

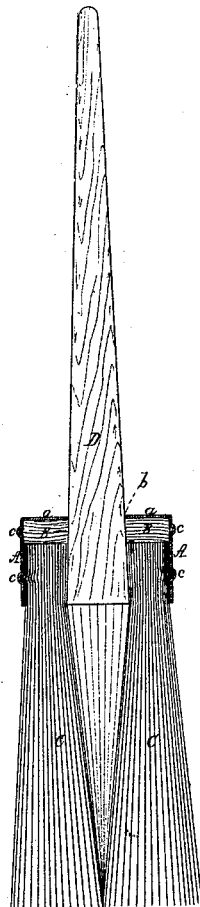
*J. L. Whiting,*

*Paint Brush.*

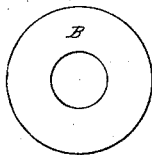
*No. 108420.*

*Patented Oct. 18. 1870.*

*Fig. 1.*



*Fig. 2.*



Witnesses

*S. N. Piper.*

*J. M. Snow*

*John L. Whiting.*

*by his attorney*

*R. H. Eddy*

# UNITED STATES PATENT OFFICE.

JOHN L. WHITING, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN PAINT-BRUSHES.

Specification forming part of Letters Patent No. **108,420**, dated October 18, 1870.

*To all whom it may concern:*

Be it known that I, JOHN LAKE WHITING, of Boston, of the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in the Manufacture of Paint-Brushes; 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 denotes a longitudinal section of a brush made in accordance with my invention. Fig. 2 is a top view of the strengthener, to be hereinafter described.

In making a brush, I employ a metallic ferrule, capped at one or the upper end and open at the other or lower end, the cap having a hole made through it at its center to receive the handle. The ferrule may be cylindrical in form, or it may be barrel-shaped, or it may be slightly conical or tapering. With such a ferrule I employ a strengthener, which consists of a short cylinder or block of wood having a diameter corresponding with that of the interior or chamber of the ferrule, or that part of it which is next to the cap or head of the ferrule, the said strengthener having a hole through it centrally, and such hole having a diameter about equal to that of the hole in the cap of the ferrule.

In Fig. 1 of the drawings, A denotes the metallic ferrule provided with a head, *a*, at its upper end, and such head having a hole, *b*, made through it centrally.

The strengthener is exhibited at B as placed within and fitted to the ferrule and against the head *a*. If desirable, the strengthener may be in two or more sections, for the purpose of being readily introduced into the ferrule, as in some cases, particularly when the ferrule is conical or tapering, it may be necessary to so make the introducer in order to get it into its place in the ferrule.

The ferrule, having been so made and provided with a strengthener, as described, is next to have the mass of stock or bristles C inserted in it at its open or lower end, and up to and against the strengthener, after which the handle, which is to be conical or tapering, is to be inserted, smaller end foremost, into the mass of bristles, and into the holes of the strengthener B and the head *a*, and be driven upward closely into such holes and into the said mass, so as to expand it in the ferrule and aid in holding it therein.

The ferrule I form with two or any other suitable number of concavo-convex beads, *c c*, extending around it, so as to constitute grooves or channels on and about its interior surface. One of such grooves I usually arrange so as to extend around the periphery of the strengthener, in order that such strengthener may be expanded by the handle into the groove, the latter thus being made to serve the purpose of aiding in holding the strengthener in place in the ferrule. The other groove or grooves, *c*, I arrange, as shown, so as to receive more or less of the bristles when the mass is expanded by the handle, the groove or grooves thus serving to aid in holding the bristles in connection with the ferrule.

In fixing the bristles in the ferrule and to the handle and the strengthener, as well as to aid in fixing the latter in or to the ferrule, cement may be employed, it being applied to the parts prior to the insertion of the handle therein.

From the above it will be seen that the purpose of the strengthener is twofold—viz., to give support to the handle and to save the necessity of extending the bristles up to the cap or head of the ferrule. It is advantageous in other respects, as it not only strengthens the ferrule or prevents it from being indented, but when of wood enables the cement on the bristle-heads to hold to it with great tenacity.

A rivet or pin may be inserted transversely through the handle, the ferrule, and the strengthener, in case such may be desirable, in order to strengthen the connection of the said parts.

I claim as my invention—

1. The arrangement and combination of the strengthener B, the capped ferrule A, the tapering handle D, and the mass of bristles or stock C, all as described.

2. The ferrule as formed, with one or more grooves arranged within the periphery of its chamber, substantially in manner as set forth, in combination with the strengthener and tapering handle, or equivalent means of expanding the bristles, the whole being as specified.

JOHN L. WHITING.

Witnesses:

S. N. PIPER,  
J. R. SNOW.