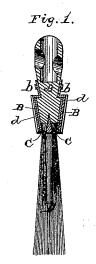
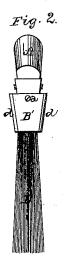
## H. ROSENTHAL.

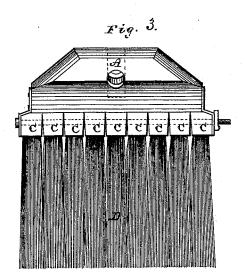
BRUSH.

No. 181,209

Patented Aug. 15, 1876.









WITNEBSES. My arners J. W. Burnhams. B. Rosenthal, few J. a. Lehmann, atty.

## UNITED STATES PATENT OFFICE.

HENRY ROSENTHAL, OF NEW YORK, N. Y.

## IMPROVEMENT IN BRUSHES.

Specification forming part of Letters Patent No. 181,209, dated August 15, 1876; application filed July 17, 1876.

To all whom it may convern:

Be it known that I, HENRY ROSENTHAL, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Brushes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

The nature of my invention consists in the construction and arrangement of a brush composed of a series of metal ferrules placed in a frame, and held together by suitable fastenings, all as hereinafter more fully set forth.

In the annexed drawing, which fully illustrates my invention, A represents the head of the brush, to which is secured a metal frame, B, forming outside of the head two parallel shoulders or ledges, b b, and having its sides inclined from the base inward toward the outer edge. The brush proper is made in sections, each section composed of a squarecornered metal ferrule, C, in which the bristles D are fastened in any suitable manner. These ferrules are made to correspond to the shape of the frame B above the shoulders b, and so as to be placed close together, side by side—that is to say, each ferrule has two perpendicular sides and two inclined sides. One end, B', of the frame B is made movable in guides dd, formed by bending the inclined sides of the frame, as shown, and when this end is removed the sections can be easily slipped into the frame, after which said end B' is replaced, and the whole fastened by a set-screw, a, as shown, or by a rod passing through all the sections, or by any other suitable fastening.

The ferrules C C may be made entirely with square corners, if so desired—that is, with all four sides perpendicular—in which case the frame B must be made to correspond, and have the outer edges of its sides formed with flanges to catch over the opposite edges of the ferrules, to hold them so that they cannot be drawn out.

The advantages of this construction of a brush are obvious. When any one or more sections are worn out they can be removed and replaced by others; or the remaining sections can be placed in a smaller head, and used till they are worn out.

If desired, each section may be made stationary, independent of the others, by means of metal partitions, fastened in any suitable manner.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a brush, a metallic frame with a removable end piece, in combination with a series of square brush-sections sliding therein, and rendered stationary, substantially in the manner herein set forth.

2. In a brush, the ferrules secured to the head by means of a rod which passes through them all, substantially as shown.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 14th day of July, 1876.

HENRY ROSENTHAL. [L. S.]

Witnesses:

John A. Shields, Hamilton M. Keeffr.