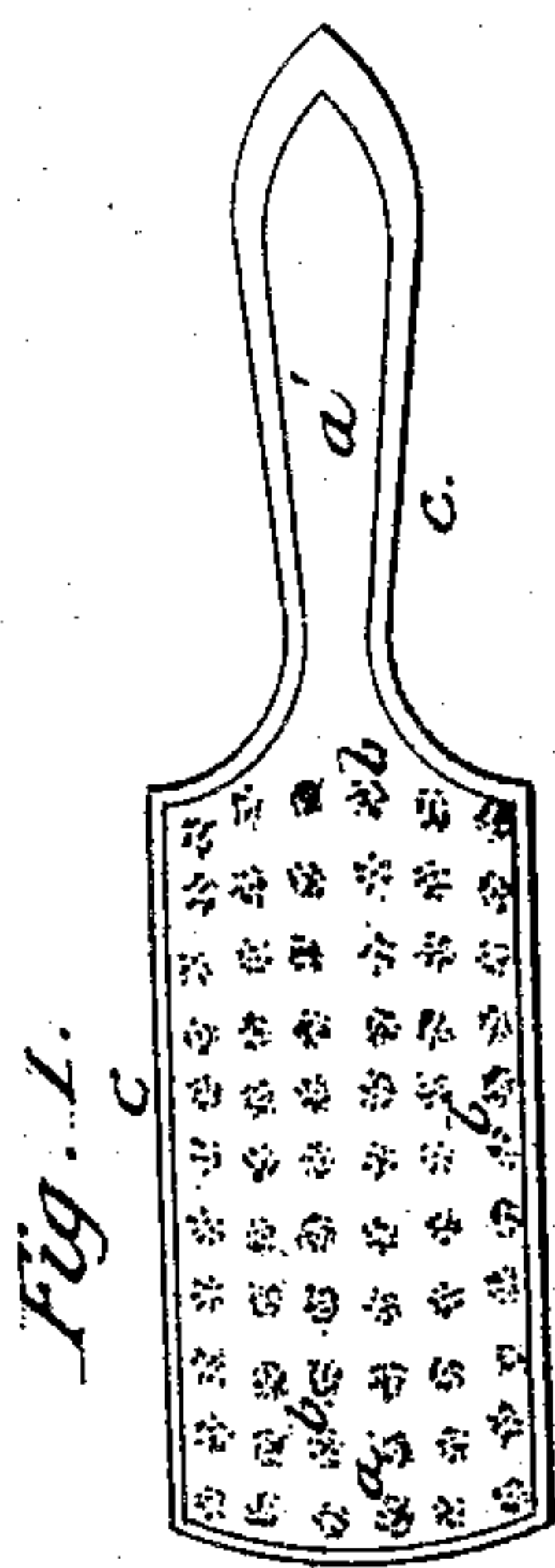


*A.C. Estabrook.*

*Hair Brush.*

*N<sup>o</sup> 55,764. Patented Jun. 19, 1866.*



*Witnesses;*  
*Samuel N. Piper*  
*G. H. Washburn*

*Inventor;*  
*Alanson C. Estabrook.*

*by his attorney*  
*R. W. Eddy*

# UNITED STATES PATENT OFFICE.

ALANSON C. ESTABROOK, OF FLORENCE, MASSACHUSETTS, ASSIGNOR TO  
I. S. PARSONS, OF SAME PLACE, AND GEO. A. SCOTT, OF LANSINGBURG,  
NEW YORK.

## IMPROVED BRUSH.

Specification forming part of Letters Patent No. 55,764, dated June 19, 1866.

*To all whom it may concern:*

Be it known that I, ALANSON C. ESTABROOK, of Florence, in the county of Hampshire and State of Massachusetts, have made a new and useful Invention having reference to Brushes and the Manufacture thereof; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is an under-side view, Fig. 2 a longitudinal section, and Fig. 3 a transverse section, of a brush made in accordance with my invention. Fig. 4 is a longitudinal section of the means or devices employed in manufacturing such brush.

In constructing the said brush I take a thin plate, *a*, (see Figs. 1, 2, and 3,) composed of wood or other material of suitable strength, and formed to the proper shape. This piece of wood I pierce with a series of holes going through it, such holes being for the reception of the bristles.

In each of such holes I insert a mass, *b*, of bristles, so as to project above as well as below the piece *a*.

On the said piece *a* and the portions of the bristles projecting above it I cast or mold or press a cement or composition, *c*, so as not only to form a back or finish to the brush, but to adhere to such projecting parts and hold the bristles firmly in place. The handle of the brush I also make in this way of the composition and an extension, *a'*, of the piece or plate *a*, the said extension being embedded in the cement or composition so as to either wholly or partially be covered by it, in which case the extension will serve to strengthen the handle and aid in preventing the composition from being broken.

For the purpose of so making a brush I prefer to make use of a mold, as shown in Fig. 4, in which A and B are its two main parts. The portion A is a bed-plate and is perforated with a series of holes to receive and support the bristles, which go through the holes in the manner as shown at *b b b* in Fig. 4. The axis of each of these holes is to be in prolongation of that of some one of the holes of the plate *a*,

which plate *a*, previous to the insertion of the bristles in the bed-plate, is to be laid on the latter, and is also to receive the bristles, which are to be run through and so as to project somewhat above it.

The part B is the die or mold plate, which is to be formed with a cavity or matrix, *d*, to encompass the edges and top surface of the plate *a* and the parts of the bristles which extend above the said plate *a*, the said cavity *d* being so formed as to be capable of pressing and molding upon the top surface and against the edges of the plate *a* a thin stratum of composition when in a soft, plastic, or moldering state. This composition may be what is termed "hard rubber" in a condition proper for being molded, or it may be composed of shellac and comminuted earthy, mineral, or vegetable matters, or it may be otherwise made, or it may be any suitable material capable of being molded in a die or cast in a mold, and which subsequently, by exposure to atmospheric temperature, will become indurated.

On applying a sufficient quantity of the composition to the plate *a* when on the bed-plate A and duly supplied with bristles, and subsequently forcing the die-plate B down upon such composition, so as to cause it to be pressed upon the plate *a* and the bristles and take the requisite form about the same for making a backing which shall cover the plate *a* more or less, as circumstances may require, we not only fix its bristles in place, but effect a finish of the brush.

The die or matrix may be made so as to produce an ornamental impression, and the handle part *a'* of the plate *a* may be formed in longitudinal section, as shown in Fig. 5, in order that when the composition is forced upon it with powerful pressure such composition may be caused to pass between the entire lower surface of the part *a'* and the bed-plate, as well as over the upper surface and about the edges of the said part *a'*, in which case the part *a'* will be entirely incased in the composition, and will serve to aid in preventing breakage of it.

The part *a'* may be in one piece with the part *a*, or the two may be made of separate



pieces duly applied together, the part *a'* being of any proper form for conveniently molding the composition upon it.

The composition I generally employ in the manufacture of my improved brushes is what is used in making molded photographs or miniature cases, it being composed in part of shellac; but I do not confine my invention to such, as there are various other compositions or substances well known which will equally well answer the purpose.

When the shellac composition is employed it holds the bristles in place with great tenacity.

After the brush may have been so made it may, after removal of the die-plate from it, be readily removed from the bed-plate, the bristles being drawn out of the latter by the withdrawal of the brush.

I make no claim to a brush composed simply of bristles and a back made entirely of cement or a molded composition; nor do I claim, for making such brush, the employment of a plate

to hold the bristles while being inserted in the composition, or while it may be in the act of being applied to them, such plate being subsequently to be drawn off the bristles, so as to leave them adhering to the cement or composition back.

What I claim, and desire to secure by Letters Patent, is—

As a new article of manufacture, the brush constructed and arranged as herein described—that is to say, a brush in which the bristles inserted through a perforated plate are embedded and held firmly in a cement of any suitable substance, as described, which cement shall, at the same time, in combination with a strip of metal or other material, form the back and handle of the brush, as herein shown and set forth.

ALANSON C. ESTABROOK.

Witnesses:

GEO. C. GAGE,  
CHAS. DELANO.