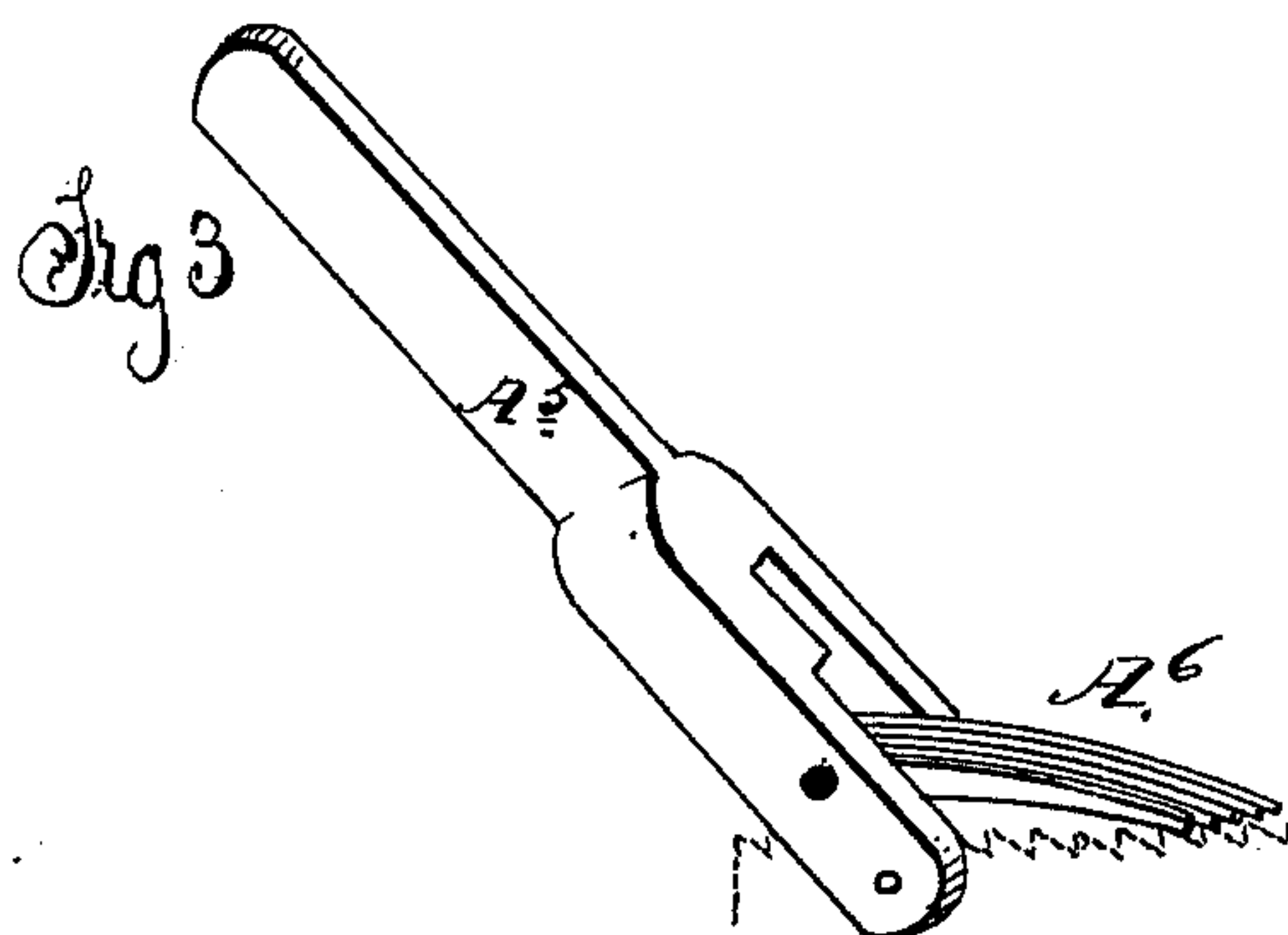
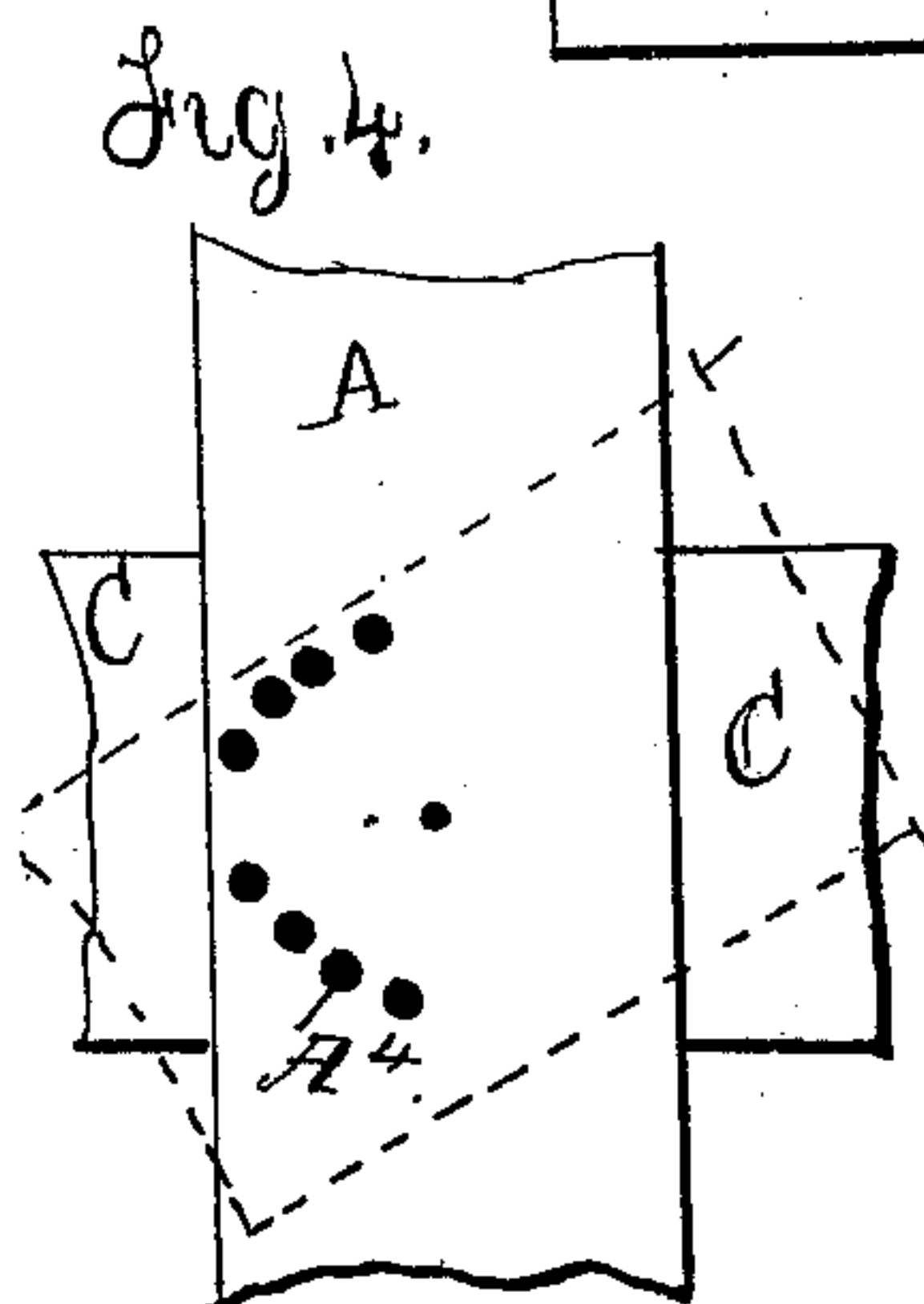
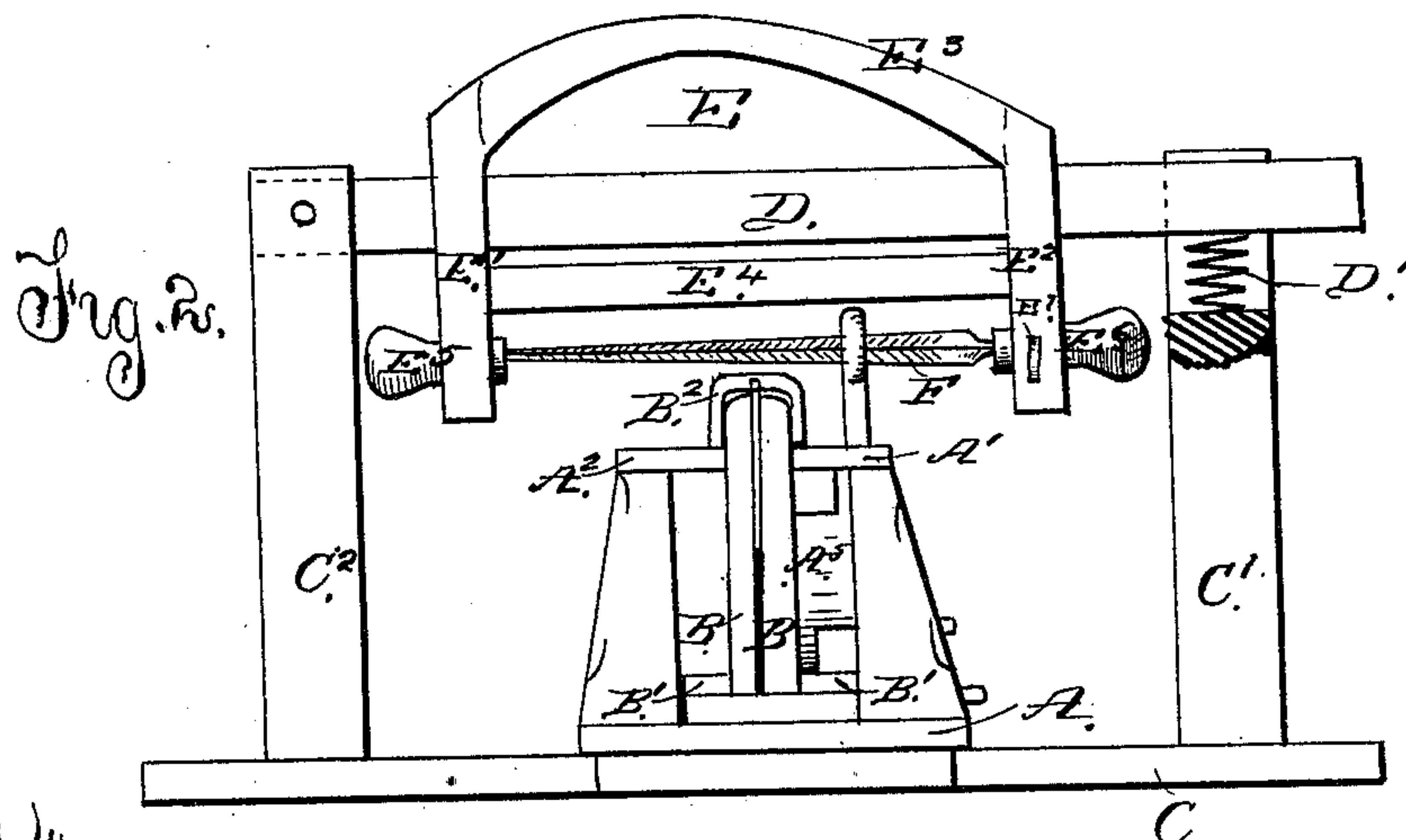
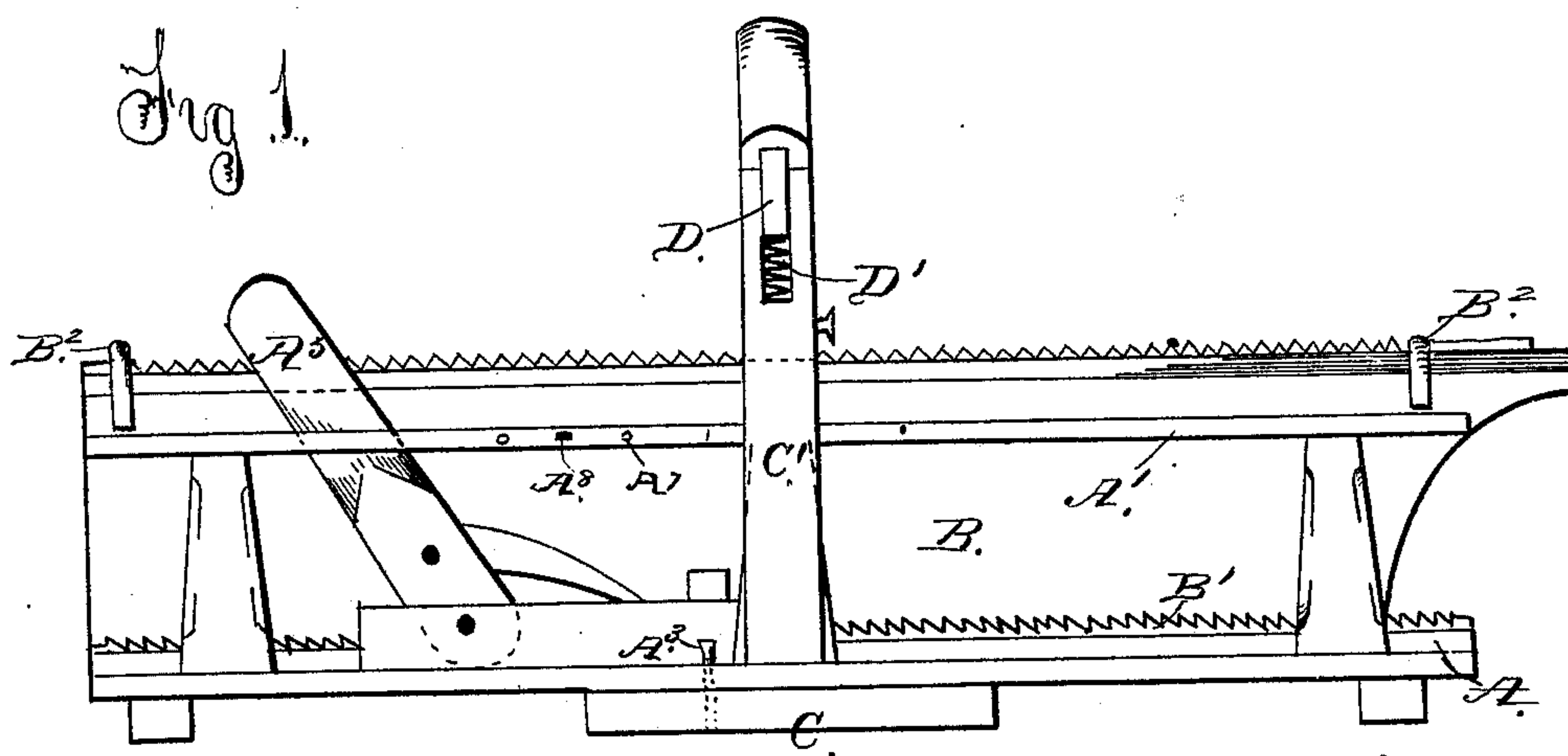


T. L. NANNEY.  
Saw-Filing Machine.  
No. 213,925. Patented April 1, 1879.

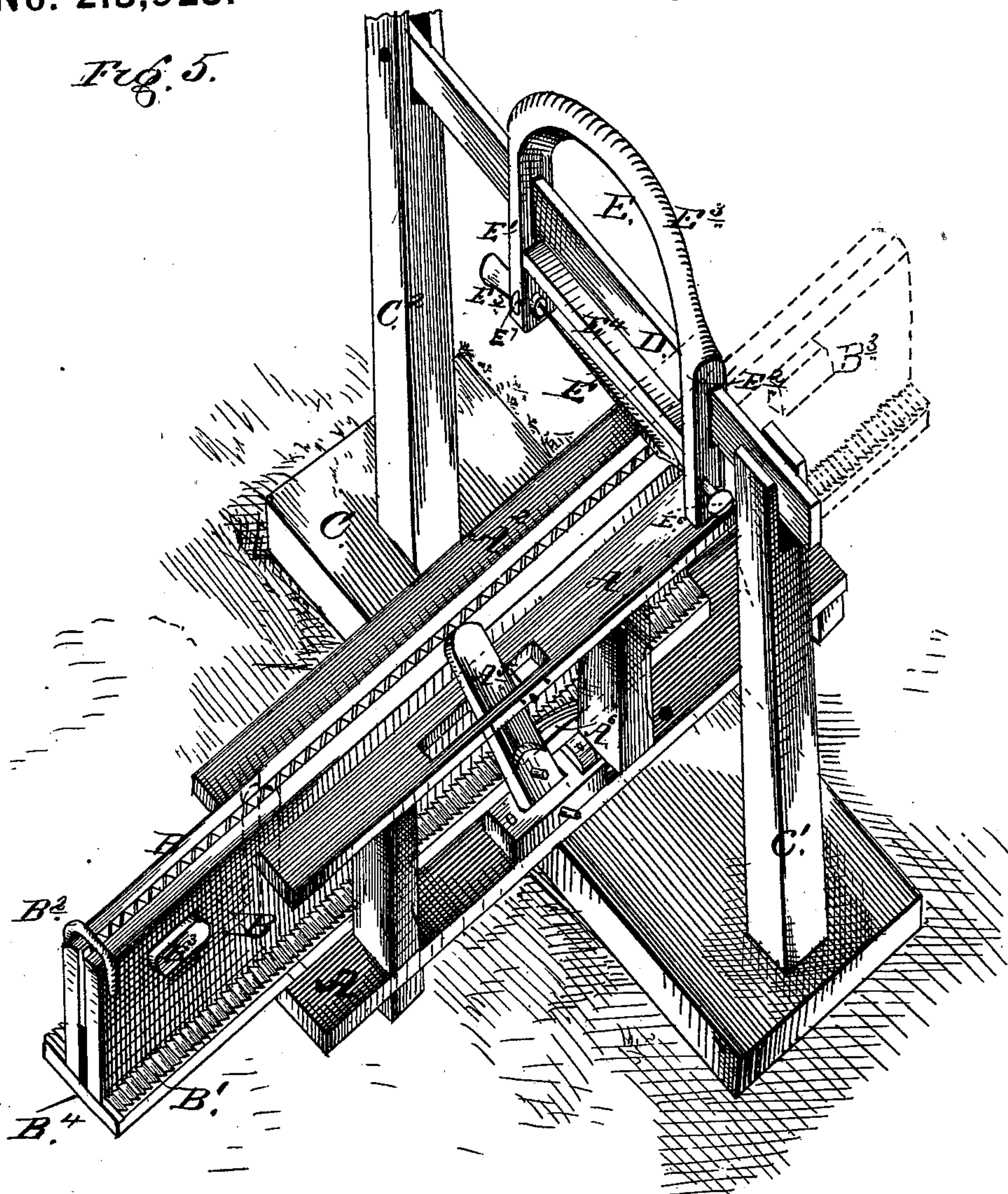


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Fig. 5.



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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN SAW-FILING MACHINES.

Specification forming part of Letters Patent No. **213,925**, dated April 1, 1879; application filed April 25, 1878.

*To all whom it may concern:*

Be it known that I, THOMAS L. NANNEY, of Evansville, in the county of Vanderburg and State of Indiana, have invented certain new and useful Improvements in Saw-Sharpeners; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide a simple and compact device for sharpening or filing the teeth of saws; and the nature of my invention will be pointed out in the claim.

In the accompanying drawings, in which similar letters of reference indicate corresponding parts, Figure 1 is a side view of my device. Fig. 2 is an end view, showing spring in standard. Fig. 3 represents the pawl and lever. Fig. 4 is a bottom view, showing holes A<sup>4</sup>. Fig. 5 is a perspective view of my device.

A is a frame or table, having secured to its sides upright clamp-guides A<sup>1</sup> A<sup>2</sup>. Between these clamp-guides are placed the saw-clamps B B, said clamps being firmly secured at their bottom sides to the clamp-base B<sup>4</sup>, so that their upper sides will have a tendency to spring together; and when it is desired to place a saw between the clamps the same are slightly sprung apart to admit the saw. Said clamp-base B<sup>4</sup> projects beyond the sides of clamps B B, and said projection having secured thereon (on either side) the racks or ratchet B<sup>1</sup> B<sup>1</sup>.

When the saw to be filed is placed between the clamps B B, fastenings B<sup>2</sup> B<sup>2</sup> are adjusted to the tops of clamps B B, to hold the clamps firmly together and against the saw. Frame A is pivoted at its bottom to the main frame C, said frame C having standards C<sup>1</sup> C<sup>2</sup> secured thereto, as shown. The tops of these standards are mortised to receive arm D.

One end of said arm D is pivoted to standard C<sup>2</sup>. The other end is free, and thus operates in the mortise in the top of standard C<sup>1</sup>, where the arm rests upon a spring, D<sup>1</sup>, for the purpose hereinafter expressed.

File-holder E is preferably made or formed by two side pieces, E<sup>1</sup> E<sup>2</sup>, joined together at

their top by the hand-hold E<sup>3</sup>, and near their bottom by stay E<sup>4</sup>. In the bottom of side piece E<sup>1</sup> is secured a bearing, E<sup>5</sup>, in which the point or small end of the file is placed; and also in the bottom of side piece E<sup>2</sup> is placed an adjustable bearing, E<sup>6</sup>, in which is placed the larger end of file F. Bearing E<sup>6</sup> is adjusted to the different lengths of the files that may be placed in the holder, and when adjusted is fastened by thumb-screw E<sup>7</sup>.

Sides E<sup>1</sup> E<sup>2</sup> have openings mortised through them, through which arm D is passed. Then the file-holder, carrying the file, is glided to and fro by the hand resting on hand-hold E<sup>3</sup>.

It will be seen that the construction above described brings the reciprocating file (in its holder) immediately above the saw in the clamps, and in a direction transverse to the saw. Now, to secure any desired angle of the file to the saw-teeth for the purpose of filing the different angles of the same, frame A, operating upon its bottom central pivot, may be turned at any angle desired, and secured at that angle by placing a small bolt, A<sup>3</sup>, through bolt-hole A<sup>4</sup> in frame A, the lower end of the bolt also passing into one of the series of bolt-holes C<sup>3</sup> in the frame C.

Having secured the saw at the proper angle to the file, the file is then operated by the hand taking hold of the hand-hold E<sup>3</sup> of the file-holder, and gliding the same forward from standards C<sup>2</sup> to C<sup>1</sup>, the spring D<sup>1</sup> being compressed to permit the file to come in contact with the saw-teeth:

In the backward movement of the file the pressure is slightly released from the file-holder, and the spring D<sup>1</sup> bears the arm D upward with the file, thus preventing the file from coming in contact with the teeth of the saw in its backward movement, as it is well known that the teeth of saws should be filed in but one direction—*i. e.*, toward their edge. In this particular it is specially claimed that this device has important advantages over others.

Now, for the purpose of bringing the teeth of the saw under the file consecutively, a hand-lever, A<sup>5</sup>, is used. This hand-lever is pivoted at its lower end to frame A, and thence passes upward through a slot in guide-frame A<sup>1</sup>. Said lever has a pawl, A<sup>6</sup>, pivoted near its lower end, which operates into the rack B<sup>1</sup>.

The saw-clamp B B, with the racks attached, are then glided forward the length of a tooth by means of the lever and pawl. The distance of the movement of the hand-lever may be regulated according to the size of the tooth to be filed by placing a pin or bolt, A<sup>8</sup>, in one of a series of small holes, A<sup>7</sup>, in the guide-frame A, thus stopping the forward movement of the lever at any desired point, or, as before stated, according to the size of the teeth to be filed.

To insure that the pawl may never fail to catch in one of the teeth of the rack when the hand-lever is brought back to its farthest point, the pawl is preferably made of a series of small strips of metal, graduated so that none of them are of the same length, and thus securing that one of the strips will catch in one of the teeth on the rack at any point that the lever A<sup>5</sup> may stop at. It is claimed that this pawl has many advantages over others that have been used.

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

In a saw-filing machine, the file-holder composed of parts E<sup>1</sup>, E<sup>2</sup>, E<sup>3</sup>, and E<sup>4</sup>, in combination with arm D, one end of which is pivoted to standard C<sup>2</sup>, the other end free and made to rest on a spring, D<sup>1</sup>, in standard C<sup>1</sup>, all substantially as described, and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

THOMAS L. NANNEY.

Witnesses:

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