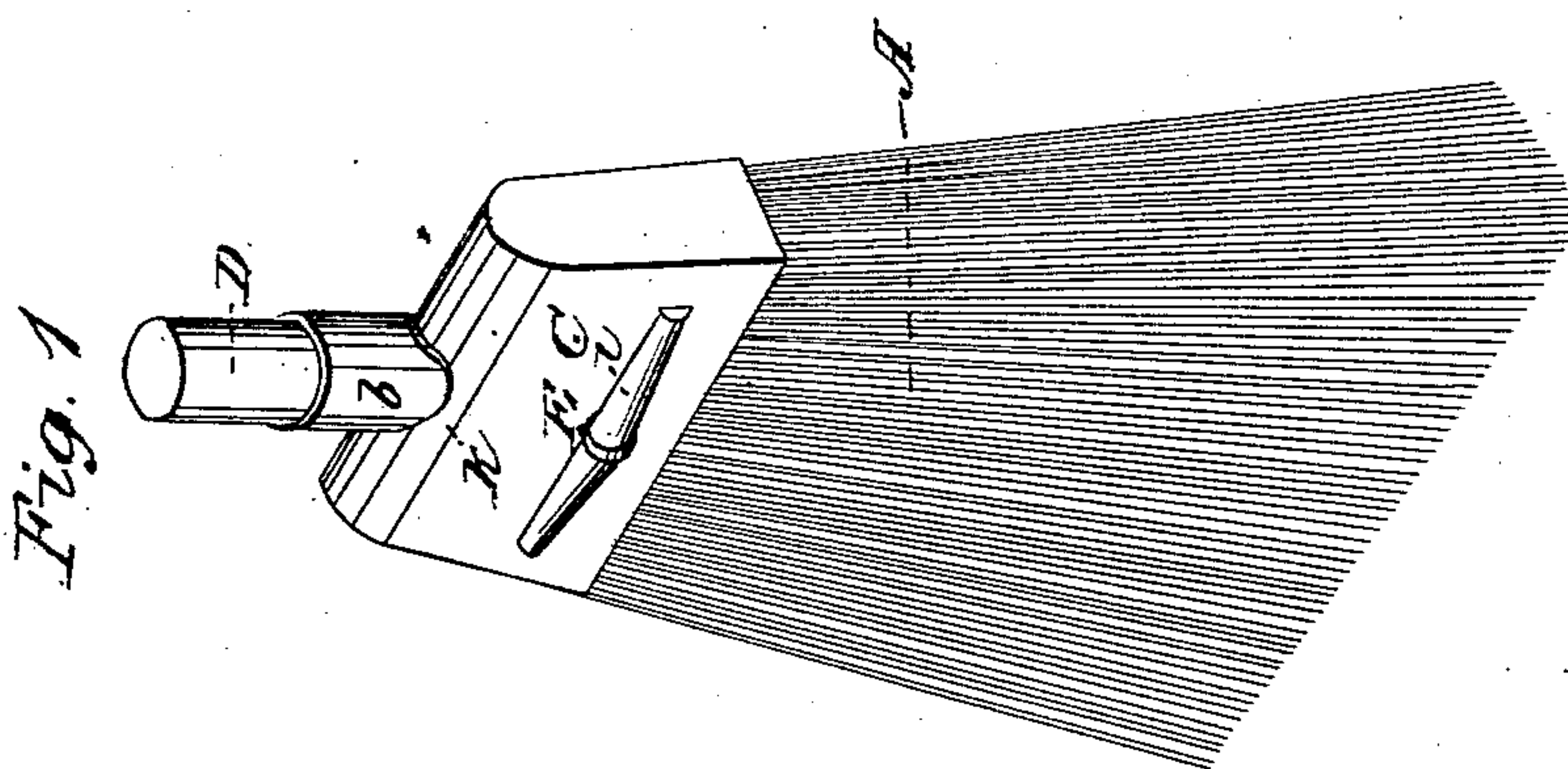
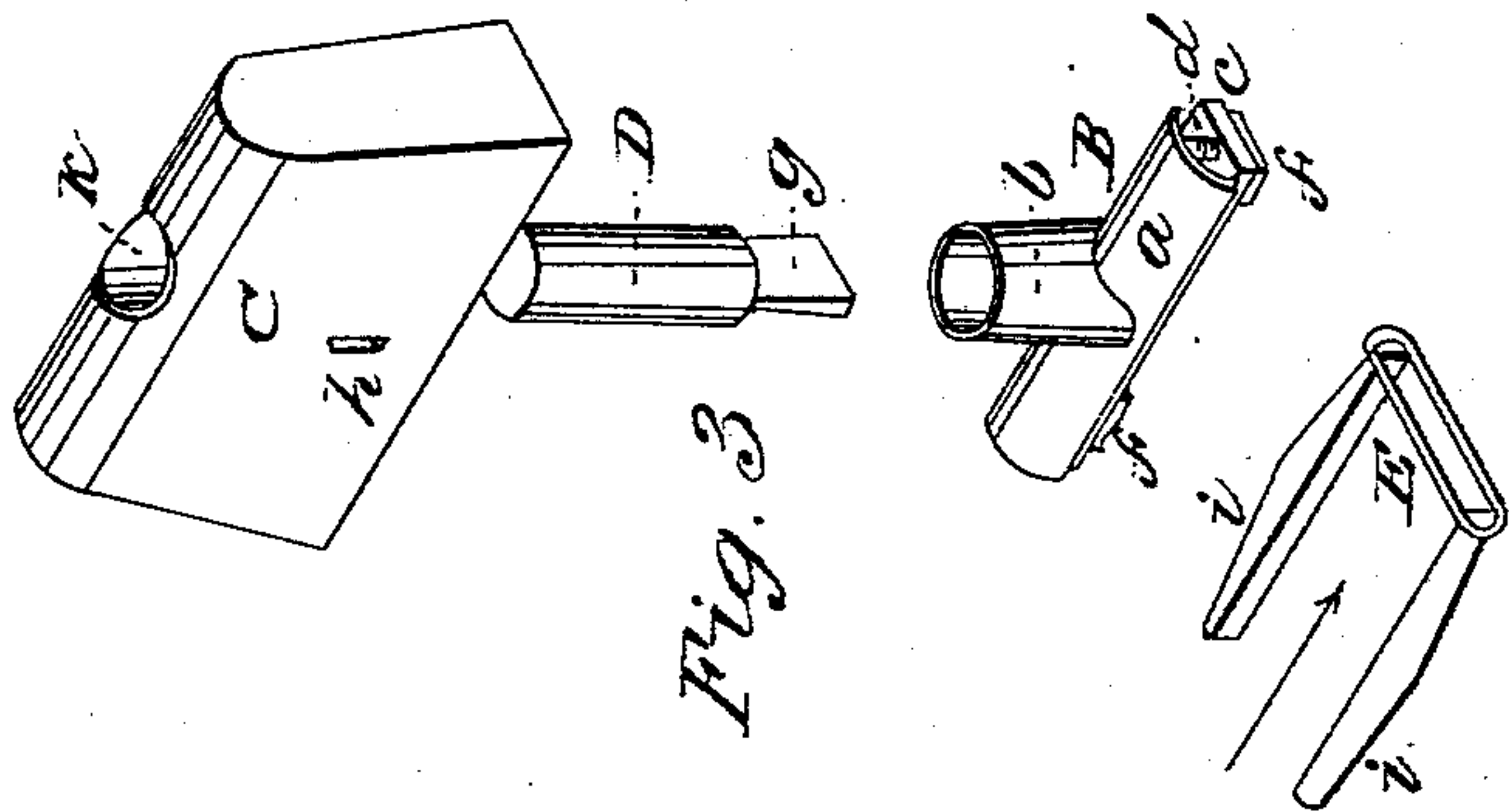
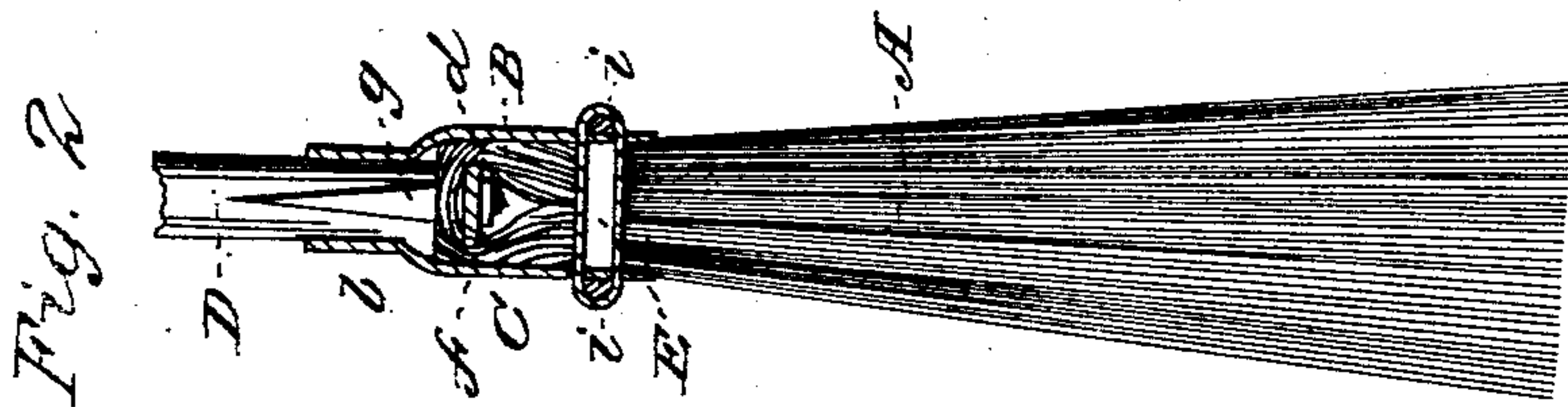


J. M. HOTALING.

Broom Head.

No. 61,621.

Patented Jan. 29, 1867.



Witnesses:  
J. A. Davis  
R. F. Osgood

Inventor:  
J. M. Hotaling  
By J. Fraser & Co  
Attys



# United States Patent Office.

J. M. HOTALING, OF WATERPORT, NEW YORK.

*Letters Patent No. 61,621, dated January 29, 1867.*

## IMPROVED BROOM HEAD.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, J. M. HOTALING, of Waterport, in the county of Orleans, and State of New York, have invented a new and useful improvement in Broom Heads; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a perspective view of my improved broom head.

Figure 2, a central vertical transverse section.

Figure 3, a perspective view of the connecting parts detached.

Like letters of reference indicate corresponding parts in all the figures.

My improvement belongs to the class of removable broom heads. The invention consists in an improved clamping arrangement for the broom corn, having a socket in which the handle is wedged, to hold it in place, when the said device is used in combination with a removable enclosing envelope, and with a link passing transversely through, and held by clamping keys on opposite sides.

As represented in the drawings, A is the broom proper, B the clamp, C the envelope, and D the handle. The clamp is made up of an arched or convex plate, *a*, with a socket, *b*, forming a part of it, and a bar, *c*, beneath, secured to the plate by screws, *d d*, and nuts, *f f*, at the ends. The but ends of the broom corn are placed between the plate and bar, which are screwed up tight, to hold the material firmly in place. The socket *b* is preferably made a little enlarged at its bottom, and the end of the handle D fitting therein has a wedge, *g*, inserted in the under side, as shown, which expands the said end within the socket, and thus retains it firmly in place. The envelope C is made of tin, of ordinary form; but instead of being fast to the handle, as usual, it has a hole, *k*, at the top, and slips over the socket *b*, and rests closely on top the plate *a*, enclosing the upper end of the broom, as shown in fig. 1. At a suitable central position beneath the clamp, slots, *h h*, are made in the sides of the envelope, and in these is inserted a link, E, passing through the broom, and projecting sufficiently on opposite sides to receive wedging keys, *i i*, which, by being of considerable length, serve as auxiliary clamps, to clamp the sides of the envelope against the broom below the main clamp. In ordinary removable brooms the socket to which the handle is attached forms a part of the envelope itself, and the broom corn is simply inserted in the envelope, and secured there by points projecting through, or by some clamping device, only clamping the lower edges of the envelope up against the corn. In such arrangements, owing to the great leverage and constant strain, and that the extreme upper end of the corn is not held firmly, either the broom stuff will work out, or the envelope will give way. I obviate this difficulty by making the attachment for the broom stuff, and the enclosing envelope in two separate parts, the first holding the material much more securely than the latter could possibly do, while the latter itself covers the whole, to shield it and retain the material in place. At the same time the envelope adds that degree of strength and stiffness which is necessary to make its lower edge the fulcrum for the leverage of the fibres in action; and this effect is greatly enhanced by the employment of the link E and the clamping keys *i i* on opposite sides. These bind firmly around the lower edge of the tin, (corresponding somewhat with the clamping device used alone in other brooms,) and stiffen at that particular point where it is necessary to resist the leverage. This clamp is intended to be only auxiliary to the clamp B, which holds the broom stiff and receives the strain from the handle.

The special construction and arrangement of the connecting parts, as before described, also secures some advantages not mentioned above. When the handle is expanded in the socket by the wedge *g* it cannot be drawn out; nor can the wedge work down below, since it rests against the broom stuff and the bar *c*. Therefore the handle cannot be detached by accident unless broken. When it is desired to remove it, the bar *c* can be unscrewed and the wedge drawn out. It will also be noticed that the envelope cannot be raised up out of its place, since the link E passes through beneath the clamp B, which forms a stop to it. Thus the parts are all mutually bound together. The making of the socket *b* a part of the clamp, instead of a part of the envelope, insures its being made much stronger, since this part is of iron, while the other is tin. The great strength of the clamp B will insure its lasting for years; and as the strain is removed, in a great degree, from the envelope, this too will be very enduring, and will not become bent and disfigured by use.

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

The combination and arrangement of the clamp B, envelope C, link E, and keys *i*, with the handle D and broom A, as herein set forth, the whole operating in the manner and for the purpose specified.

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

J. M. HOTALING.

Witnesses:

R. F. OSGOOD,

J. A. DAVIS.