## J. L. Whiting.

Brush.

Nº81,966.

Patented Sep. 8, 1868.

Fig1

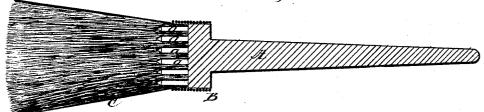


Fig.2



Witnesses. SN. Reper LR. Snow

Inventor.

John I., Whiting

by his attorney

U. Whili

## UNITED STATES PATENT OFFICE.

JOHN L. WHITING, OF BOSTON, MASSACHUSETTS.

## IMPROVED BRUSH.

Specification forming part of Letters Patent No. 81,966, dated September 8, 1868.

To all whom it may concern:

Be it known that I, John L. Whiting, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Brushes; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a longitudinal section of a paint or varnish brush made in accordance with my invention. Fig. 2 is an end view of its handle and ferrule as they appear preparatory to the fixation of the mass of bristles to them.

My present invention may be said to be an improvement with reference to that for which Letters Patent No. 39,439, were granted to me on August 4, 1863, this latter invention being a brush containing a wedge or cone shaped point projecting from the handle into the mass of bristles circumscribed by a cone-shaped or tapering ferrule, and having pitch or cement applied to the butt of the mass.

Such invention, involving the use of the single wedge or cone shaped projection, is only applicable to small brushes, for when applied in the manufacture of the larger kinds it either does not compact the mass of bristles sufficiently, or, when it does so, it leaves too great a space in the mass unoccupied with bristles—in other words, it forms a tubular instead of a solid brush.

The object of my present invention is to so apply the principle of the patented one as to avoid the formation of what may be termed "the bore in the brush," which, especially after the brush may have become worn, will cause its mass of bristles to split or open, and thus affect the proper working of the brush when in use.

In carrying out my present improvement, instead of extending from the butt of the brush-handle a single projection, I construct it with a series of such, as shown at a a a, &c.,

in the drawings, A being the handle, B the ferrule, and C the mass of bristles. projections I arrange with spaces between them or around each other. The ferrule may be cylindrical, tapering, or of other proper form, and I prefer to have it extend somewhat back of the butt of the handle or the roots of the projections. These projections may be disposed in parallel rows, or the rows may be arranged concentrically, or may be otherwise properly disposed, each being tapered throughout its length or form a short distance from its point or outer end. Thus, when driven into a mass of bristles circumscribed by the ferrule, and having cement on their butts, the projections will be distributed throughout the mass, and will compress the bristles in directions toward as well as away from the axis of the mass. They will present a very great extent of holding-surface to the bristles in comparison to what would be presented by a single projection, and consequently the bristles will not be so likely to become loose while the brush may be in use, especially when the mass may shrink at the butt, or the projection may shrink in consequence of the brush being allowed to get dry.

I herein make no claim to a brush as made with the single projection to extend from the butt of the handle into a mass of bristles encompassed by a tapering ferrule, the whole being as represented in the aforementioned patent.

What, however, I claim as my present in-

The combination and arrangement of the series of projections with the other parts of the brush, as described, the series being productive of new and useful effects, as specified.

JOHN L. WHITING.

Witnesses:

R. H. EDDY, F. P. HALE, Jr.