

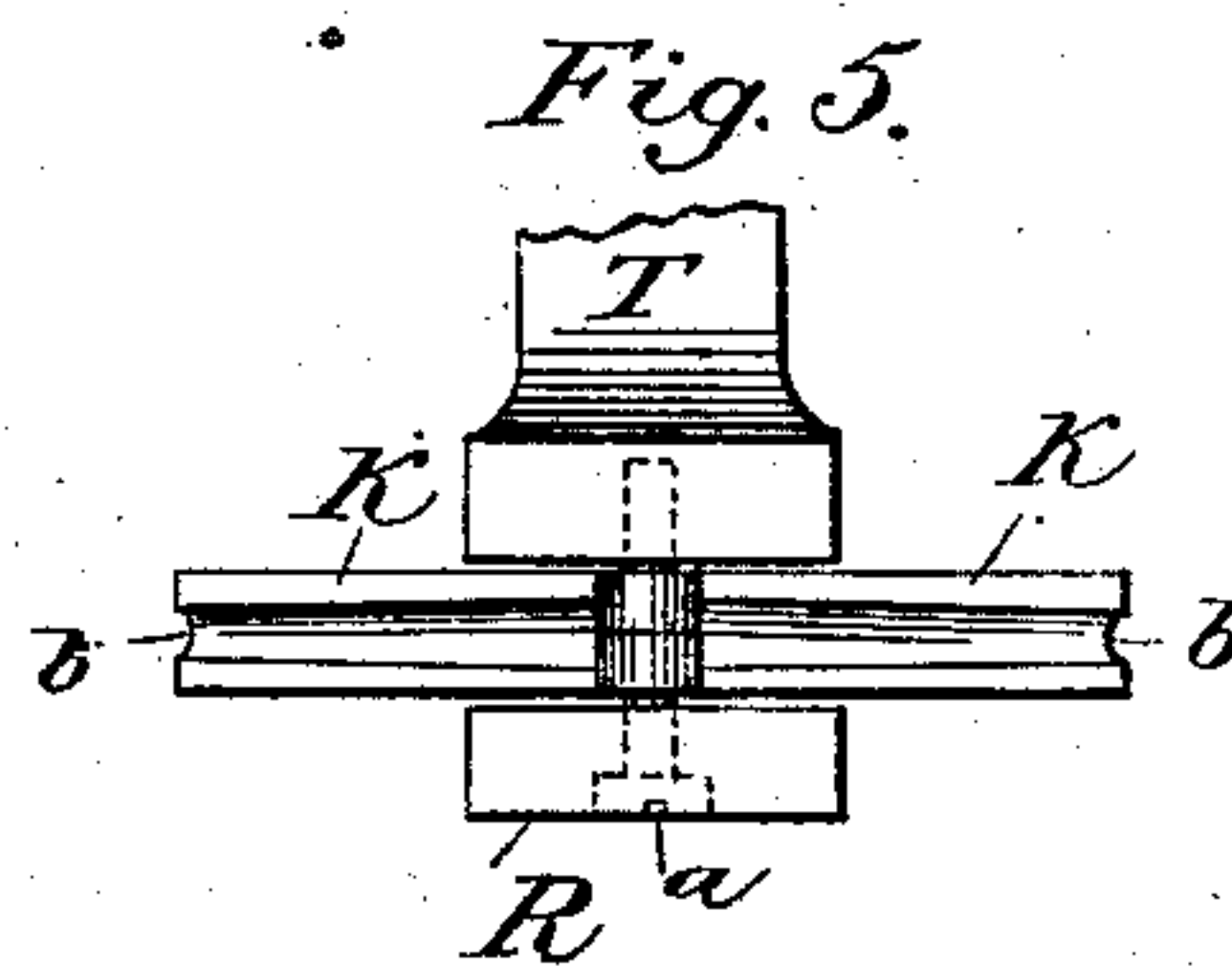
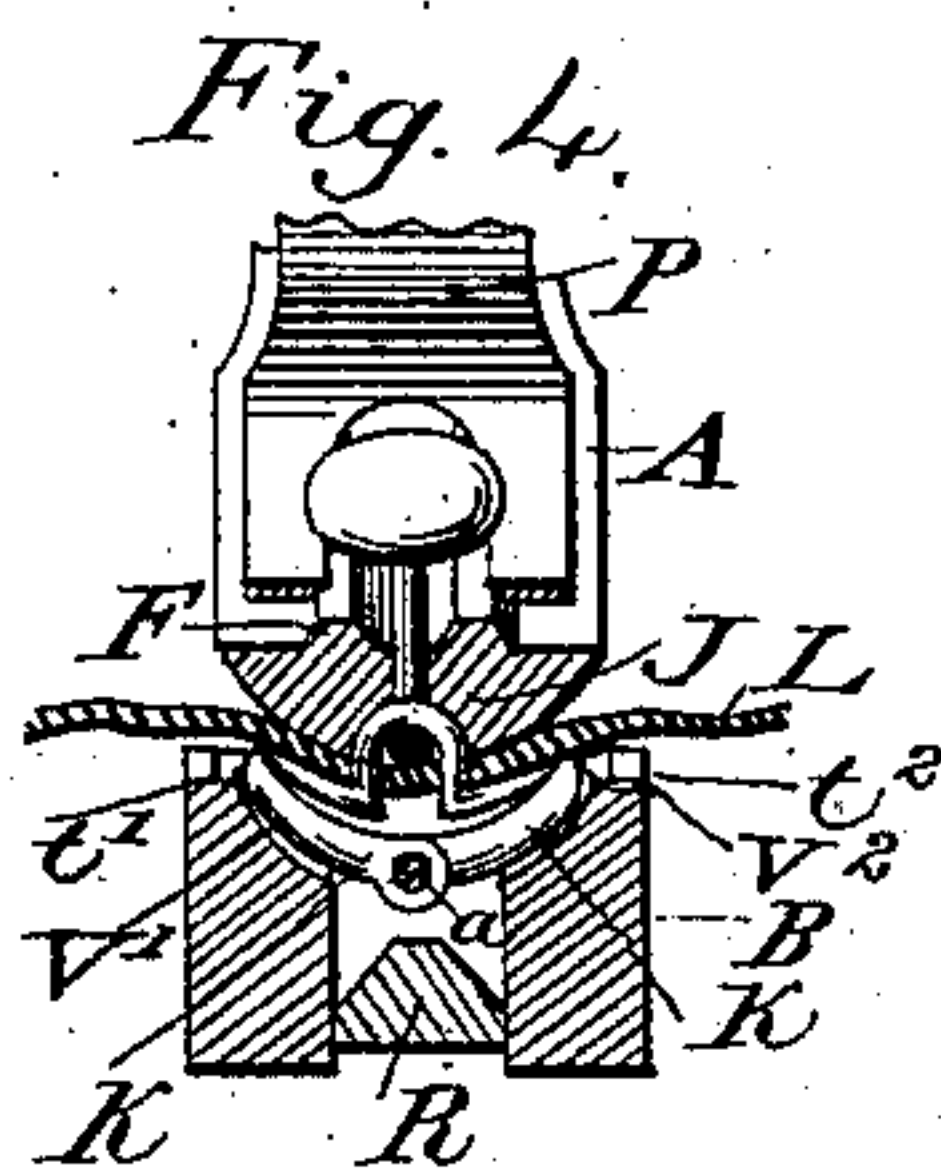
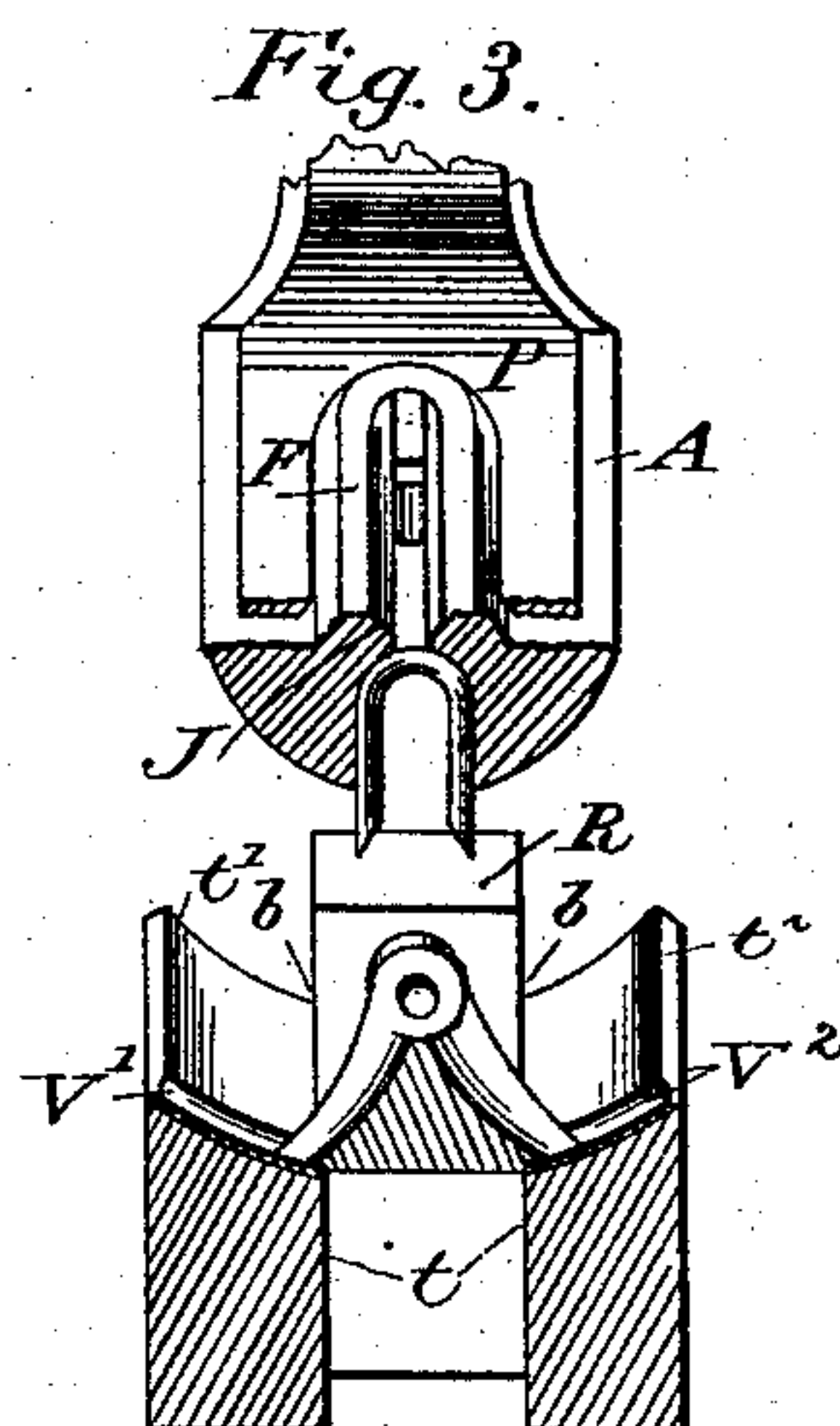
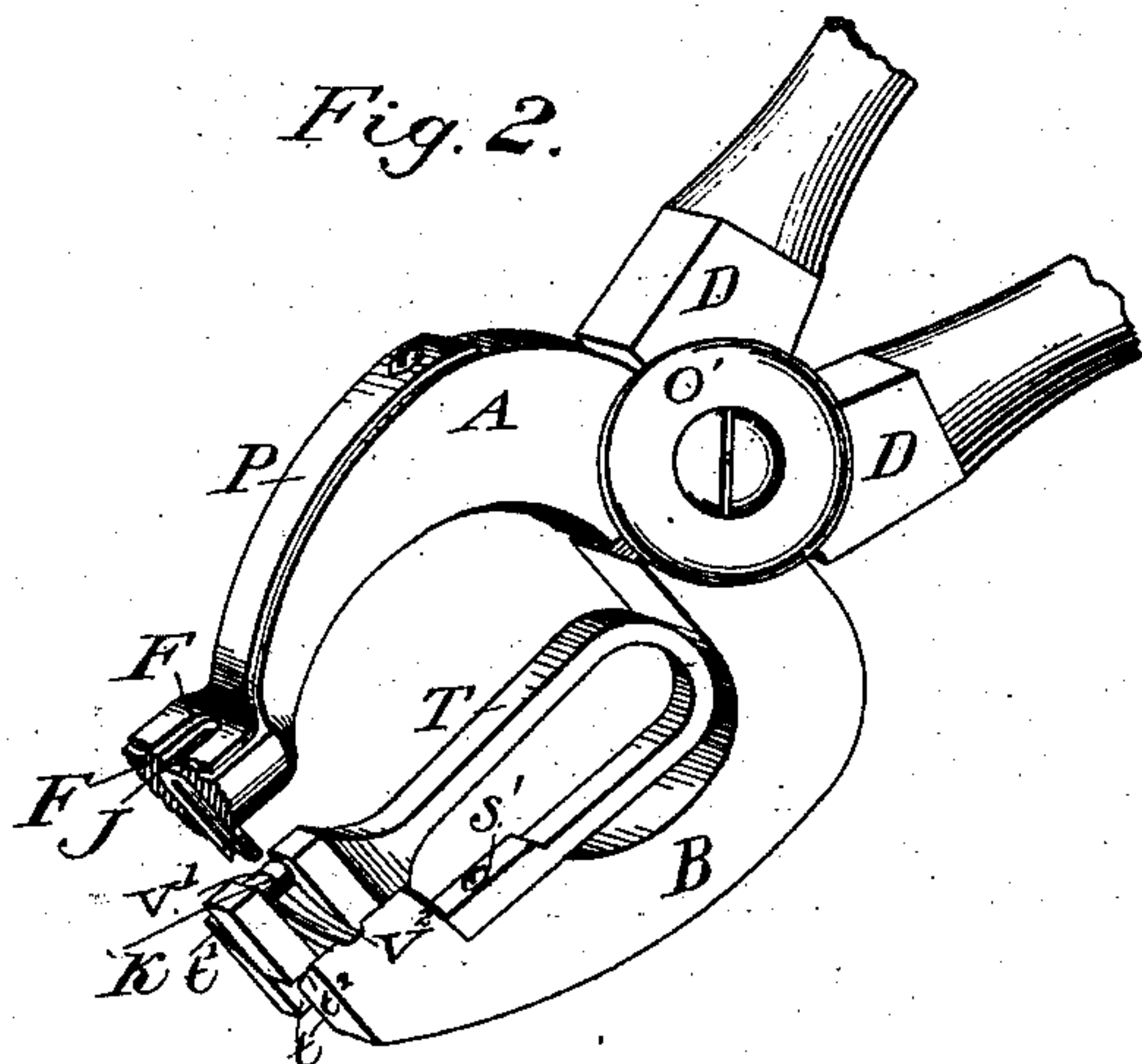
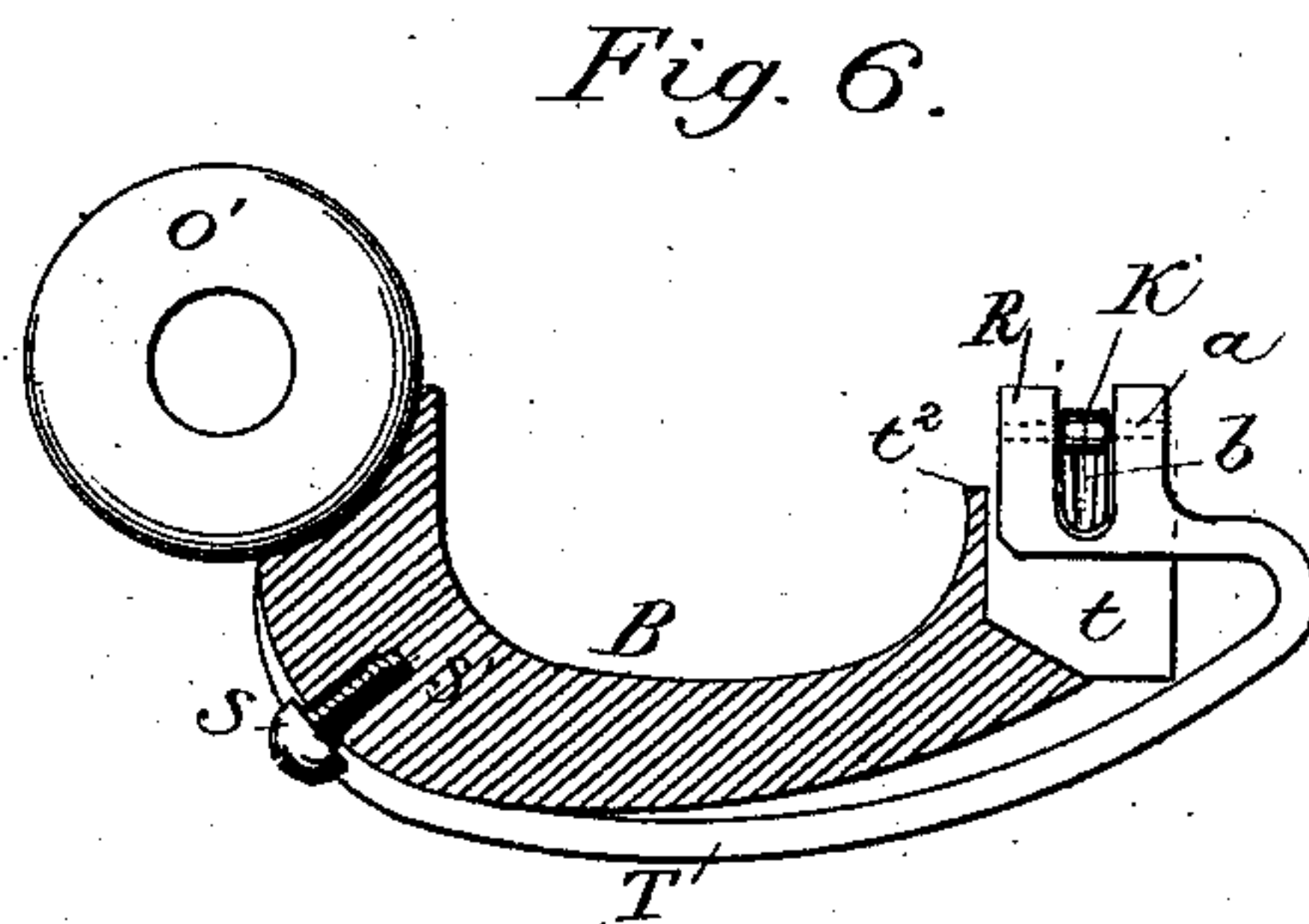
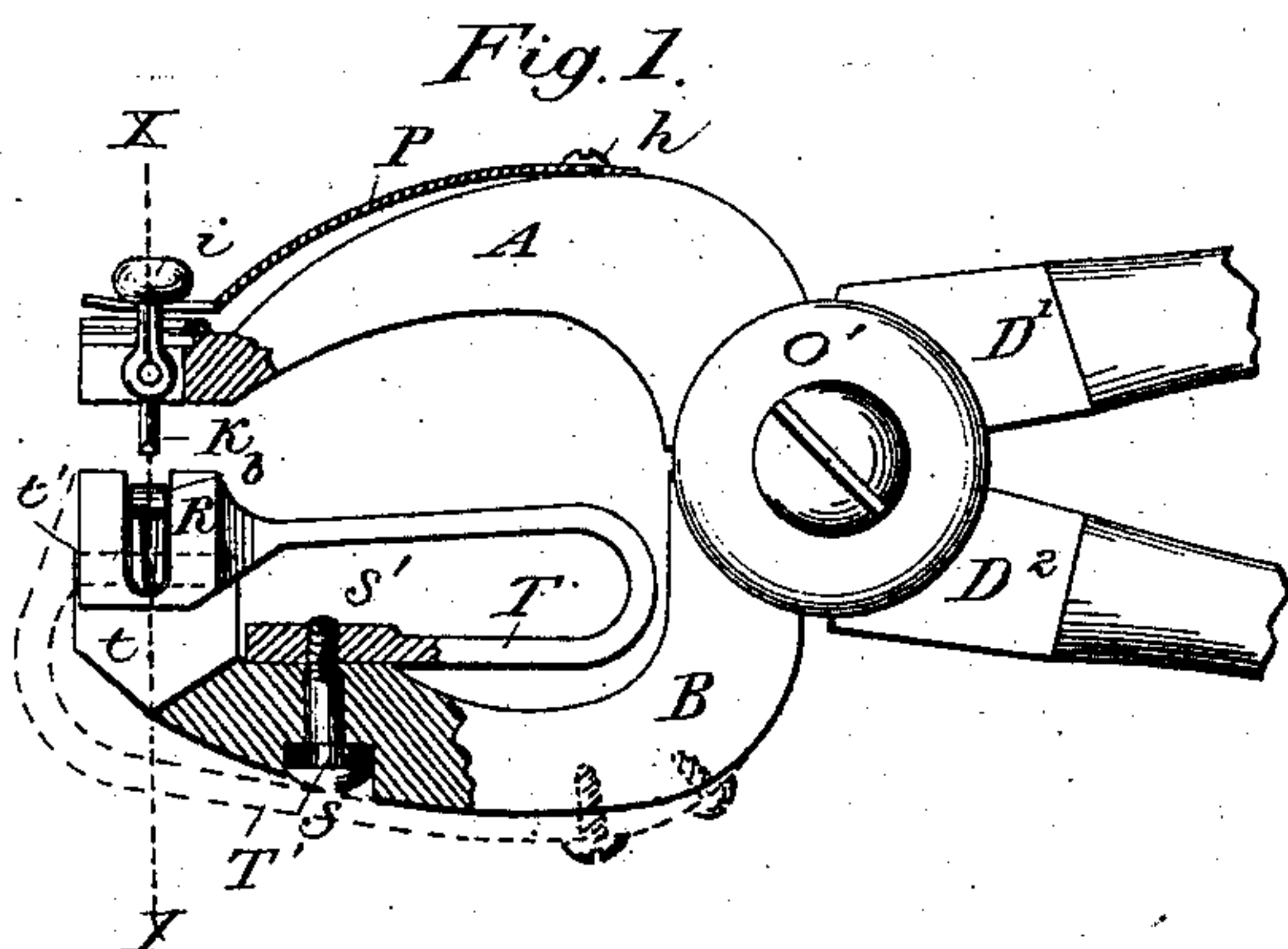
(No Model.)

J. H. GOODFELLOW.

IMPLEMENT FOR SETTING BUTTON FASTENERS.

No. 292,482.

Patented Jan. 29, 1884.



Witnesses:
Jacob L. Rowe
Walter R. Hicks

Inventor:
John H. Goodfellow

UNITED STATES PATENT OFFICE.

JOHN H. GOODFELLOW, OF TROY, NEW YORK.

IMPLEMENT FOR SETTING BUTTON-FASTENERS.

SPECIFICATION forming part of Letters Patent No. 292,482, dated January 29, 1884.

Application filed June 11, 1883. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. GOODFELLOW, of the city of Troy, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Implements for Setting Button-Fasteners, of which the following description, in connection with the accompanying drawings, forms a part of this specification.

My invention relates to and has for its object to provide certain improvements in implements for attaching button-fasteners to shoes and other wearing-apparel, in which the staple and button are placed in the upper jaw of an implement adapted to receive a U-shaped staple, and the mechanism of the lower jaw spreads and turns them outwardly and upwardly against the fabric.

Implements have heretofore been made in which the staples are placed in the upper jaw, with various arrangements for holding the same in position while being driven against fixed dies in the lower jaw, and caused to turn inwardly or outwardly up against the fabric at obtuse angles; also, others in which the lower jaw is provided with a supporting-sleeve, which sustains the fabric while being pierced by the staple, after which said sleeve is tripped by a tripping device, causing the former to give away and the staple-points to be driven against the lower jaw and turn inwardly.

My invention consists of a spring securely attached to the lower jaw at one end, and having its free end provided with a head, in which are pivoted movable clinching-arms, the lower part of which engages and moves in suitable guides in the face of the lower jaw of the implement, to spread and turn the staple outwardly and upwardly against the fabric at an acute angle from its loop. It is immaterial whether this spring is attached to the lower jaw between the jaws or on the under side thereof, as shown in Figs. 1 and 6, as the gist of my invention is of a spring having an enlargement on its free end, in which arms are pivoted, the free ends of which vibrate across the face of the lower jaw in suitable guides, thereby carrying the staple-legs upon their faces, (after they have been forced through

the fabric,) turning them up against the fabric in a line with each other.

It also consists of an implement having two jaws and a joint-pivot, one of which is provided with means for holding a staple and the other a yielding anvil, having hinged therein cams and a curved concave face, by which the cams are forced outwardly and upwardly in guide-grooves formed in the face of the jaw.

In the drawings, Figure 1 is a side elevation, partly in section, showing the spring on the inside of the lower jaw, with button and staple in position; Fig. 2, a perspective view, and a part section through the upper jaw and spring in line with the staple; Fig. 3, a sectional view through the line $x x$, Fig. 1, showing the staple in position over the anvil preparatory to being brought in contact therewith; Fig. 4, a front elevation of the upper jaw and section of lower jaw, and a part of the anvil removed, showing position of clinching-arms after the staple has been forced through the fabric and their free ends forced above the face of the lower jaw; Fig. 5, a plan view of a portion of the spring carrying the anvil-head and cams hinged therein spread apart, more clearly showing my invention; and Fig. 6 a side elevation of the lower jaw, with the spring and anvil on the under side thereof.

A is the upper jaw, having secured thereto a forked spring, P, on its top, provided as a means for holding the button and staple in position in the arched groove of its extreme end; B, the lower jaw, having the curved sides $t' t^2$ and concave groove $v' v^2$ in its upper face; D' D², the handles connected by the tongs' joint-pivot o' ; and T is a spring secured to the jaw B at s' by the bolt s or other suitable means, and having the anvil R, formed on its free end, arranged over the lower jaw above the sides $t' t^2$; and $k k$ are two clinching-arms hinged together, as shown in Figs. 3, 4, and 5, by the bolt a , so that the said clinching-arms may hang free therefrom on either side of said anvil R, so that their loose ends will rest in the concave grooves or guides $v' v^2$ when in their normal position. (See Fig. 3.)

The operation of these parts is as follows: The staples are placed in the eye of the button, with the loop of the former parallel to

the cams K K, and the button above the forked spring P, with the said loop in the arched groove and button-eye in the slotted recess of the upper jaw, A. The anvil and spring T stand in normal position, as shown in Fig. 3, when the fabric L is placed over the former, which supports the fabric while being pierced, and the staple-legs are spread apart in a line with each other until the upper jaw, A, comes in contact therewith, overpowers the spring T, drives the anvil R down, and forces the lower ends of the cams K K against the lower portion of the concave guides V' V² in the face t' t² of the lower jaw, which they follow in an outwardly and upwardly course, as seen in Fig. 4, thereby carrying the staple-legs and bending them at an acute angle from the loops against the fabric. When the jaws are again opened, the spring returns to its normal position, and the cams, being free, drop back by their own weight, as shown in Fig. 3.

In Figs. 2, 3, 4 are shown other distinctive features of my invention, in which the jaw A is cut away on its upper face, forming the U-shaped portion F, thereby making room for the thickness of the forked spring P on both sides thereof. This does not weaken the jaw or infringe upon the space required for the button. This U-shaped part is made concave from front to rear of the slot J, so that the implement will be better adapted to receive freely a small button-eye, and still leave ample room for any lump of japan or other obstruction often found on irregular-made buttons.

It will be observed that the grooves b b, formed in the upper face of the clinching-arms k k, (see Figs. 1, 2, 3, and 6,) serve as guides to direct the legs of the staple in the proper courses along the arms k k.

I am aware that United States Patent No. 200,774 shows a staple-clinching mechanism, with an anvil having movable clinching-arms arranged to turn the ends of the staple inward toward each other, and that United States Patent No. 267,342 shows a clinching-anvil supported by a spring separate from the anvil.

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

1. An implement for attaching buttons, having jaws A and B, the latter being provided

with a movable anvil, R, having arms k k pivoted thereto, and spring T, combined to operate substantially as described. 55

2. In an implement for attaching buttons, the spring T, secured to the jaw thereof, carrying the anvil-head R at its free end, the anvil having the arms k k pivoted therein, as described, and adapted to operate in connection with the lower jaw, substantially as and for the purpose set forth. 60

3. In an implement for attaching buttons, the combination of the upper jaw, having means for holding a button and staple, as described, and the lower jaw, B, having the spring T attached thereto, and carrying the anvil R, provided with the pivoted arms k k, which are adapted to spread apart and force the legs of a staple up against the fabric in a line with each other, all substantially as described and set forth. 65 70

4. In an implement for attaching buttons, the combination of an upper jaw provided with means for holding a button and staple, with the lower jaw provided with a movable anvil having pivoted arms, which are adapted to move in the grooves v' v² in the lower jaw, for the purpose of spreading the legs of a staple, all substantially as described. 75 80

5. In an implement for attaching buttons by staples, the jaw B, furnished with the movable anvil R, and the arms k k, pivoted to the anvil and extending outward beyond the anvil and over the jaw, substantially as set forth. 85

6. In an implement for attaching buttons by staples, the jaw B, furnished with the movable anvil R, and arms k k, pivoted to the anvil, and having the guide-grooves b b, substantially as shown and described. 90

7. In an implement for attaching buttons by staples, the jaw A, having the raised platform F and slot J in the platform, and furnished with a forked spring extending along the sides of the platform, substantially as shown and described. 95

In testimony whereof I have hereunto set my hand, in the presence of two subscribing witnesses, this 8th day of June, 1883.

JOHN H. GOODFELLOW.

Witnesses:

EDWARD P. AUGUR,
A. E. PRENTISS.