

(No Model.)

E. B. MANLEY.

PLIERS.

No. 370,960.

Patented Oct. 4, 1887.

Fig. 1

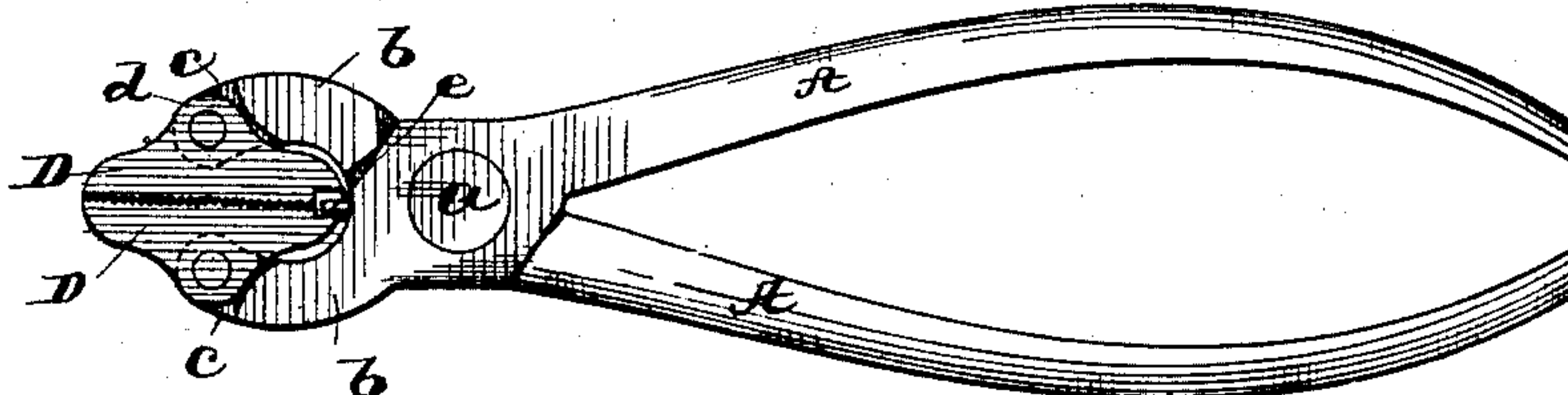


Fig. 2.

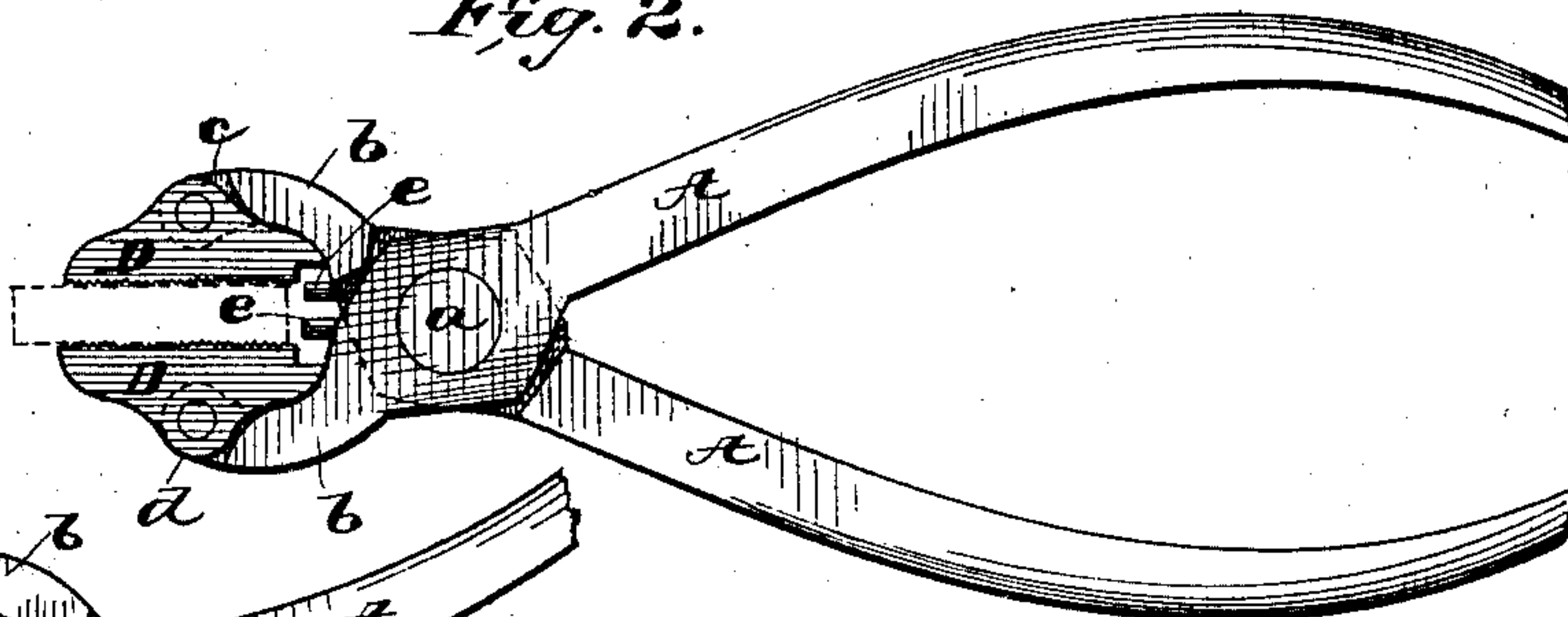


Fig. 7

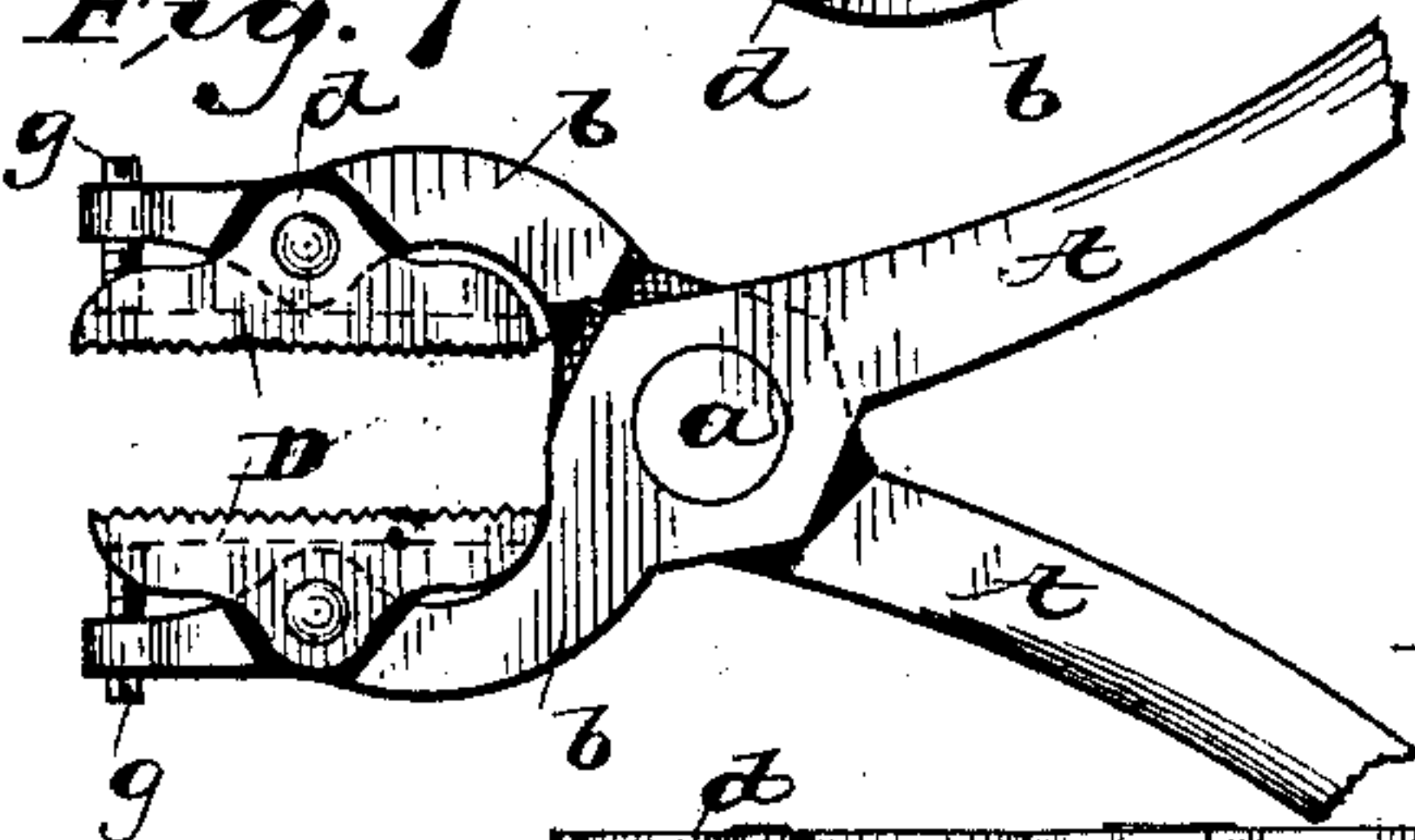


Fig. 3.

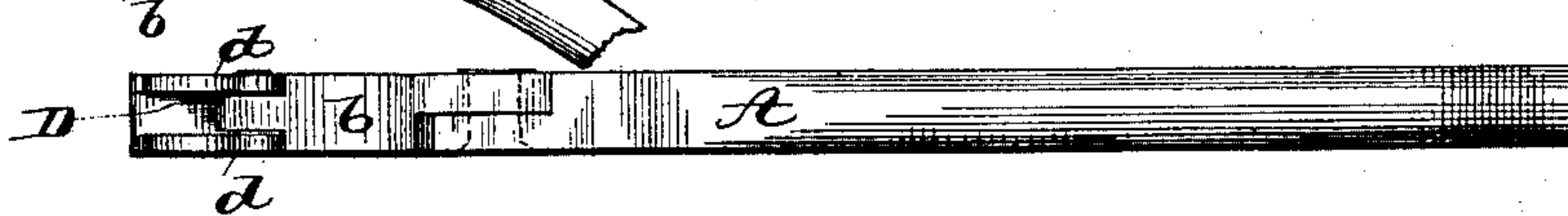


Fig. 4



Fig. 5

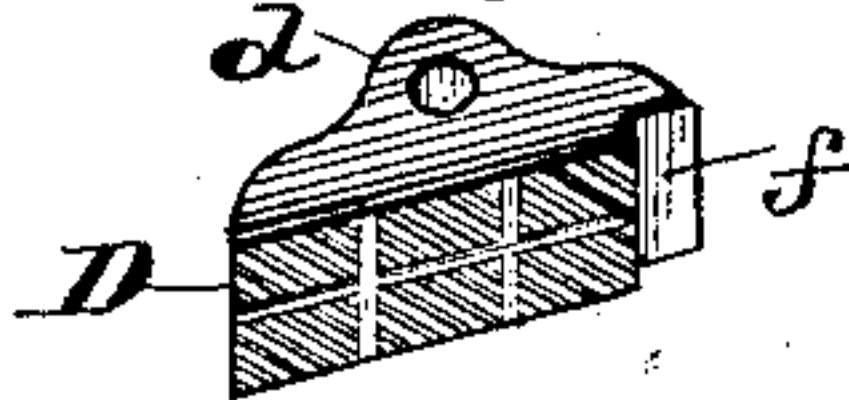
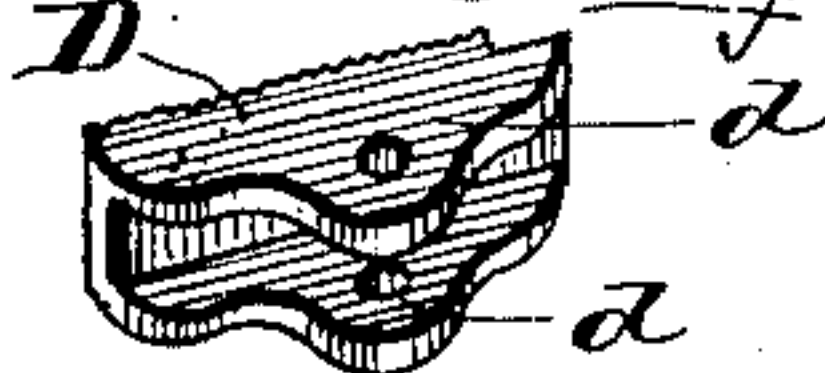


Fig. 6.



Witnesses:

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UNITED STATES PATENT OFFICE.

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PLIERS.

SPECIFICATION forming part of Letters Patent No. 370,960, dated October 4, 1887.

Application filed May 26, 1887. Serial No. 239,454. (No model.)

To all whom it may concern:

Be it known that I, EDWARD B. MANLEY, a citizen of the United States, residing at East Meriden, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Pliers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention is an improvement in pliers; and its object is to furnish a construction which will firmly grasp any shape or form of material.

To this end my improvement consists in certain arrangements and combinations of parts, which will be fully described in the ensuing specification, and distinctly pointed out in the claims at the close thereof.

In order that my invention may be clearly understood, I have illustrated it in the annexed drawings, and will now proceed to describe the same.

Figure 1 represents an elevation of one form of my improved pliers in their closed position. Fig. 2 is a similar view with the jaws open and adjusted to grasp a flat bar. Fig. 3 represents an edge view of the same. Fig. 4 is a perspective view of one arm of the pliers. Figs. 5 and 6 are perspective views of the adjustable jaws. Fig. 7 represents a modified form of my invention.

The same letters of reference indicate identical parts in all the figures.

In the drawings, A A represent the two arms composing the pliers, pivoted together in the usual manner at *a*. The short ends *b* of the arms A are curved in the form of a segment of a circle, and are provided at the end with a tenon, *c*, to which is pivotally connected an adjustable clamping-jaw, D. This adjustable clamping-jaw D may be corrugated on its clamping-face, and is provided on its other face with ears *d d*, by which it is pivoted to the tenon *c*. The self-adjusting jaws are limited in their movement by the pins or studs *e e*, secured one to each arm A A at any convenient point; but I have shown them as secured at a point on a line drawn from the clamping-face of the jaw D to the center of the pivot *a*. In order that the jaws may be

brought firmly together, I have provided them with an offset, *f*, for the reception of the projecting ends of the pins *e e*.

It sometimes may be desirable that the stop limiting the movement of the pivoted jaws shall be adjustable. I secure this by the construction shown in Fig. 7. In this form the adjustable jaws are pivoted in the same manner as heretofore described, but the short ends *b* of the arms A are extended somewhat beyond the pivotal point of the adjustable jaw, and are provided with adjusting-screws *g g* for regulating the amount of movement of the pivoted jaws.

It will be readily observed that by the constructions described I am enabled to grasp articles or material of any shape at any point, either at the points of the jaws or at their rear, and when it becomes necessary to grasp a flat bar, as shown in dotted lines in Fig. 2, the jaws will adjust themselves so as to take hold of the material throughout their entire length.

This construction may be applied to other clamping devices—such as blacksmith's tongs, shoe-maker's pinchers, and other like articles.

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

1. The pliers, substantially as before set forth, consisting of two pivoted parts having long and short arms, clamping-jaws pivoted to the short arms of the pliers, and movable stops for adjusting the same.

2. In a pair of pliers, the combination, substantially as before set forth, of the self-adjusting jaws pivotally connected to the short arms of the pliers, and a stop connected with each of such short arms for limiting the movement of the said jaws.

3. A pair of pliers provided with independently-adjustable clamping-jaws pivotally connected to the short arms of the pliers, and adjusting-screws for limiting the movement of the adjustable jaws, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD B. MANLEY.

Witnesses:

GEO. W. SMITH,
L. H. WILLIAMS.