

(Model.)

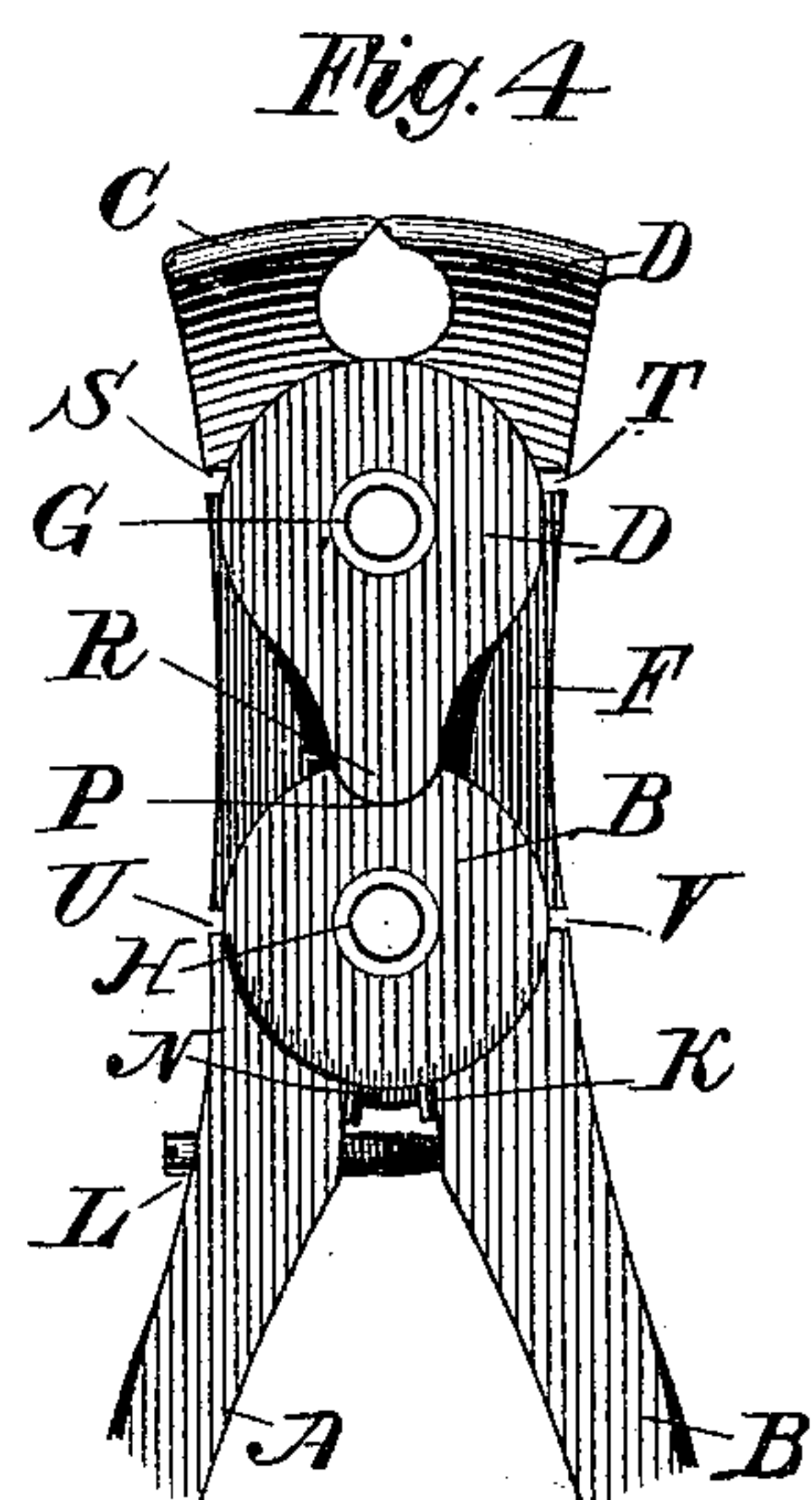
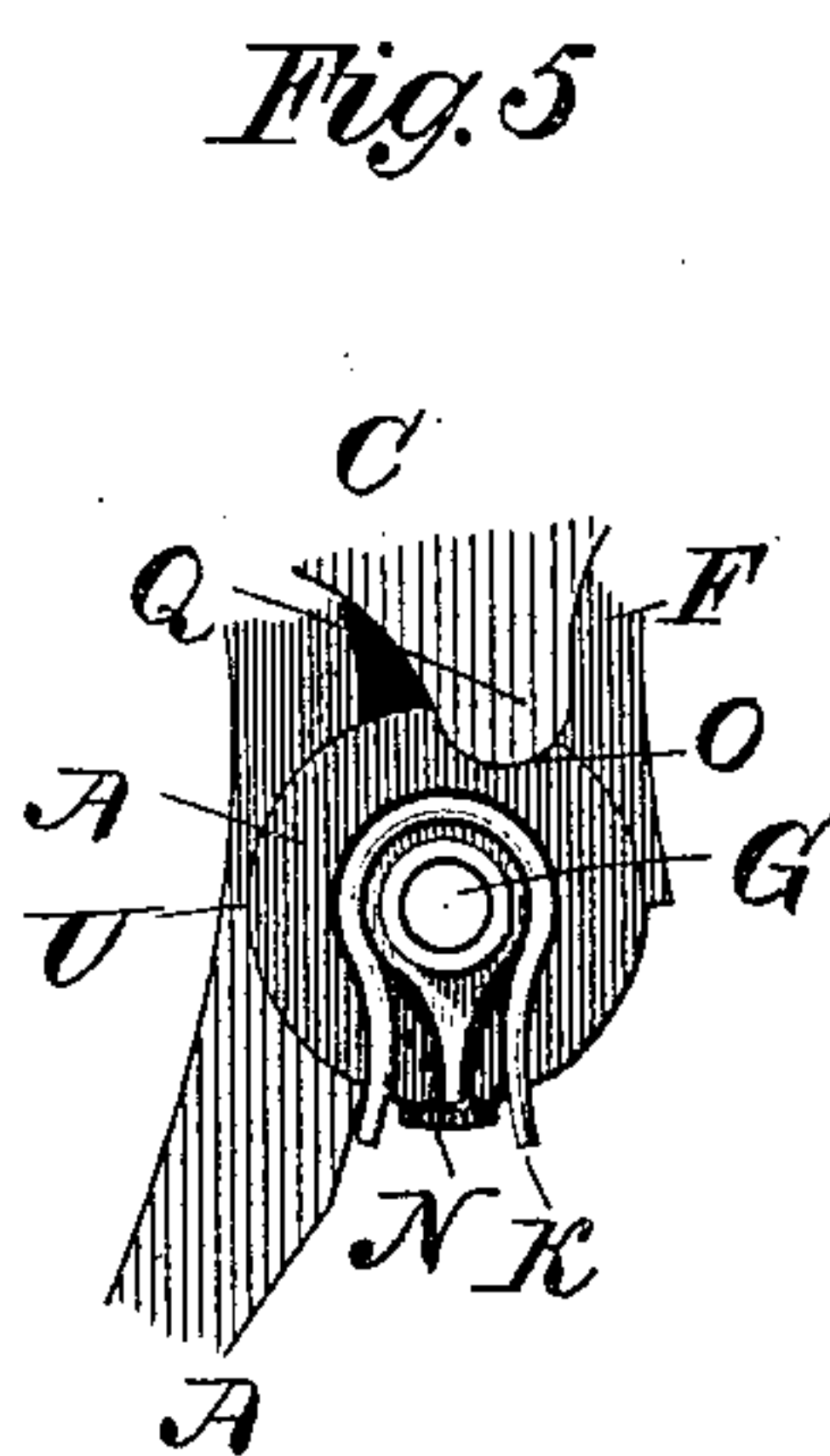
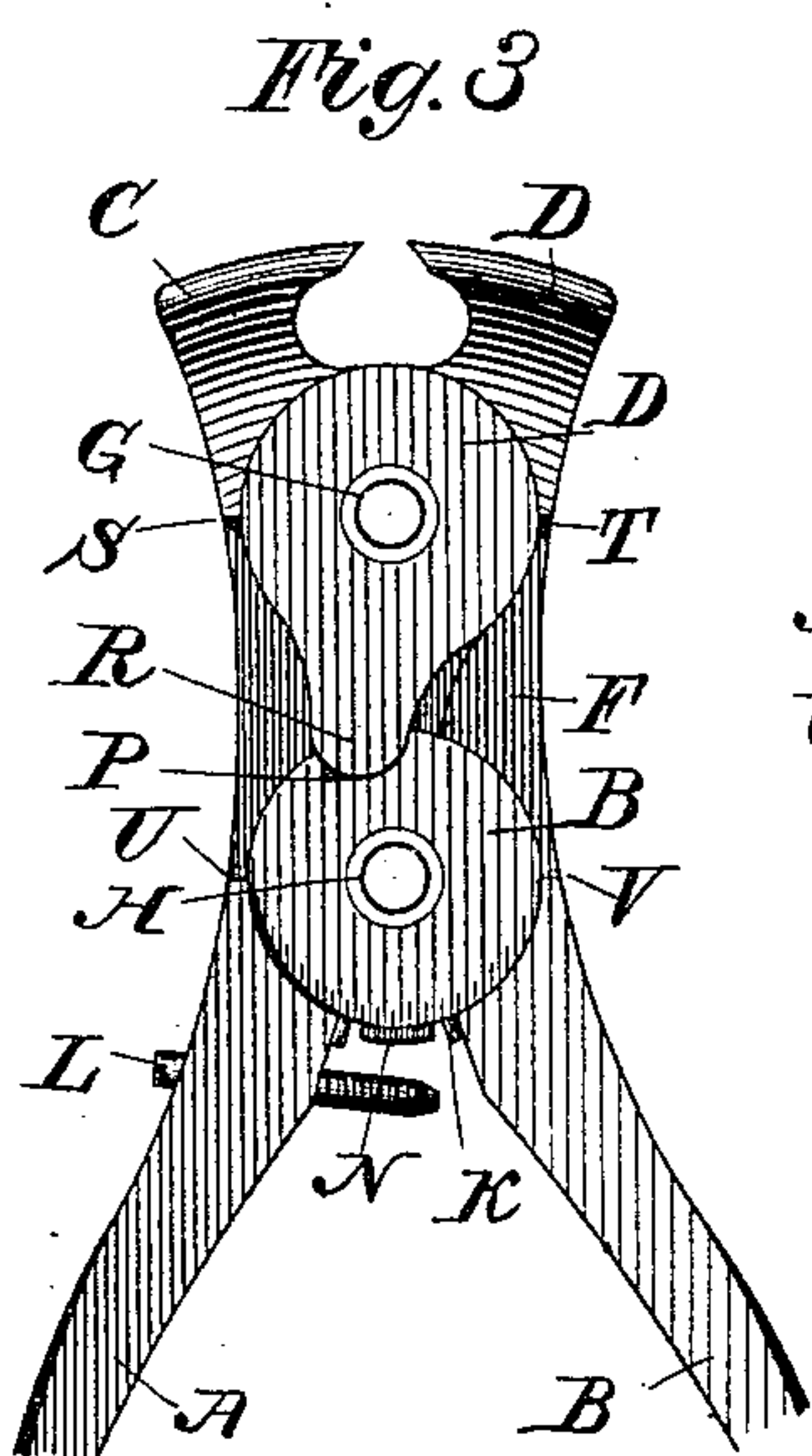
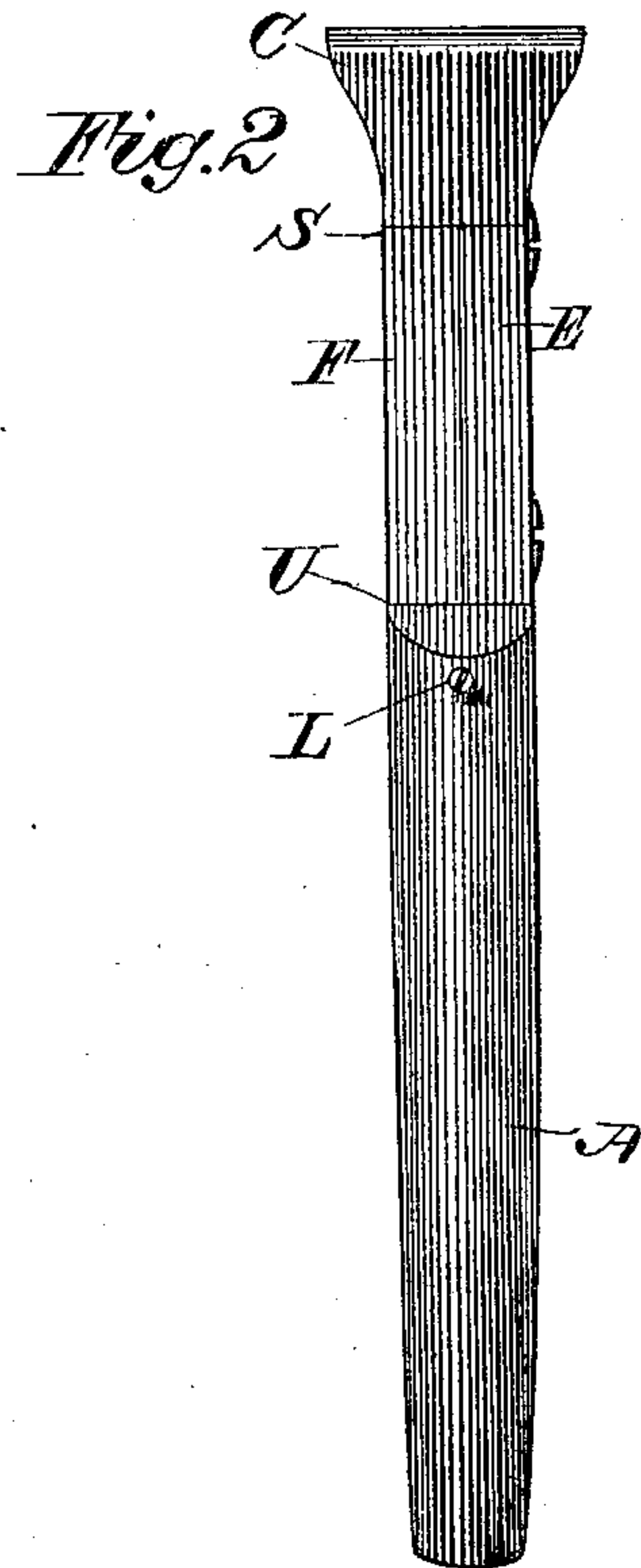
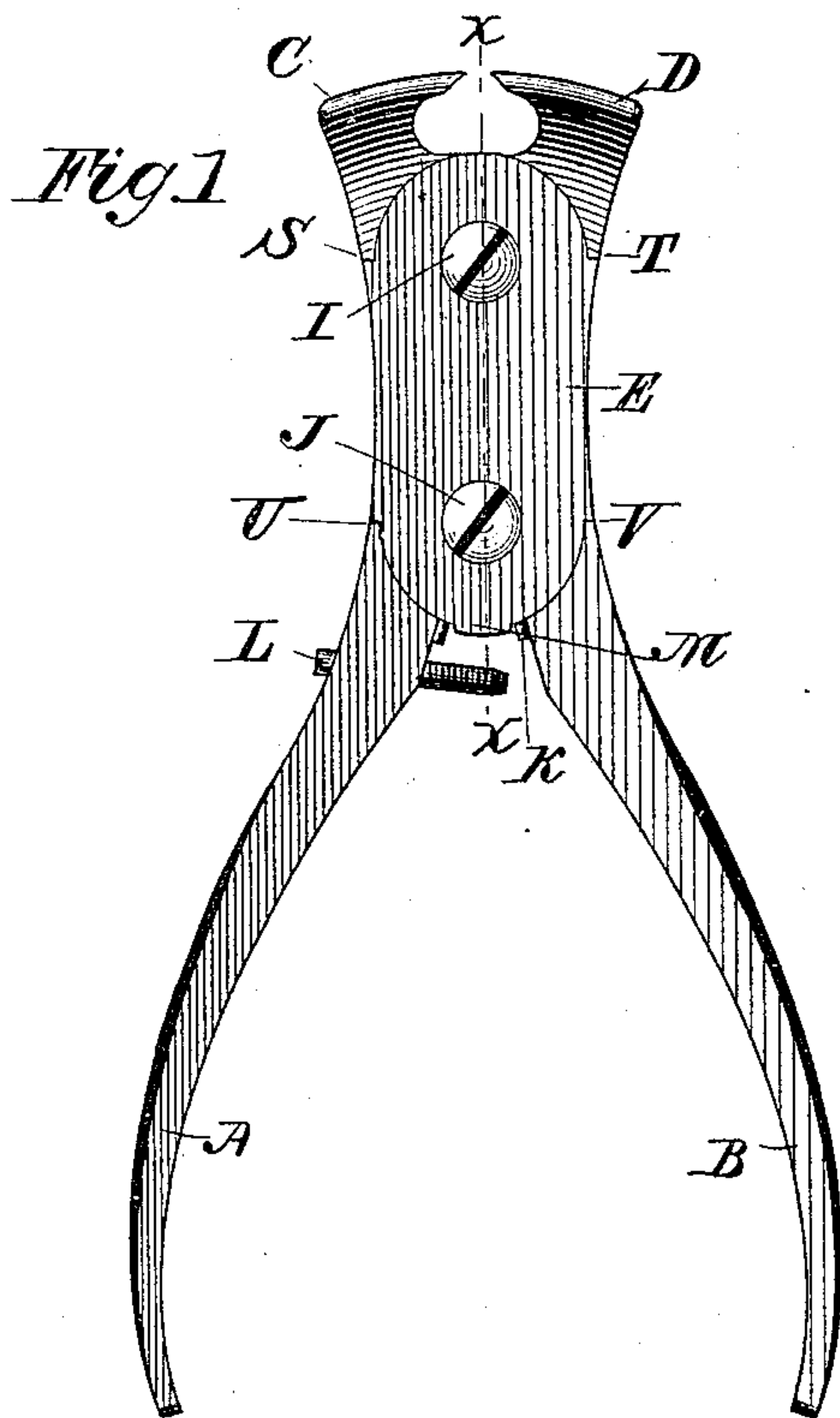
2 Sheets—Sheet 1.

H. HAMMOND.

NIPPERS.

No. 368,470.

Patented Aug. 16, 1887.



Witnesses

Frank H. Pierpont
Thos. J. Vail

Inventor

By *Henry Hammond*
Attorney
Albert E. Walker

(Model.)

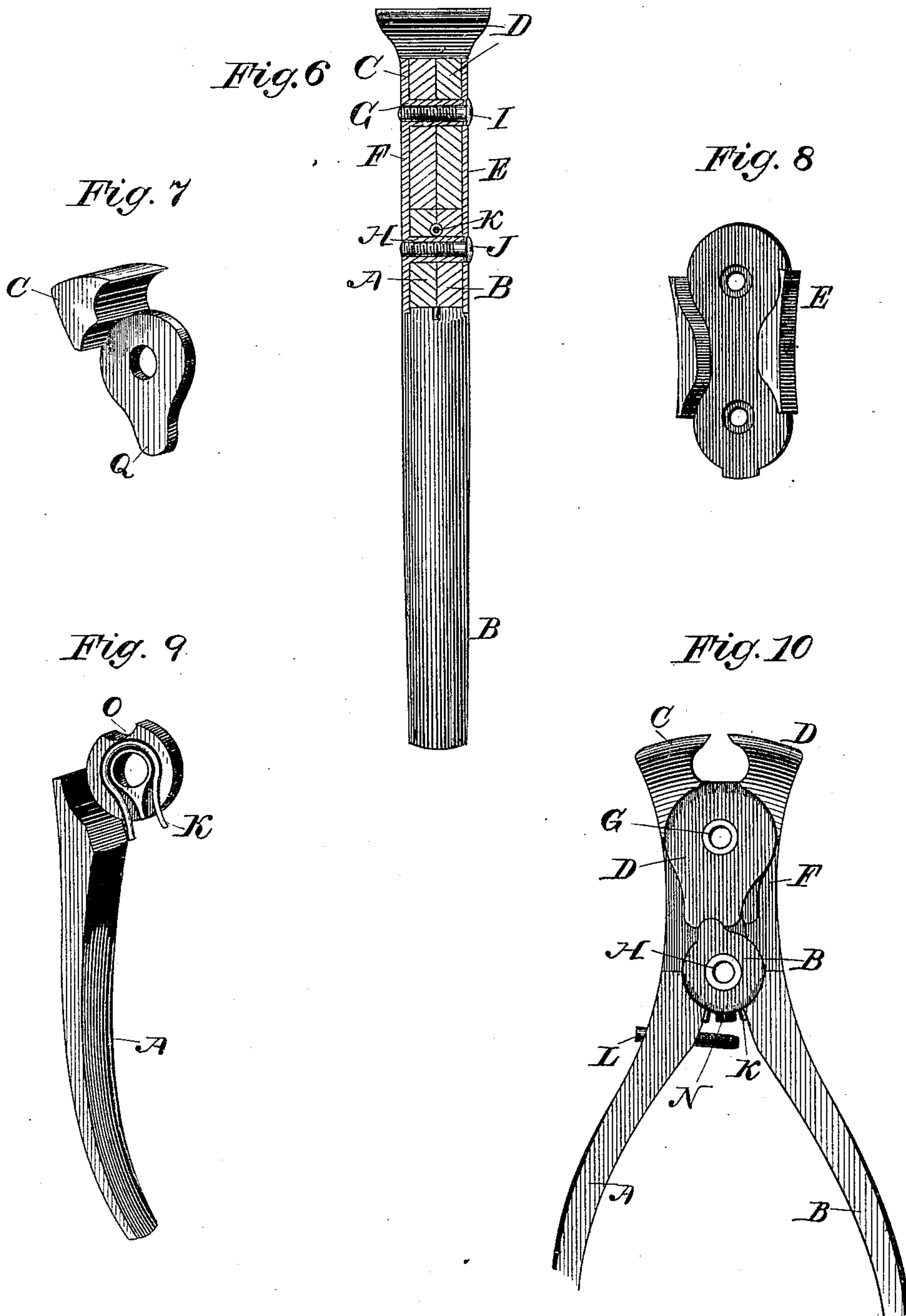
2 Sheets—Sheet 2.

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By his Attorney
Henry Hammond
Albert H. Walker

UNITED STATES PATENT OFFICE.

HENRY HAMMOND, OF NEW HAVEN, CONNECTICUT.

NIPPERS.

SPECIFICATION forming part of Letters Patent No. 368,470, dated August 16, 1887.

Application filed August 16, 1886. Serial No. 210,961. (Model.)

To all whom it may concern:

Be it known that I, HENRY HAMMOND, of New Haven, Connecticut, have invented a new and useful Improvement in Wire-Nippers and Pliers, of which the following description and claim constitute the specification, and which is illustrated in the accompanying two sheets of drawings.

This invention relates to nippers for cutting wire and to pliers for claspings small objects, and it is also applicable to other analogous implements.

Figure 1 is a side view of an implement containing my invention, and Fig. 2 is an edge view of the same. Figs. 3 and 4 are fragmentary side views of the same with one of the exterior parts removed. Fig. 5 is a fragmentary view of still fewer parts of the implement. Fig. 6 is a central longitudinal section on the line *xx* of Fig. 1. Figs. 7, 8, and 9 are perspective views of certain pieces of the implement. Fig. 10 is a view identical with Fig. 3, except that it shows a modified form of certain of the interior parts of the instrument.

A and B are levers of the first order, and constitute the handles of the tool.

C and D are other levers of the first order, and constitute the working parts of the implement.

E and F are flanged plates.

G and H are cylindrical studs integral with the plate F.

I and J are screws tapped into those studs, respectively, and holding the plate E firmly down upon the tops thereof, so as to bind all parts of the instrument together.

K is a spring fixed around the stud H in grooves cut into the adjacent surfaces of the disk-like parts of the levers A and B.

L is a set-screw, adjustable to limit the mutual approach of those levers.

M and N are protuberances extending from the plates E and F, respectively, to positions between the levers A and B.

O and P are recesses, which constitute the working-points of the levers A and B, respectively. Q and R are protuberances extending into those recesses, respectively, and constituting the power-points of the levers C and D, respectively.

The modification in Fig. 10 consists in placing protuberances, instead of recesses, at the working-points of the levers A and B, and fitting those protuberances to recesses in the

lower ends of the levers C and D, respectively.

The levers A and B have the stud H for their common fulcrum, and the stud G is the common fulcrum for the levers C and D.

The mode of assembling the parts of the implement is readily understood from the foregoing description and the accompanying drawings.

The mode of operation is as follows: The wire to be cut, or the article to be clasped, being placed between the working edges of the levers C and D, the user of the tool clasps the levers A and B and forces them to mutually approach, thus turning them upon their fulcrum, and causing them to force the power-points of the levers C and D apart, and their working edges together to the accomplishment of their function of cutting or pinching, as the case may be. When the implement is clasped in the hand, the protuberances M and N fill the spaces between the outer borders of the nearest opposing surfaces of the levers A and B, and thus prevent the plates E and F and the levers C and D from moving relatively to the levers A and B. When the last-mentioned levers are forced most widely apart by the spring K, that relative movement is prevented by the closure of the joints S, T, U, and V, as shown in Figs. 1, 2, and 3. The proportions of the levers may be varied to the requirements of particular cases, and the forms of sundry of the parts may be changed to suit the preference of the constructor; but I prefer the forms shown in the drawings.

I claim as my invention—

The combination of the levers A and B, each of them being provided with a disk-like part, the circumferences of which two parts are substantially coincident, and the centers of which turn upon one fulcrum, and the levers C and D, each of them being provided with a disk-like part, the outlines of which parts are substantially coincident, and the centers of which turn upon one other fulcrum, the four levers being so constructed and combined that the movement either way of the lever A will work the lever C, and the movement either way of the lever B will work the lever D, all substantially as shown and described.

HENRY HAMMOND.

Witnesses:

ALBERT H. WALKER,
THO. J. VAIL.