

T. J. WHITECAR.  
ANCHOR.

No. 172,535.

Patented Jan. 18, 1876.

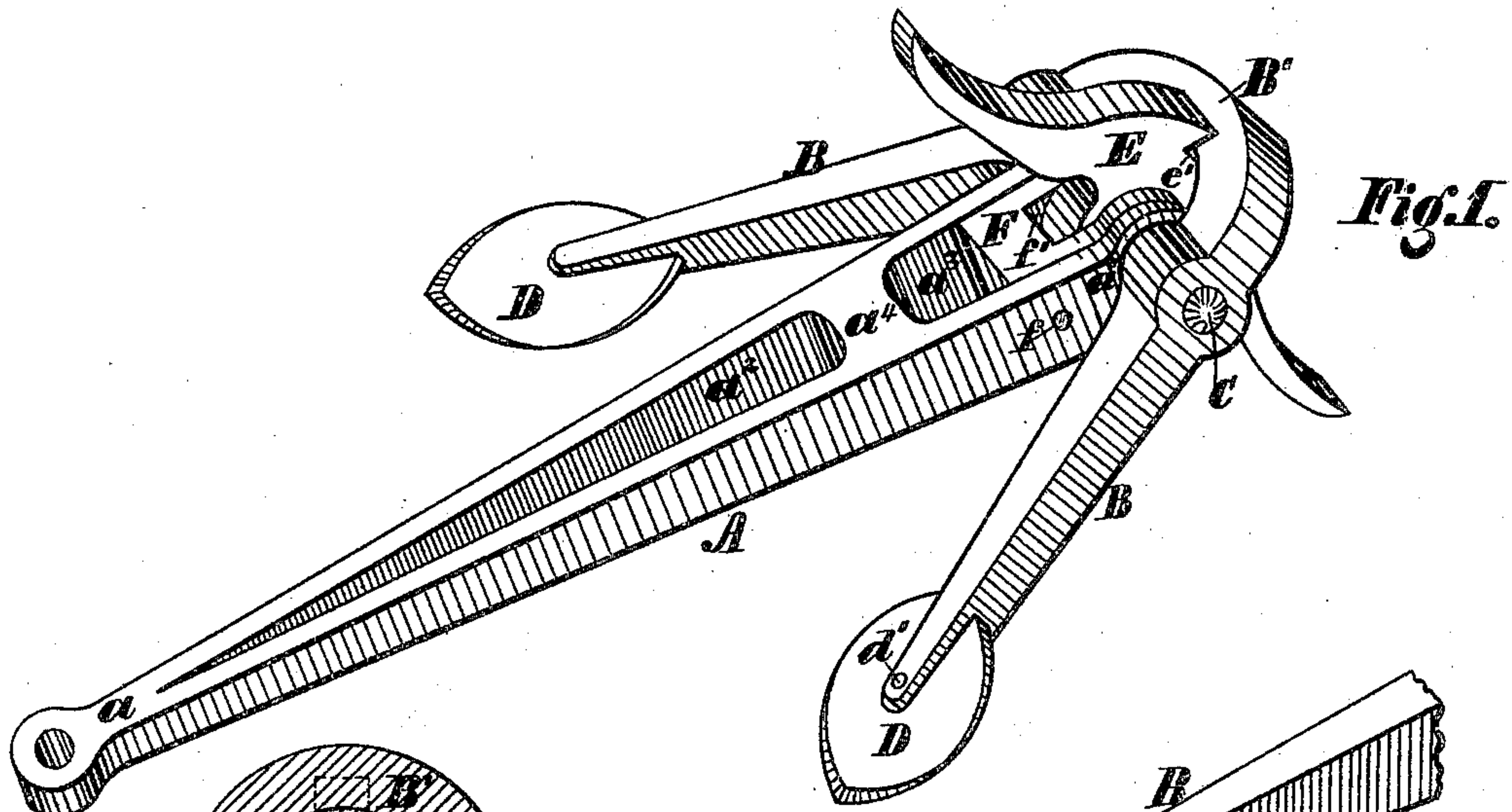


Fig. 1.

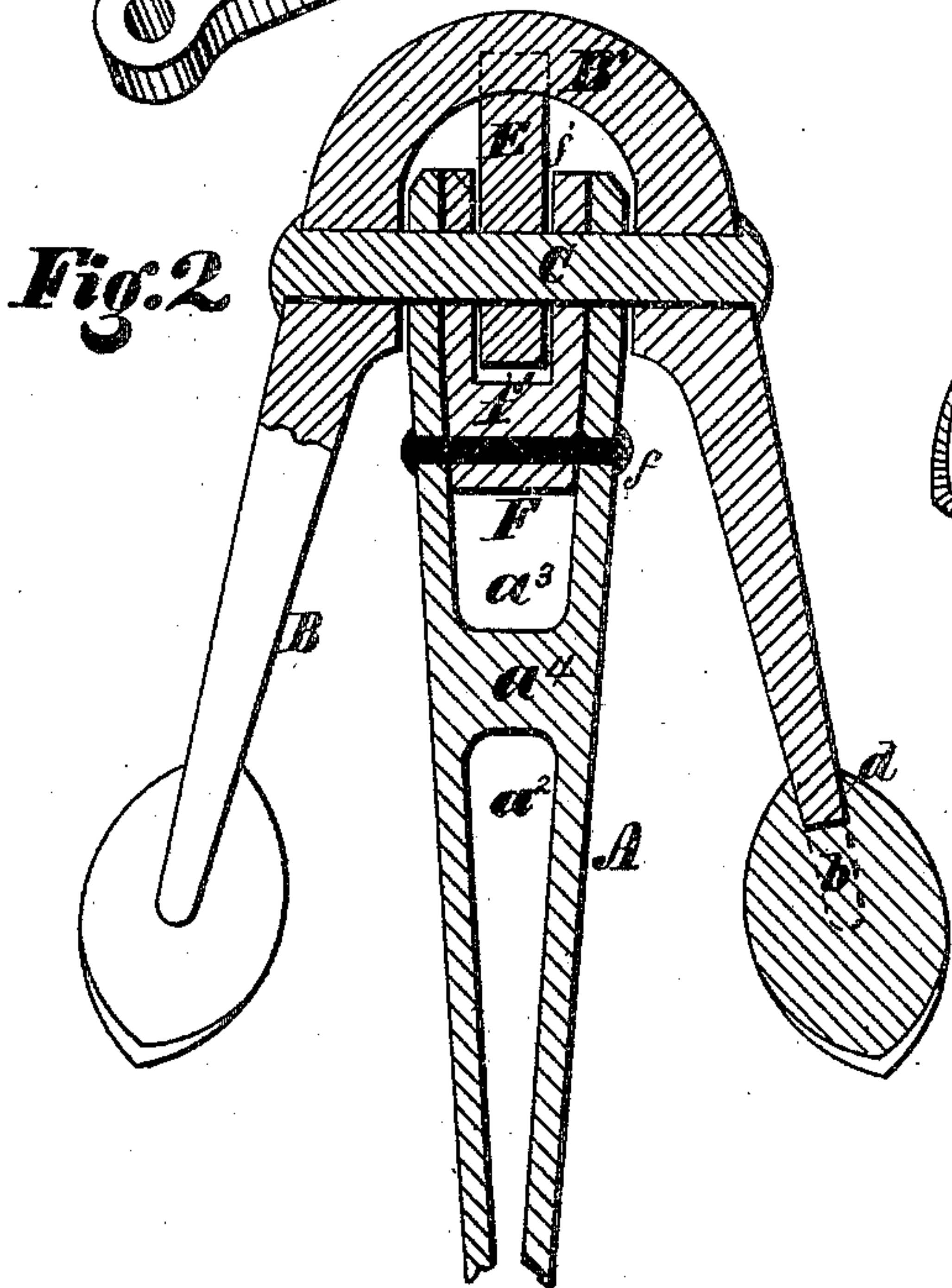


Fig. 2.

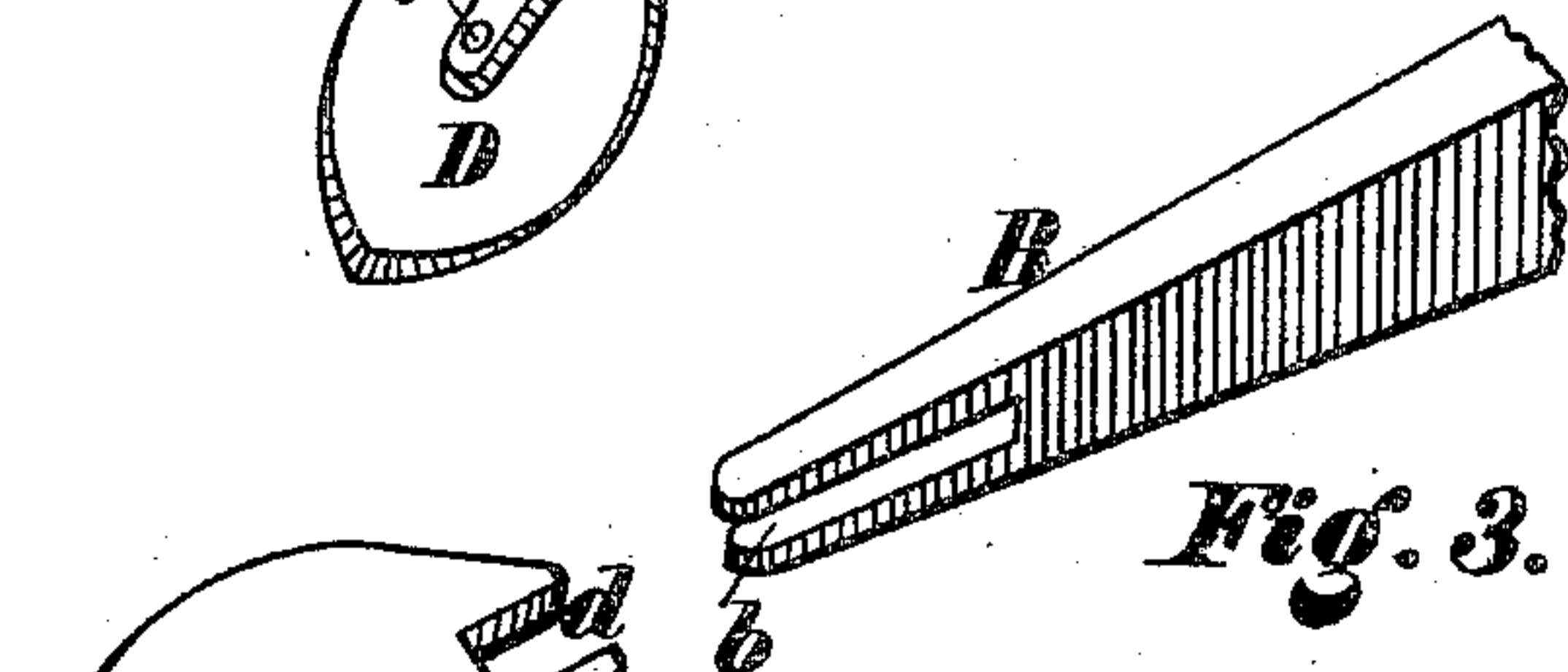


Fig. 3.

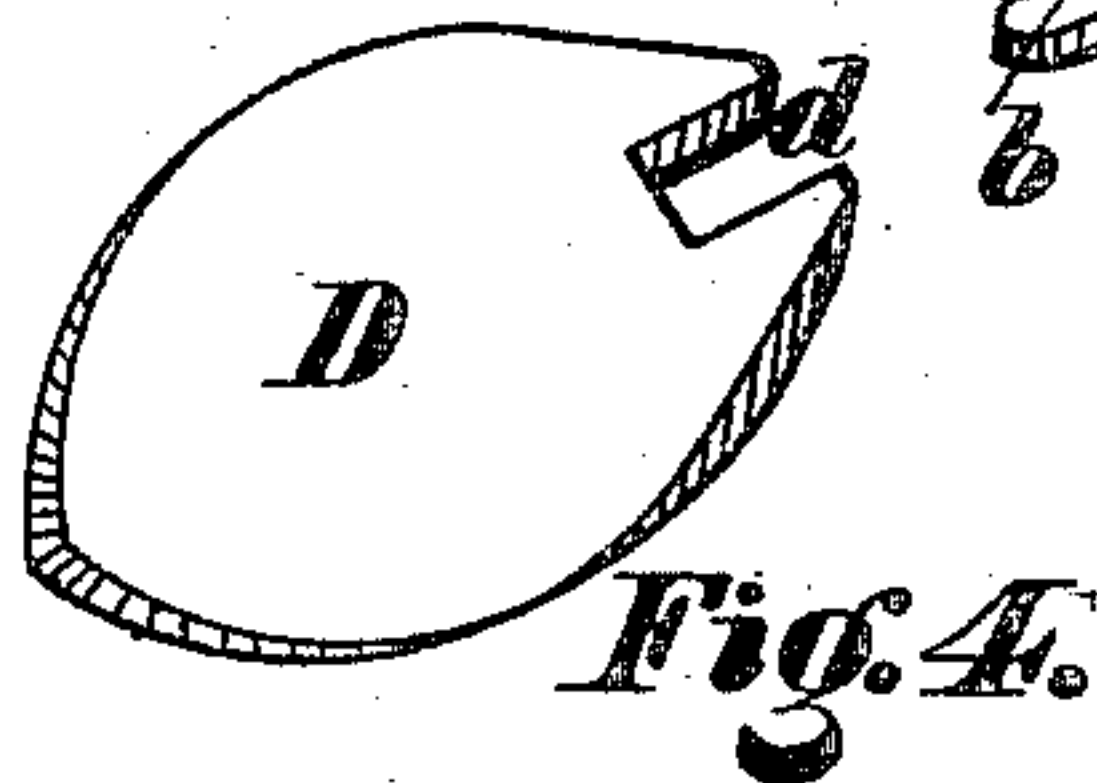


Fig. 4.

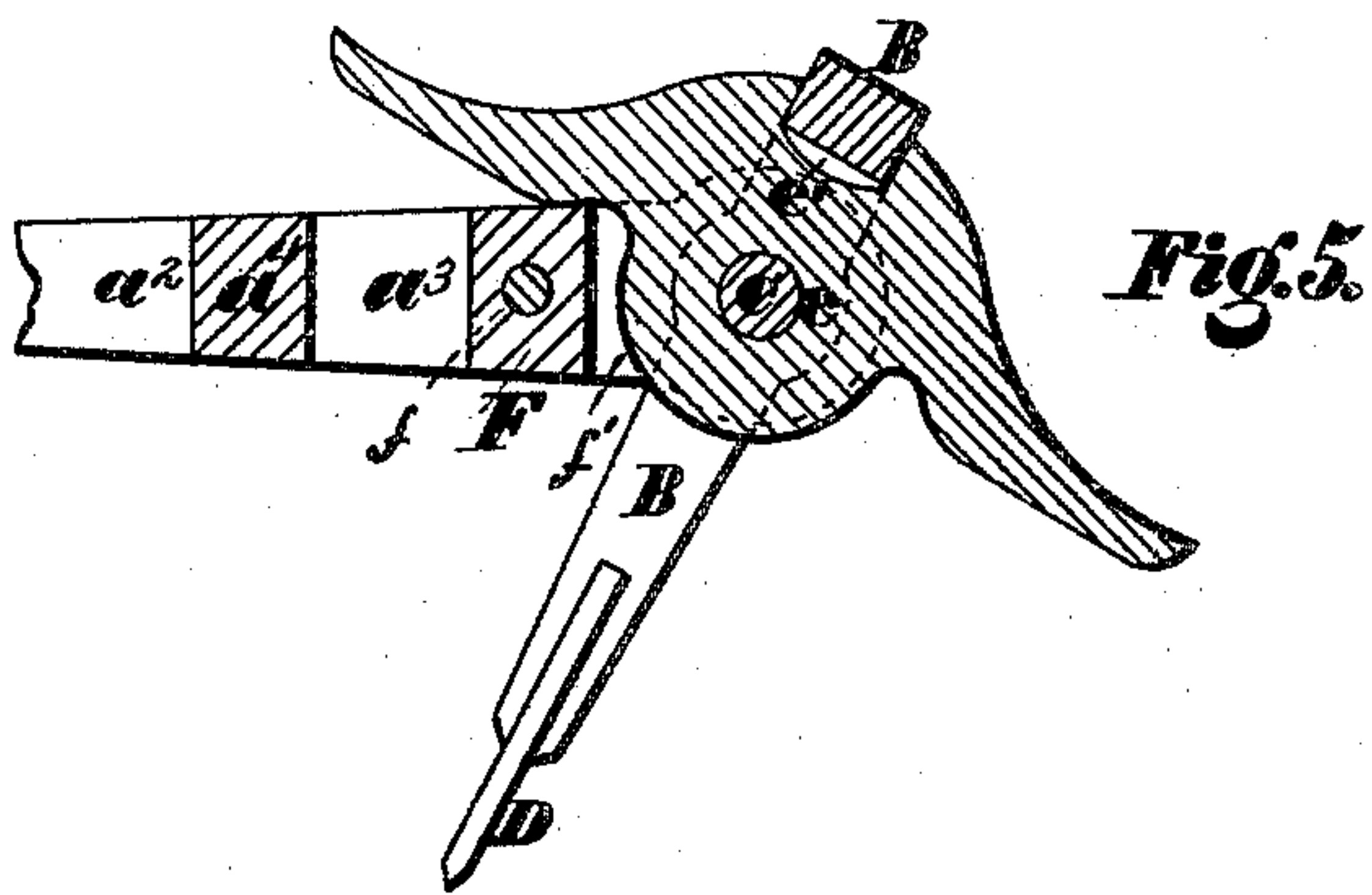


Fig. 5.

Witnesses

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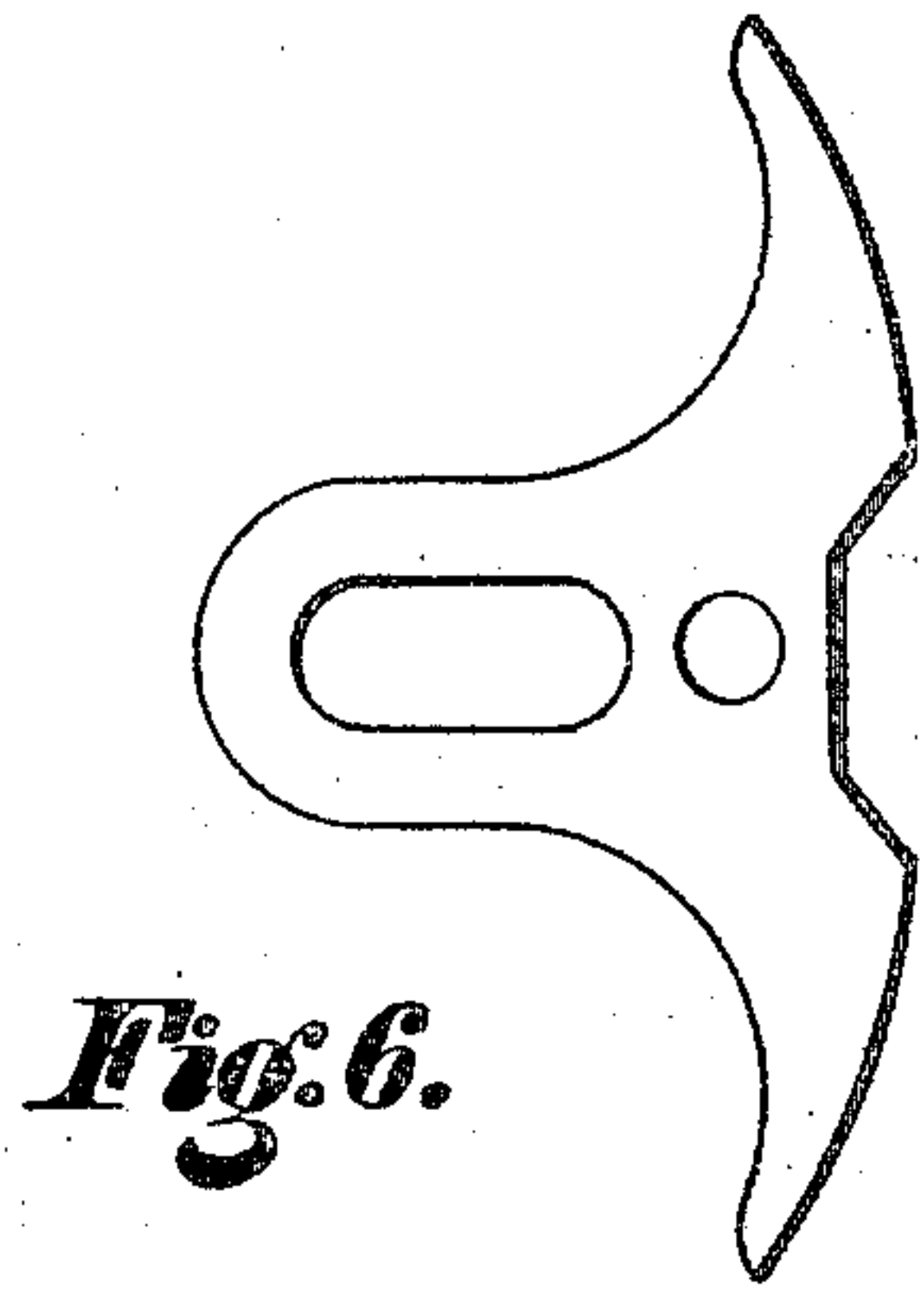
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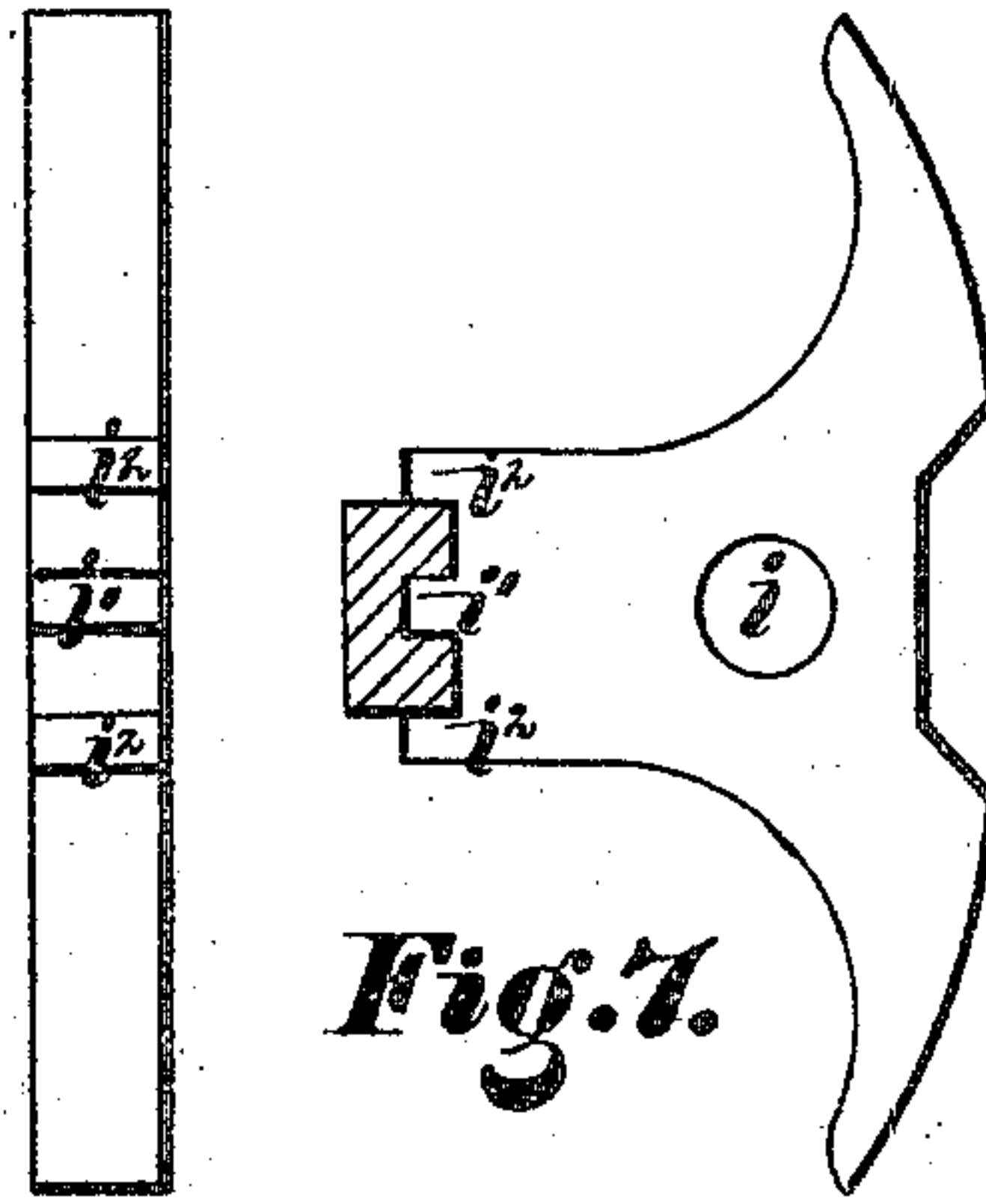
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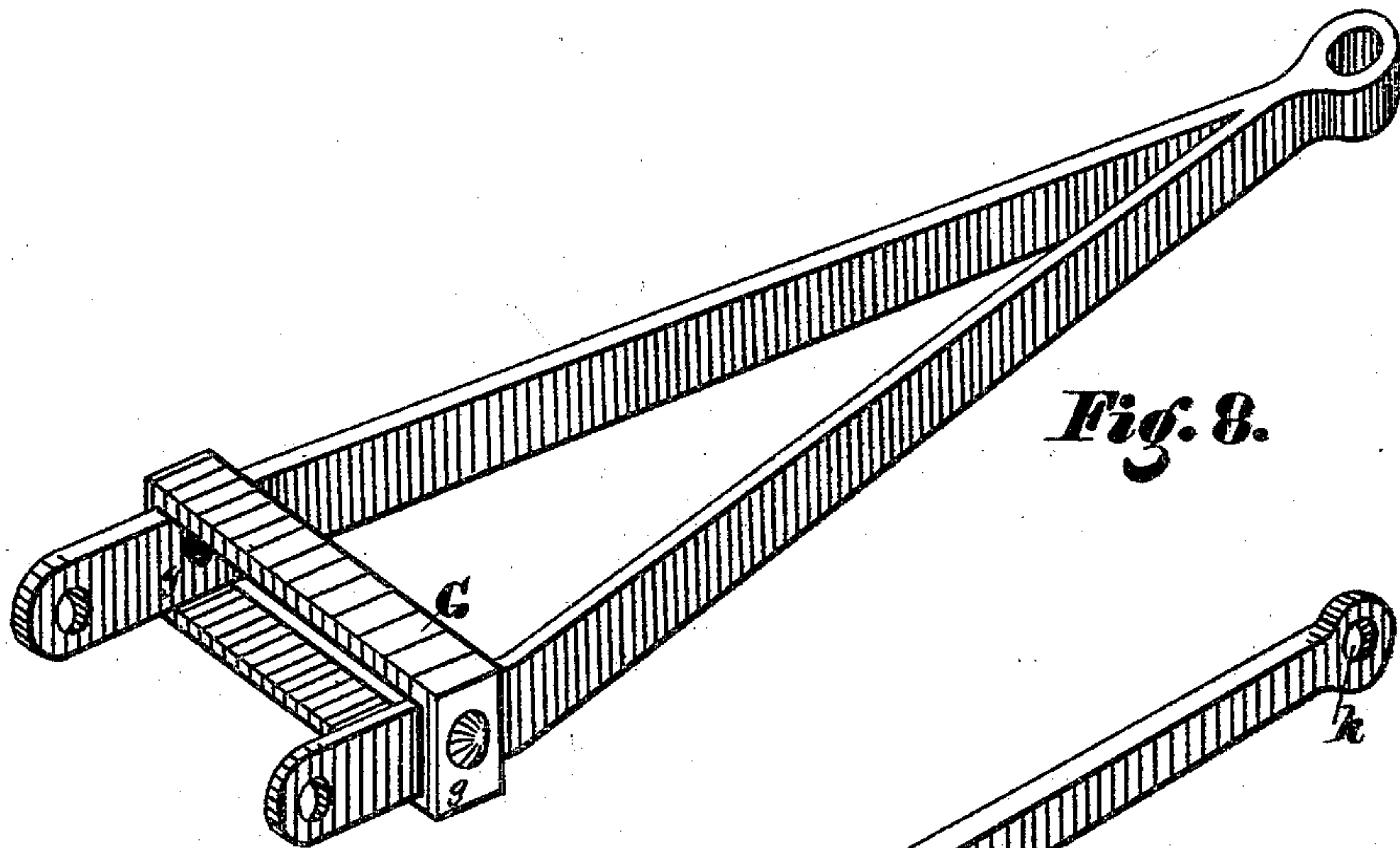
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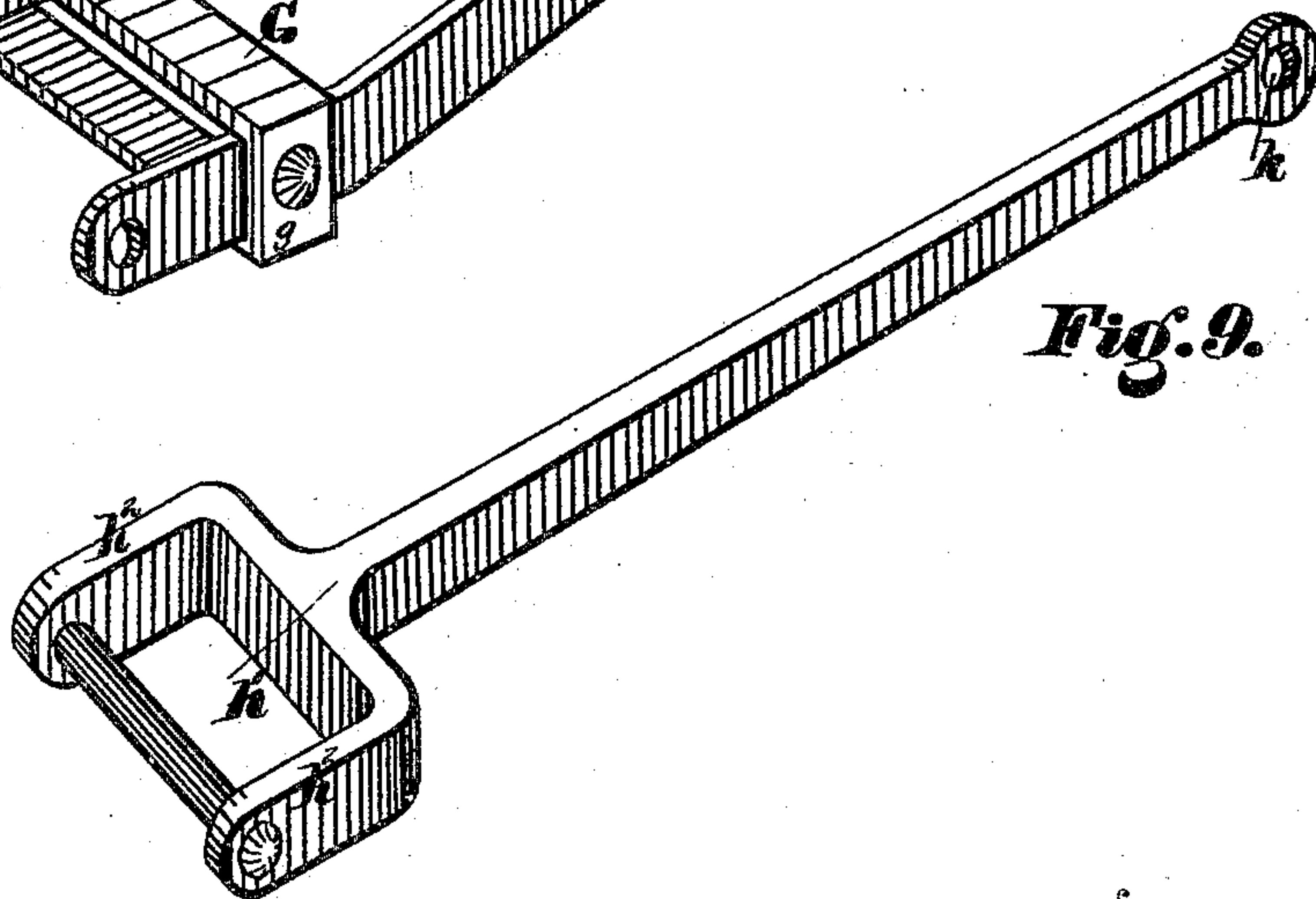
*Fig. 6.*



*Fig. 7.*



*Fig. 8.*



*Fig. 9.*

Witnesses

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# UNITED STATES PATENT OFFICE.

THOMAS J. WHITECAR, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN ANCHORS.

Specification forming part of Letters Patent No. **172,535**, dated January 18, 1876; application filed November 27, 1875.

*To all whom it may concern:*

Be it known that I, THOMAS J. WHITECAR, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Anchors; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a perspective. Figs. 2, 3, 4, and 5 are detail views, partly in section. Figs. 6, 7, 8, and 9 are views of modifications.

My improvements consist in the novel construction and combination of parts, as hereinafter fully described.

A shows the anchor-shank, flaring from the stock end  $a$  to the crown  $a^1$ , bifurcated so as to leave openings  $a^2$  and  $a^3$ , separated by a bridge,  $a^4$ . B B are the fluke-arms, formed in one piece with the arch B', and fastened to the shank A by a rivet or bolt, C. From the arch B' the arms B flare or spread outwardly till they meet the palms D D. The said palms are made, in the first instance, of pieces of flat metal, of suitable shape, having notches  $d$  at their upper extremities. The plates are inserted in slots or jaws  $b$  in the lower end of the fluke-arms B B, and riveted therein, as shown at  $d'$ ; or the plates D D, after insertion, may be reheated with the fluke-arms and both welded together. E shows a double-ended tripper, having a central opening,  $e$ , for the passage of the rivet C, and notched at  $e'$ , so as to embrace three sides of the arch B' and cause the fluke-arms B B to be moved with it. F shows a wedge-block inserted in the opening  $a^3$  of the shank, and held therein by a rivet,  $f$ , and by the rivet C passing through the fluke-arms and tripper. The object of this block is to fill up the space between the crown ends of the shank, which are spread sufficiently to keep the flukes the requisite distance apart, and also to prevent said ends of the shank from being accidentally brought any closer together. The block F is slotted, as shown at  $f'$ , for the passage of the tripper, having, as will be seen, the effect and object of limiting the movement of said tripper, and,

correspondingly, of the fluke-arms. When the arms B B reach the proper position for holding, as shown in Fig. 5, the tripper C impinges upon the block F, preventing the further backward movement of said arms. Instead of the block F, a band, G, encircling the shank, as shown in Fig. 8, and riveted to the same at  $g$ , may be employed. Instead of making the shank as shown in Fig. 1, viz., spreading gradually from the eye  $a$  to the crown  $a^1$ , it may be made of the same, or about the same, thickness, and solid, as shown in Fig. 9, from the eye  $h$  to the point  $h^1$ , where it suddenly spreads, forming forks  $h^2$ , which the fluke-arms and arch B' will embrace, as already described. The space between the sides of the tripper and the forks or bifurcated end of the shank may be filled in with loose collars, which may be also inserted between the outside of the shank and the inside of the fluke-arms and arch, said collars in both cases encircling the pivot-bolt or rivet C; or the fluke-arms may be formed on the inside with shoulders, against which the outside of the shank rests and moves, the rivet C passing through said shoulders.

I would here remark that in every case the vertical sides of the shank, from the point where the fluke-arms are met and backward of that, are parallel; also, that the adjacent sides of the fluke-arms where they meet and move on the parallel sides of the shank are, too, parallel.

In Fig. 6 is shown a tripper, having an elongated slot for the passage of the arch B', and opening for the pivot-bolt C; and in Fig. 7 is shown another tripper, designed to be made of flat or sheet metal, having an opening,  $i$ , for the passage of the pivot-bolt C, and studs  $i^1$  and  $i^2$ , the former entering an aperture in the arch B', and the latter embracing the upper and lower sides of the same, as shown.

What I claim as my invention is—

1. The double-ended tripper E, engaging with the arch B' and limiting the movement of the arms B B by impinging against the block F or band G, as shown.

2. The combination of the wedge-block F with the bifurcated shank A and tripper E, as shown.

The combination, with the notched fluke-arms B, of the separately-formed notched palms D, inserted in the notches *b* and receiving the arms B in the notches *d'*, substantially as shown and described.

4. The combination of the bifurcated shank A, the inserted tripper E, and the encircling fluke-arms, and arch, substantially as shown and described.

5. In combination with the shank A, fluke-

arms B B, arch B', and double-ended tripper E, the wedge-block or hand, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 23d day of November, 1875.

THOMAS J. WHITECAR.

Witnesses:

M. DANL. CONNOLLY,  
CHAS. F. VAN HORN.