

I. SMITH.

Holders for Brushes, Mops, &c.

No. 138,946.

Patented May 13, 1873.

Fig. 1.

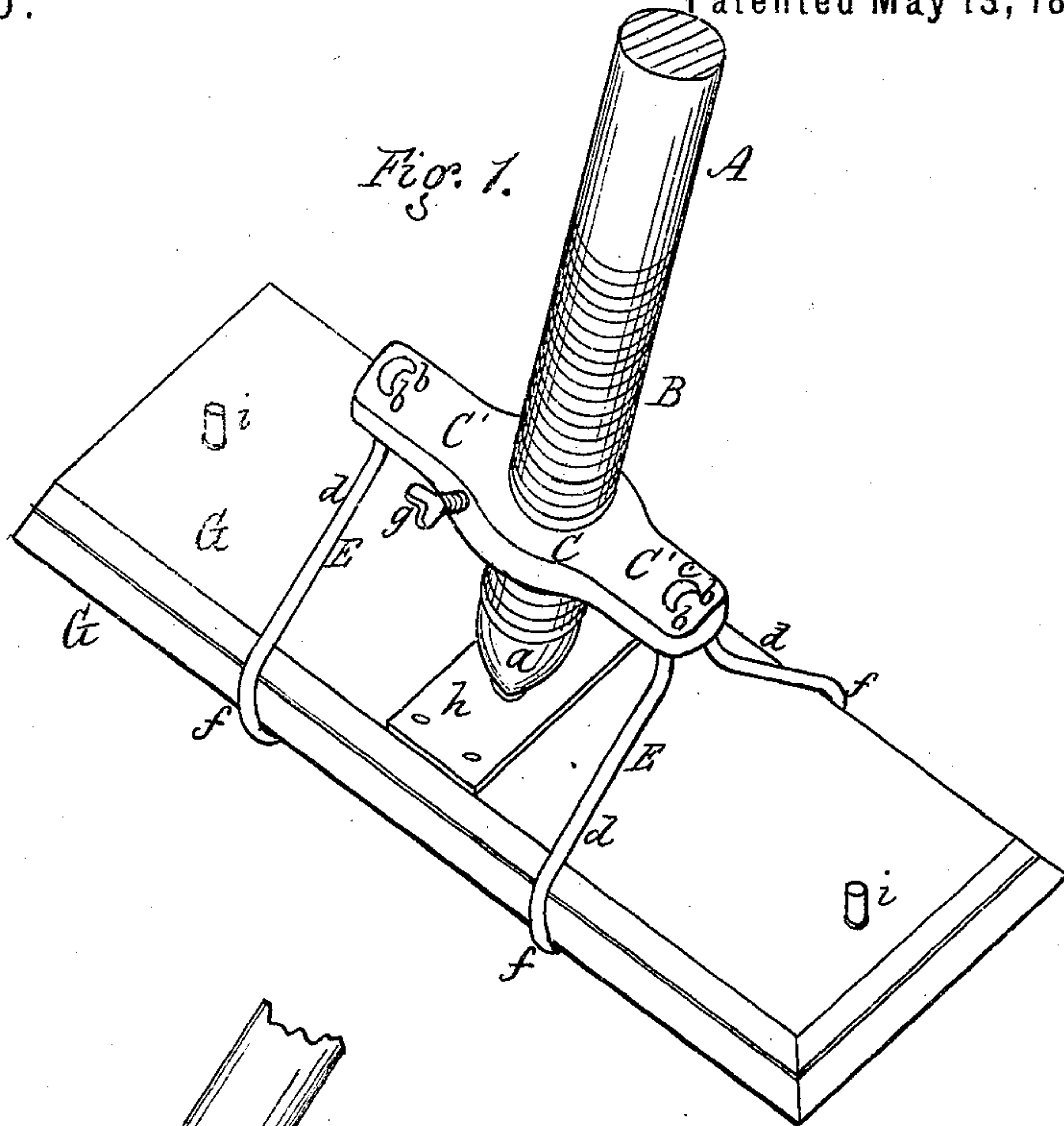


Fig. 2.

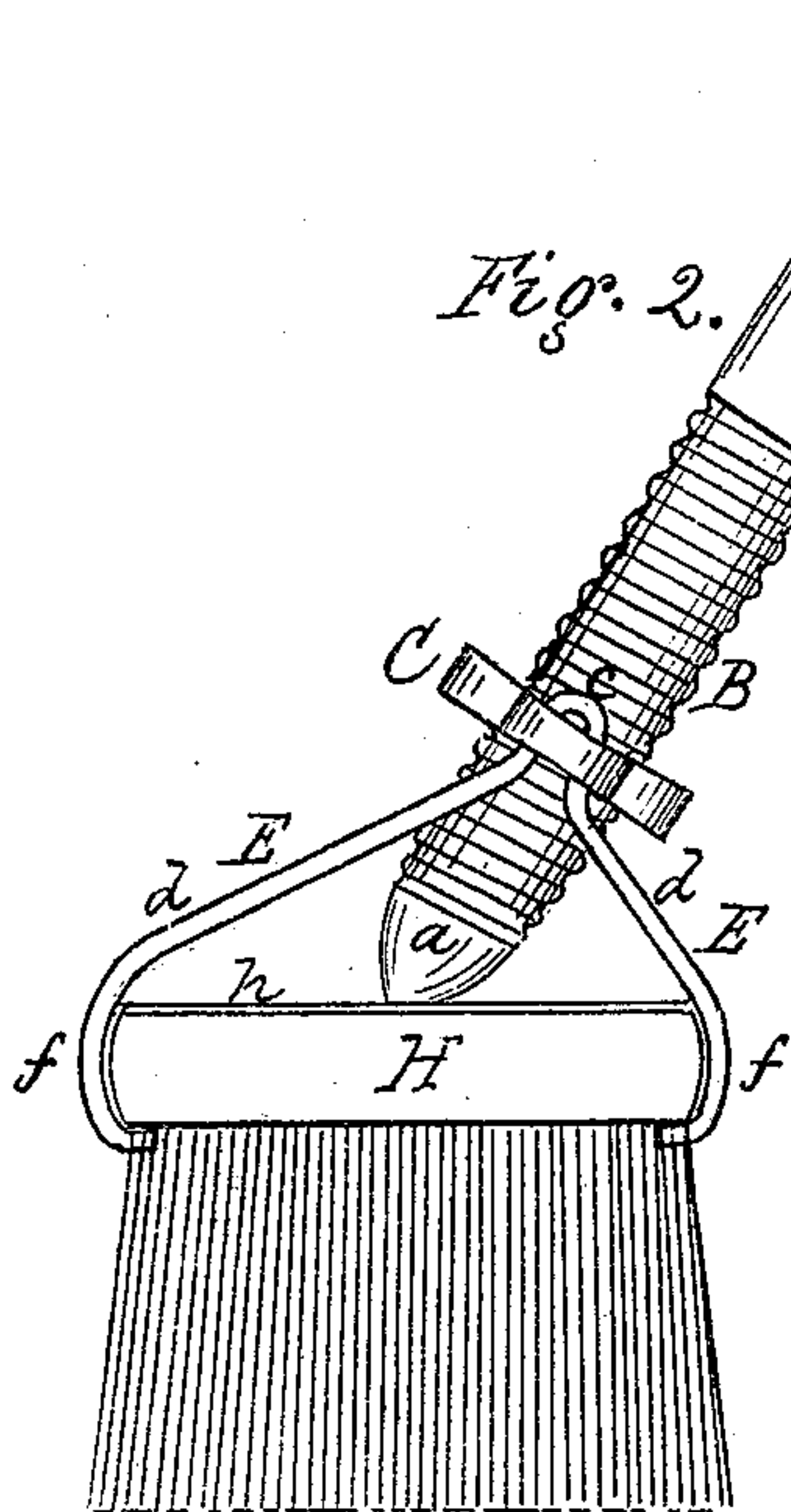
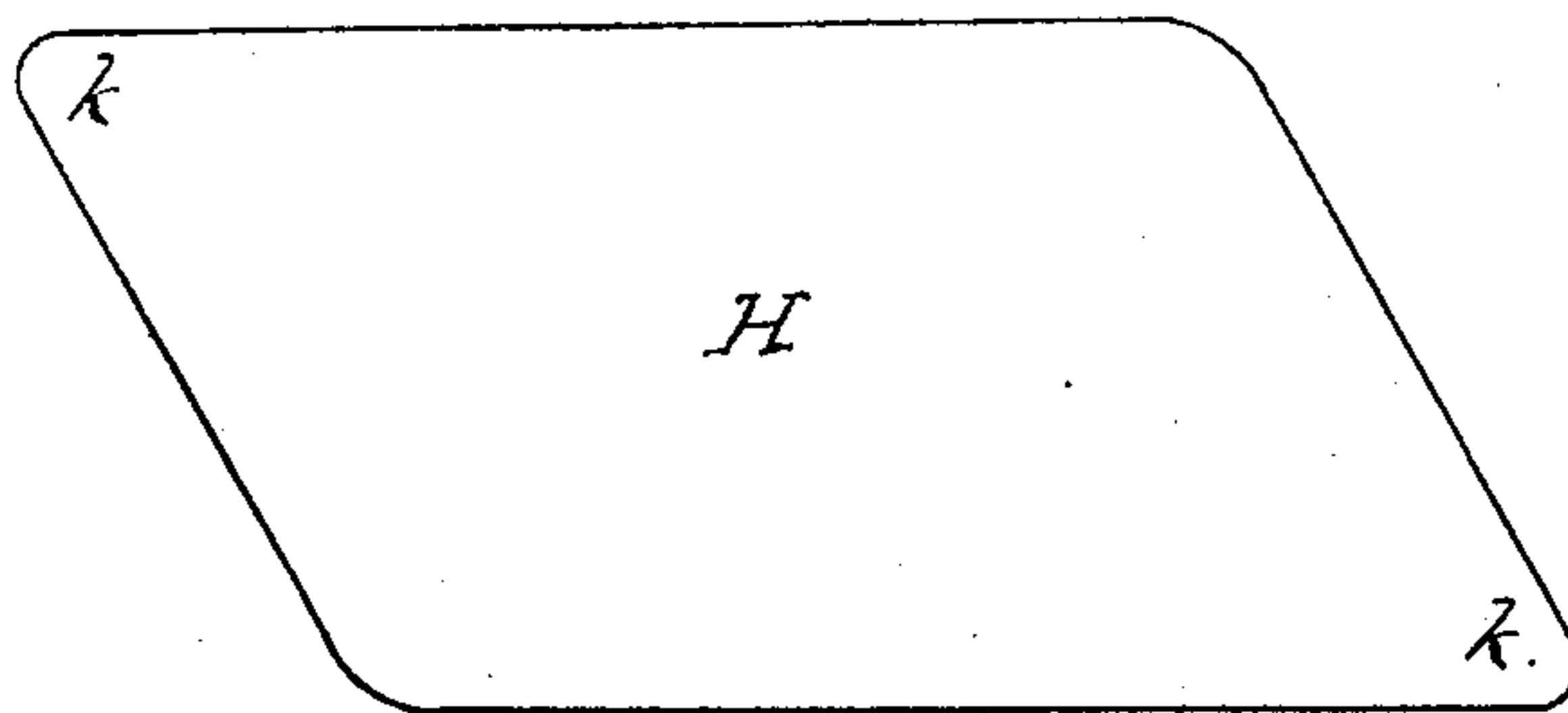


Fig. 3.



Witnesses.

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## IMPROVEMENT IN HOLDERS FOR BRUSHES, MOPS, &c.

Specification forming part of Letters Patent No. **138,946**, dated May 13, 1873; application filed March 6, 1873.

*To all whom it may concern:*

Be it known that I, ISRAEL SMITH, of the city of Rochester, in the county of Monroe, and State of New York, have invented a certain new and useful Improvement in Holders for Brushes, Mops, &c.; and I do hereby declare that the following is a full, clear and exact description of the construction and operation of the same.

In my improvement the end of the screw is formed with a conical bearing end which pinches upon the top of the brush, or mop, to tighten the holder in place, thereby avoiding extra attachments such as are generally used. The ends of the clamping-wires are also attached to the cross-head by looping through double holes of the latter, thereby saving riveting in place, which is usually done. I also employ a set screw passing through the cross-head, and tightening upon the screw to prevent turning of the cross-head upon the screw.

In the drawing, Figure 1 is a perspective view of a mop-head with my improvement applied; Fig. 2, an end elevation of a brush with my improvement applied; Fig. 3, a plan of one form of brush.

A represents the handle; B, the operating-screw; C, the cross-head; and E E, the clamping-wires. The screw B is a hollow socket riveted or otherwise secured fast to the end of the handle. It is threaded upon the outside, and has a plain conical point, *a*, which pinches upon the device to be held, as will presently be described. The cross-head C is of ordinary form, having a central threaded socket for running upon the screw, and extensions C' C' on either side for the attachment of the clamping-wires. It has double holes *b b* at either end for the passage of the wires. The clamping-wires E E are each made in a single piece, the ends first being passed through the holes *b b* of the cross-head, leaving thereby the loop *c*, and then spread in straight lengths, *d d*, and bent at the extremities to form hooks *f f*, which clasp the brush, mop, or other device which is to be held. The rear length is made shorter than the front length, so that when attached the handle will stand at the proper incline, as shown in Fig. 2. A threaded hole is cut through the

socket of the cross-head on one side, in which is inserted a thumb-screw, *g*, for the purpose of clamping the cross-head to the operating-screw at any given position, and thereby prevent the turning of the cross-head by the leverage that might occur from the use of a long mop or brush. A strip, *h*, of tin or sheet-metal, is secured on top the mop or brush, to receive the pressure of the operating-screw. The mop-head consists of two clamps G G, as shown in Fig. 1. The edges are made beveled or rounded to allow the hooks of the clamping-wires to pass endwise over them, and the bottom clamp is provided with pins *i i* on which the upper clamp slides. The mop-stuff is simply secured between the clamps. The brush H may be of ordinary form, or it may be made, as shown in Fig. 3, in the form of a rhomboid, the projecting ends *k k*, being armed with brushes on the under side, as well as the center. This form is especially adapted to cleaning windows, as the ends *k* will fit closely into the angles of the sash in going up or down, and on opposite sides. For this purpose, it is much superior to the ordinary rectangular brush, or a half-circular one.

The operation of the improvement is as follows: The operating-screw being loosened or turned back, the clamping-wires are slipped endwise over the mop or brush to the proper position. The operating-screw is then turned down till the conical point *a* strikes the plate *h*, when the tightening of the screw upon the back of the device will draw up the clamping-wires and thus clasp the mop or brush firmly in place. When fixed in position, the thumb-screw *g* is turned in to clamp the cross-head to the operating-screw, which it does by striking between the threads, thereby preventing the cross-head from unturning, as before described.

One feature of novelty is the conical point, *a*, on the end of the operating-screw; another is the clamping action produced by the end of the screw striking directly upon the back of the mop or brush. By this means an intermediate follower or plate is avoided between the end of the screw and the brush, which is usually employed to act upon the clamping-wires; another is that a drawing strain is produced upon the wires, as shown

in Fig. 1; whereas, in ordinary holders the follower which is used has a tendency to bend the wires down, and the amount of holding power is limited to the amount of resistance the wires have to being bent. In mine, this resistance is limited only by the strength of the wires in drawing lengthwise. Another novelty consists in the method of attaching the wires to the cross-head, by bending them double, and passing them through the holes *b b*, and then expanding and bending them to proper shape, thereby avoiding riveting, which is usually done, and which renders the wires liable to loose action or pulling out under great strain. By this means, also, I am enabled to make each of the clamping-wires of a single piece.

This holder may not only be used for mops or brushes, but for any other substances to which it could be adapted.

Having thus fully described my invention, what I claim as new is—

The mop or brush-holder, consisting of the screw *B*, cross-head *C*, and clamping-wires *E* *E*, when said screw has a conical point *a*, to bear direct upon the back of the device to be held, and said clamping-wires are made each of a single piece and looped through double holes of the cross-head, said holder being used either with or without the set screw *g*, all as herein shown and described.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

ISRAEL SMITH.

Witnesses:

R. F. OSGOOD,

WILLIAM C. BAINE.