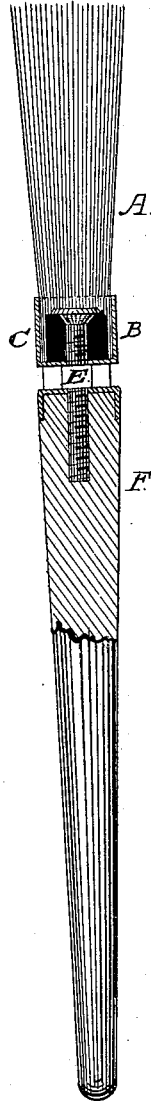


J. C. LAWRENCE.

Brush.

No. 54,179.

Patented April 24, 1866.



WITNESSES

*J. P. Cunningham*  
*Wm. Brewin*

INVENTOR

*J. C. Lawrence*  
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# UNITED STATES PATENT OFFICE.

JOSEPH C. LAWRENCE, OF BROOKLYN, NEW YORK.

## IMPROVED BRUSH.

Specification forming part of Letters Patent No. **54,179**, dated April 24, 1866.

*To all whom it may concern:*

Be it known that I, JOSEPH C. LAWRENCE, of Brooklyn, E. D., in the county of Kings and State of New York, have invented a new and useful Improvement in Brushes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

The drawing, consisting of only one figure, represents a brush made according to my invention.

This invention consists, among other things, in a novel way of holding and securing the bristles or hairs of the brush, whereby they can be at any time made more secure, and can be tightened if at any time they become loose.

A designates the bristles or hairs. Their butt-ends, or the ends which are to be confined, are placed in a metallic socket, B, which may be cylindrical in shape, or square, or flat. In this example it is cylindrical in shape, resembling a thimble, except that it is of the same diameter throughout. Its closed end is perforated to let a spindle or screw, D, go through it toward the base of the handle F.

The screw D has a broad head, and around the screw, between its head and the bottom of the socket B, is placed a ring, C, of rubber or other elastic or compressible and expansible material, around which are set the ends of the bristles, between it and the interior of the socket.

When enough bristles have been placed in the socket to make a brush of the size required the screw is drawn inward by means of a nut, E, placed on it outside of the socket, and the head of the screw is thereby brought against the top of the elastic ring, which is compressed in the direction of its length and expanded in the direction of its diameter, so as to press the

bristles closely and firmly against the inside of the socket. After the screw has been brought down far enough to hold the bristles securely the handle F is placed on the end of the screw and turned until it comes against the nut E.

A brush made in this manner is not liable to become injured by moisture, as in the case of those made with the aid of cords and twine, which frequently are broken by the expansion of the wooden stock on which the bristles are fastened, or are rotted away from the effects of exposure and moisture.

When the bristles are secured in the way provided by my invention, if any of them become worn away or fall out the rest can be tightened by means of the nut E, so as to prevent them from falling out. The brush can be easily renewed when worn out, and can be exposed to the weather without danger of injury to the means of securing the bristles.

The expansible ring or body C and the screw D are not rotated in the socket, but are brought downward or inward by the turning of the nut, and therefore the socket B can be of any shape, so as to produce a flat or round or other shaped brush. Cork or any other substance which can be expanded laterally by endwise pressure may be used instead of rubber.

The same principle of construction can be applied to making brooms.

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

Confining and securing bristles or other material for brushes in a socket by means of the expansion therein of an elastic or expansible material, substantially as described.

The above specification of my invention signed by me this 2d day of March, 1866.

JOSEPH C. LAWRENCE.

Witnesses:

M. M. LIVINGSTON,  
ALEX. F. ROBERTS.