

G. WADSWORTH & J. F. SMITH.
Brush.

No. 222,166.

Patented Dec. 2, 1879.

Fig. 1.

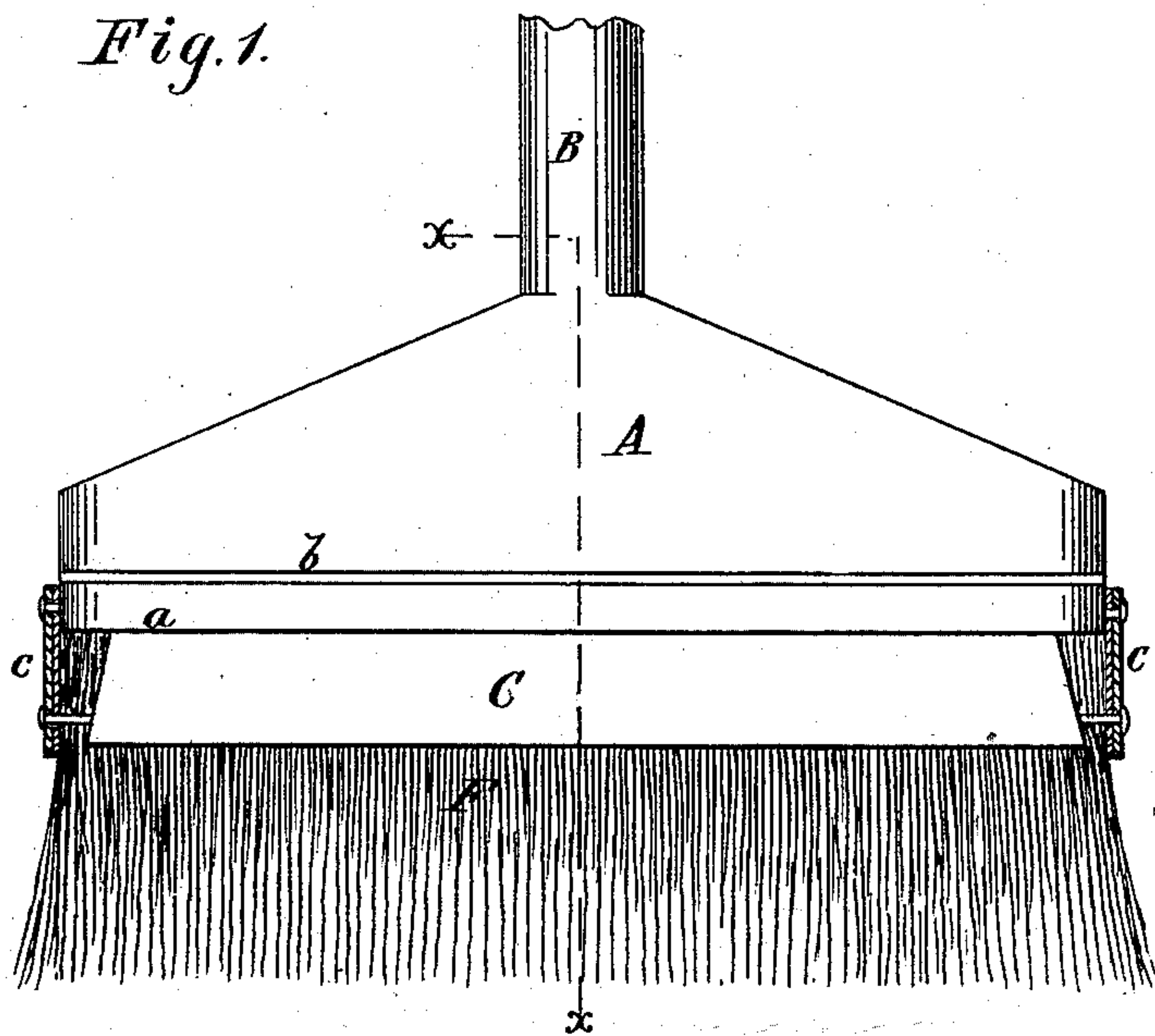
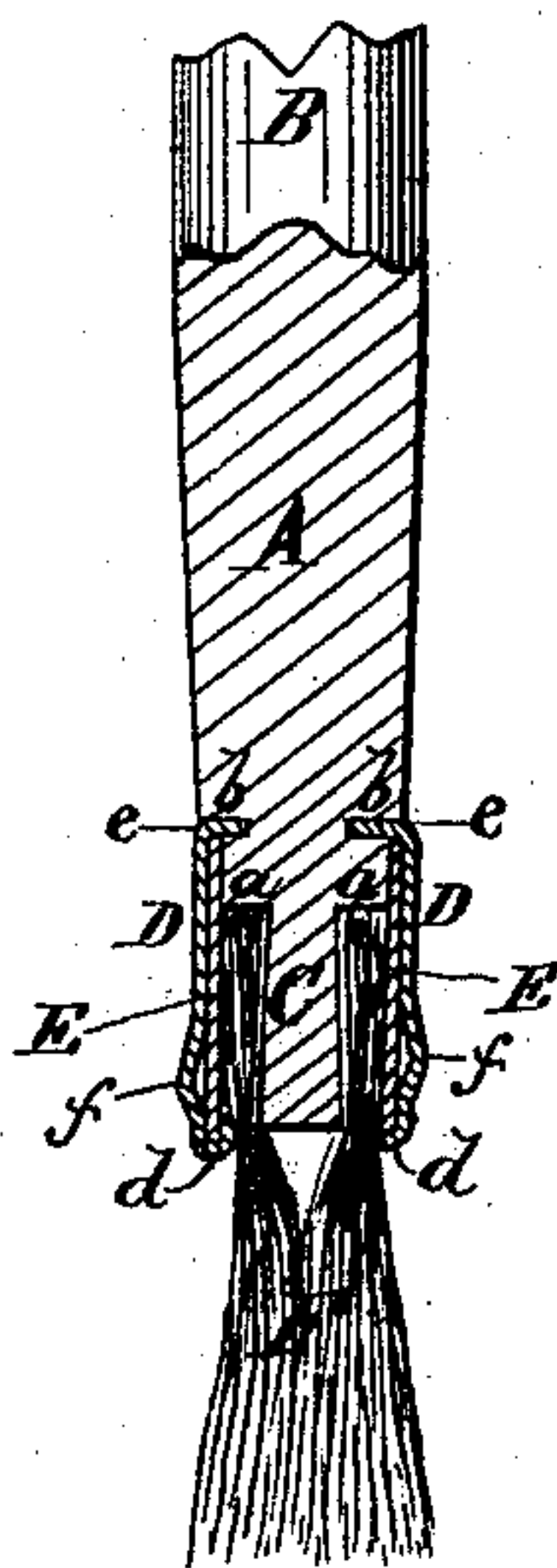


Fig. 2.



WITNESSES:

Henry N. Miller
C. Sedgwick

INVENTOR:

G. Wadsworth
J. F. Smith
BY *Mum & Co.*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

GEORGE WADSWORTH, OF BOSTON, MASS., AND JOSEPH F. SMITH, OF NEW YORK, N. Y.; SAID WADSWORTH ASSIGNOR TO SAID SMITH.

IMPROVEMENT IN BRUSHES.

Specification forming part of Letters Patent No. **222,166**, dated December 2, 1879; application filed September 16, 1879.

To all whom it may concern:

Be it known that we, GEORGE WADSWORTH, of Boston, in the county of Suffolk and State of Massachusetts, and JOSEPH F. SMITH, of New York, in the county and State of New York, have invented a new and useful Improvement in Brushes, of which the following is a specification.

Our invention relates to an improvement in the class of bristle-brushes such as are used for painting, whitewashing, &c.; and it consists in the construction and arrangement of parts as hereinafter described, whereby the bristles are firmly secured to the stock or head, and a superior brush produced economically.

It consists in providing the stock with a dovetailed core, along which the butts of the bristles are laid and secured by wooden strips on each side held under a metal ferrule securely fastened to the core outside of the bristles.

In the accompanying drawings, Figure 1 is a sectional side elevation of my improvement in brushes, and Fig. 2 is a vertical cross-section of Fig. 1 on line *x x*.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A is the flat stock of the brush provided with a handle, B, and having on its bottom edge a dovetailed projection, C, forming the core. Above the shoulders *a a* grooves *b* are made in the sides of the stock.

D is the ferrule made in two parts, which are joined at the ends of the core by lapping the edges and fastening them together with nails driven into the core, as shown at *c c*.

Wooden strips E are placed between the metal plates D and the butts of the bristles for the purpose of securing the latter more firmly, since the said strips are elastic and contribute to the elastic pressure on the bristles, particularly at the corner of core C, besides forming a better friction-surface than the metal. They do not require to be nailed to the core C, and hence may be easily and quickly attached or detached. This facility of attachment and detachment, coupled with the facts that the core C does not require to be perforated nor the bristles to be secured thus by means of nails or cord, greatly economizes the labor of constructing the brush as compared with others of its class.

Lips *d* are formed on the lower edges of the

plates D, which, together with the angular lateral projection of the core C, hold the strips E in place.

The upper edges of the sides of the ferrule are turned over inwardly at right angles, forming flanges *e e*, which are adapted to be fitted into the grooves *b b*. A bead or rib, *f*, is struck outwardly in the sides of the ferrule to give stiffness to the sides.

The manner of operating our invention is as follows: The butts of the bristles F are laid along the sides of the dovetailed projection C and around the ends thereof, with their extreme ends abutted against the shoulders *a*, as shown in the drawings. When they have been laid into the proper thickness the ferrule is put in place with the wooden strips against the bristles, and the lips *d* compressing the bristles against the broad edges of the dovetail, and the flanges *e e* in the grooves *b*, and when the two parts of the ferrule have been pressed up against the bristles with sufficient force, the ends are joined together and nailed to the core, as before described.

By the construction and arrangement of parts above described, we produce cheaply a brush whose bristles are held very securely by the coaction of the angles of the core C, the elastic metallic plates D and elastic wooden strips E.

We do not claim, broadly, the use of elastic metallic plates for this purpose, and we are aware a brush has been provided with a core having inclined sides, but not with the acute angle of ours.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

In a brush, the combination, with the wooden core C, having an acute angle at its lower edge, of the elastic metallic side plates, D D, constituting the ferrule, and the wooden strips E E, which are placed between said plates and core, as shown and described, for the purpose specified.

GEORGE WADSWORTH.
JOSEPH F. SMITH.

Witnesses for G. Wadsworth:

ARMAND DÉPATIE,
ANTOINE LABONTÉ.

Witnesses for J. F. Smith:

W. C. DONN,
C. SEDGWICK.