(No Model.)

S. S. HARMAN.

MARKING BRUSH.

No. 391,964. Patented Oct. 30, 1888.

Fig. 2.

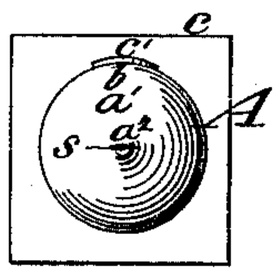


Fig. 1.

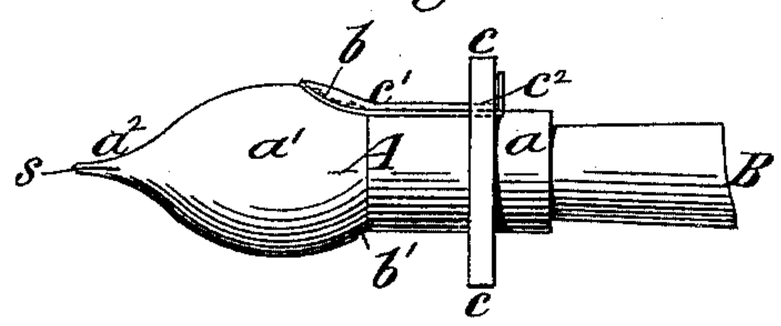


Fig. 3.

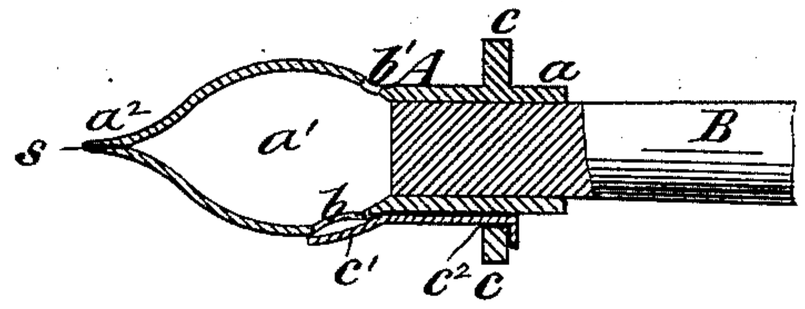
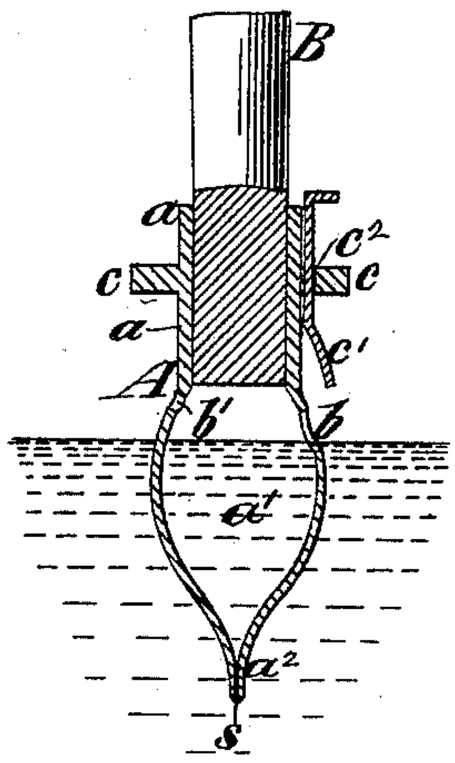


Fig. 4.



Witnesses
Joseph W. Roe.
C. L. Sundgren.

Inventor:
Stephen S. Harman,
by his Attys
Brown & Hall.

UNITED STATES PATENT OFFICE.

STEPHEN S. HARMAN, OF NEW YORK, N. Y.

MARKING-BRUSH.

SPECIFICATION forming part of Letters Patent No. 391,964, dated October 30, 1888

Application filed February 3, 1888. Serial No. 262,862. (No model.)

To all whom it may concern:

Be it known that I, STEPHEN S. HARMAN, of the city and county of New York, in the State of New York, have invented a new and useful Improvement in Marking-Brushes, of which the following is a specification.

My present invention is an improvement on the brush shown in my Letters Patent No. 365,472, dated June 28, 1887. The brush-head which is shown in that patent is of hollow conical form, forming an internal reservoir, and its tip is of soft or elastic material, as soft india-rubber, and is provided with an opening in its end, and the reservoir has openings in its sides, which are shown as extending nearly the full length of said reservoir. When in the act of writing or marking, the pressure or variation of pressure produced on the soft flexible tip by the act causes the marking-fluid to work out from the opening in the tip, and consequently produces the marking of the package or box. If the brush shown in my former patent be laid down when full of ink or marking-liquid, the liquid will run out of the side openings; and the object of my present invention is to provide a brush which has all the advantages of the one shown in my former patent, and which, when filled full, may be laid down upon a flat surface without danger of leakage taking place from the hollow brush-head.

The invention will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a side view of a brush-head embodying my invention. Fig. 2 is an end view thereof. Fig. 3 is a longitudinal section of the brush-head, and Fig. 4 is a similar longitudinal section of the brush-head, illustrating how it is dipped into the marking-fluid for filling it.

Similar letters of reference designate corresponding parts in all the figures.

A designates the brush-head, and B the brush-stick whereby the brush is held. The brush-head A is usually, as here represented, formed with all its parts integral in one piece, of soft india-rubber or equivalent elastic and flexible material. The brush-head A comprises a sleeve or socket portion, *a*, which receives the brush-stick, and a hollow reservoir, *a'*, for holding marking material. As here represented, the reservoir *a'*, beyond the junction of the sleeve *a* therewith, is bulged outward from the sleeve, and then its walls converge either in curved or straight lines toward the tip a^2. In all cases the tip a^2 will be of india-rubber or other soft elastic material.

In the tip a^2 is a slit or cut, *s*, which affords an opening leading from the hollow or cavity within the wall of the reservoir *a'*. This slit or cut, through which the marking ink or liquid works and is delivered upon the box when using the brush, is so fine that when the brush is filled with liquid and laid upon its side or even held vertically no ink or liquid will escape through the slit or opening *s;* but in the act of writing and by the pressure and variations of pressure produced with the tip a^2 upon the surface to be marked the ink is caused to work out from such tip in proper quantity and not too fast to perform neat marking.

In the wall of the chamber or reservoir *a'*, near the top thereof, and at about the point of its junction with the sleeve *a*, is an opening, *b*, which is of comparatively small size, and through which the reservoir *a'* may be filled. I have also shown the brush-head as provided with a guard-flange, *c*, which may be formed integral with the sleeve *a*, or may be made of a separate piece secured thereon, and which furnishes a rest for the fingers and prevents them from slipping downward onto the dirty brush-head.

In order to close the filling-opening *b*, I provide a sliding or other cover or stopper, *c'*. As here represented, this cover *c'* is formed of sheet metal and slides through a slit, c^2, provided in the flange *c* at its junction with the sleeve *a*. This cover or stopper *c'* may be withdrawn from over the hole *b*, as shown in Fig. 4, or it may be slid inward, so as to completely cover the opening *b*, and thus prevent leakage.

I have also represented a vent-opening, *b'*, which, although not absolutely necessary to the proper working of the brush, may advantageously be used. This vent-opening *b'* is preferably slightly higher than the filling-opening *b* or nearer to the sleeve *a*, and consequently, when the cover *c'* is slid back to uncover the filling-opening *b* and the brush is dipped ver-

tically into the marking-fluid, as shown in Fig. 4, the ink or fluid will run in through the opening *b* to fill the reservoir *a'*, while the air will escape meanwhile through the vent-opening *b'*. In all cases the filling-opening *b* and also the vent-opening *b'* are very small as compared to the capacity of the hollow reservoir *a'*, and are in the upper part of said reservoir only, or very near the sleeve *a*, and the entire wall of the reservoir throughout the greater part of its length and to the tip a^2 is solid and imperforate. After filling the reservoir *a'* with ink or marking-fluid the cover or stopper *c'* is slid downward, so as to cover the filling-hole *b*, and then the brush, even when the reservoir *a'* is filled with liquid, may be laid upon its side, as shown in Fig. 2, and no liquid will escape. Even if the brush-head had no separate vent-opening, as *b'*, it might be readily filled by simply dipping it into the liquid, as shown in Fig. 4, until the filling-opening *b* is partly below the level of the liquid, and the liquid will then run in through the lower part of the opening *b* and fill the reservoir *a'*, while the air escapes from said reservoir through the upper part of said opening.

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

1. The brush-head herein described, consisting of a fluid-reservoir having a converging tip of soft india-rubber or equivalent soft elastic material, with an opening in its end, and a filling-opening, *b*, near the upper end of the fluid-reservoir, the side walls of the reservoir and tip being entirely imperforate below said filling-opening and for the greater part of their length, substantially as herein described.

2. The brush-head A, comprising a reservoir, *a'*, and a converging tip, a^2, which is of soft india-rubber or equivalent soft elastic material, having an opening in its end, the reservoir having near its upper end a filling-opening, *b*, and having its side wall below said opening and for the greater part of the length of the reservoir entirely imperforate, and a cover or stopper for closing such opening *b*, to prevent leakage from the reservoir when the brush-head is laid on its side, substantially as herein described.

3. The brush-head herein described, having a reservoir, *a'*, with the filling and vent openings *b b'* in its upper portion, and the converging tip a^2, of soft india-rubber or equivalent soft elastic material, which has an outlet-opening in its end, the wall of the reservoir and tip below the filling and vent openings and to the tip-opening being imperforate, and the cover or stopper for the filling-opening, substantially as herein described.

STEPHEN S. HARMAN.

Witnesses:
C. HALL,
HENRY J. MCBRIDE.