

A. C. ESTABROOK.
Brush.

No. 208,898.

Patented Oct. 15, 1878.

Fig. 1.

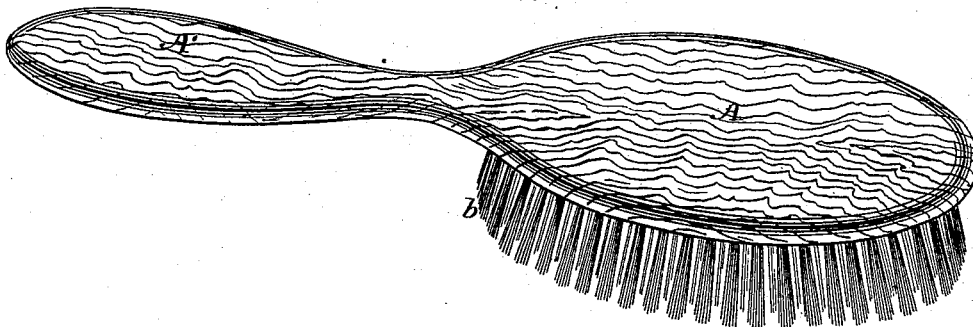


Fig. 2.

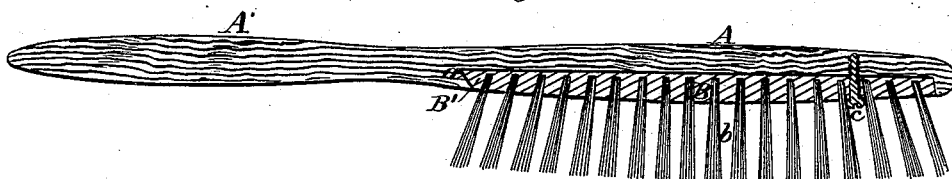
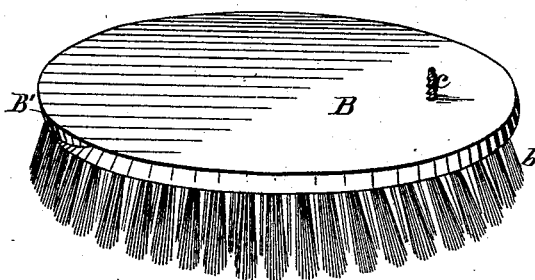


Fig. 3.



Witnesses:
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att'y

UNITED STATES PATENT OFFICE.

ALANSON C. ESTABROOK, OF NORTHAMPTON, MASSACHUSETTS, ASSIGNOR
TO FLORENCE MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN BRUSHES.

Specification forming part of Letters Patent No. **208,898**, dated October 15, 1878; application filed
May 27, 1878.

To all whom it may concern:

Be it known that I, ALANSON C. ESTABROOK, of Northampton, in the county of Hampshire and State of Massachusetts, have invented certain new and useful Improvements in Brushes; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a perspective view of the brush. Fig. 2 represents a longitudinal central section. Fig. 3 represents a perspective view of the bristle-holder detached from the back and handle.

My invention relates, mainly, to toilet brushes in which wood is used for the back and handle.

My invention consists in the combination, with a wooden back and handle, of a composition bristle-holder, the material of which fits closely around and covers the ends of the bristles.

My invention consists, also, in a brush, the same having a wooden back and handle and a composition bristle-holder, the material of which fits closely around and covers the ends of the bristles.

It consists, also, in the attachment of the composition bristle-holder to the recessed wooden back by means of a projecting lip on one end of the holder, a corresponding recess in the wooden back, and a screw passing through the holder into the wood.

Brushes made with wood backs are among the oldest in use. They are preferred by many persons over the later novelty of brushes called "composition" or "india-rubber" brushes, the odor of the latter being often objectionable. They are sometimes brittle, breaking at the junction of the handle. To obtain the high polish and relief-designs generally found upon composition backs, they are subjected to very heavy pressure, by which the bristles are liable to become crinkled, injured, or bent in various directions. Brushes with wood backs have not these defects; but, as ordinarily made, they have others, and it is a slow and expensive operation to manufacture them. They are generally made of a flat block of wood, drilled through. Bent tufts of bristles are secured in the holes by a twine or wire, and the unsight-

liness is covered by veneer, glued upon the top. Such brushes will not stand dipping in water, (as toilet-brushes often are,) as the water enters by capillarity between the bristles under the veneer and separates it from the bristle-block. To avoid the use of veneer, brushes have been made with solid backs, with longitudinal holes for the wire and bristle-holes extending only half-way through the back. Such brushes are difficult to make, and consequently expensive, and are liable to split lengthwise of the rows of holes when dipped in water, the water entering alongside of the bristles.

By my improvements I obtain a brush with a wood back and handle without any drilled holes for the bristles, and in which neither wire, glue, nor veneer is used.

In the drawings, A represents the back, and A' the handle, of the brush. These parts, as shown, are made of a single piece of wood. The part A has a cavity to receive the bristle-block B, the configuration of the cavity and bristle-block being made identical to insure a close fitting of the parts. The bristle-block B is made of a plastic composition, set in contact, pressed, and united to the bristles *b* by a process analogous to the one for which a patent was granted to S. Barnes September 7, 1858, and to Estabrook February 4, 1873, in which a bed-plate (generally concave and provided with small recesses) is used to support one end of the bristles, upon which, to receive the bristles, is placed a perforated plate of a thickness equal to the intended length of the bristles to project from the bristle-block after completion, and so as to leave the other end of the bristles free to be embedded and covered by the plastic or melted material that is poured on and then pressed around and over the ends of the bristles by a third or top plate, the plates being retained in proper position, one above the other, by suitable dowels or guides; and the composition of the block B forms no part of this invention. It can be made of suitable water-proof materials, as celluloid, or a composition of gum-shellac thickened with ground substances, and preferably with coloring substances added, to imitate the color of the wood forming the back; but, while the composition

of the block B forms no part of this invention, the mode of manufacture of the bristle-holder does when pressed around the bristles and combined with the wood back recessed for its reception.

By forming the bristle-block in this manner it is not necessary to drill holes for the bristles, and the secured end of the bristles is covered by the composition, so that water cannot penetrate alongside of the bristles in the cavity of the wood back. This back can be completely varnished, if desired, and be thus rendered impermeable to water.

To securely unite the bristle-block to the wood back, one end of said bristle-block has a beveled projection, B', formed upon it, to engage in a dovetailed recess, *a*, of the handle, while the other end is secured by a single screw, *c*. The whole periphery of the bristle-block being inclosed in the wood back renders the connection very firm, and gives to the brush a neat finish.

Having now fully described my invention, I claim—

1. The combination, with a wooden back and

handle, of a composition bristle-holder, the material of which fits closely around and covers the ends of the bristles, in virtue of the application, aided by pressure, of the composition to the bristles while said composition is in a plastic state.

2. As a new article of manufacture, the brush herein described, the same having a wooden back and handle and a composition bristle-holder, the material of which fits closely around and covers the ends of the bristles, in virtue of the application, aided by pressure, of said composition to the bristles while in a plastic state.

3. The attachment of the composition bristle-holder to the recessed wooden back by means of the projecting lip on one end of the holder, a corresponding recess in the wooden back, and a screw passing through the holder into the wood, as set forth.

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Witnesses:

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