

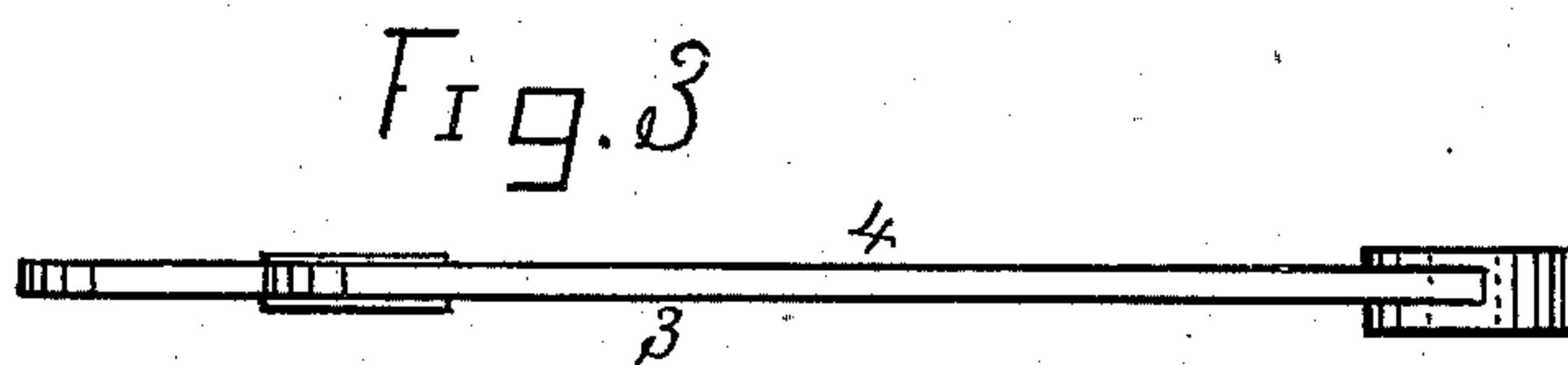
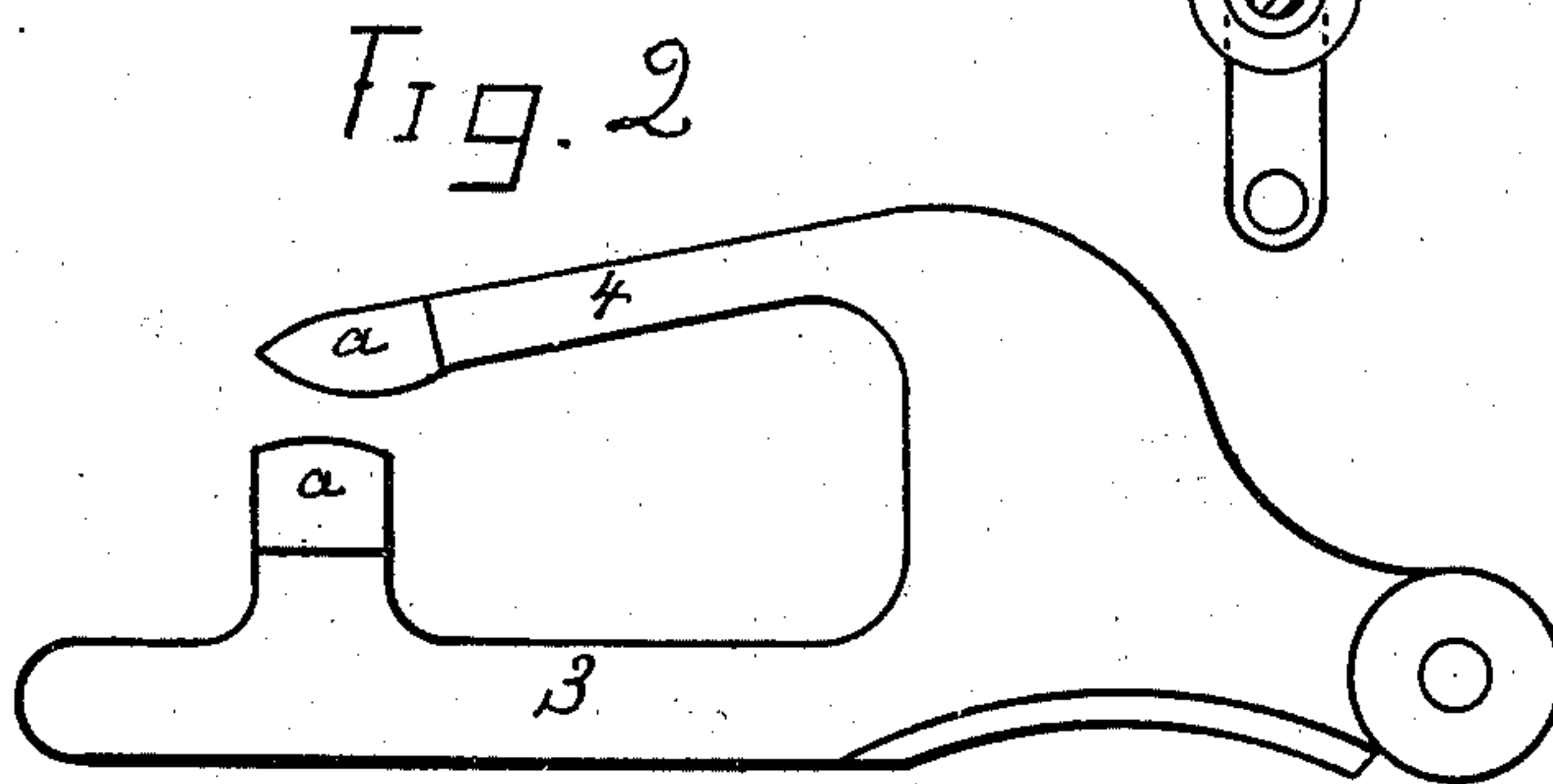
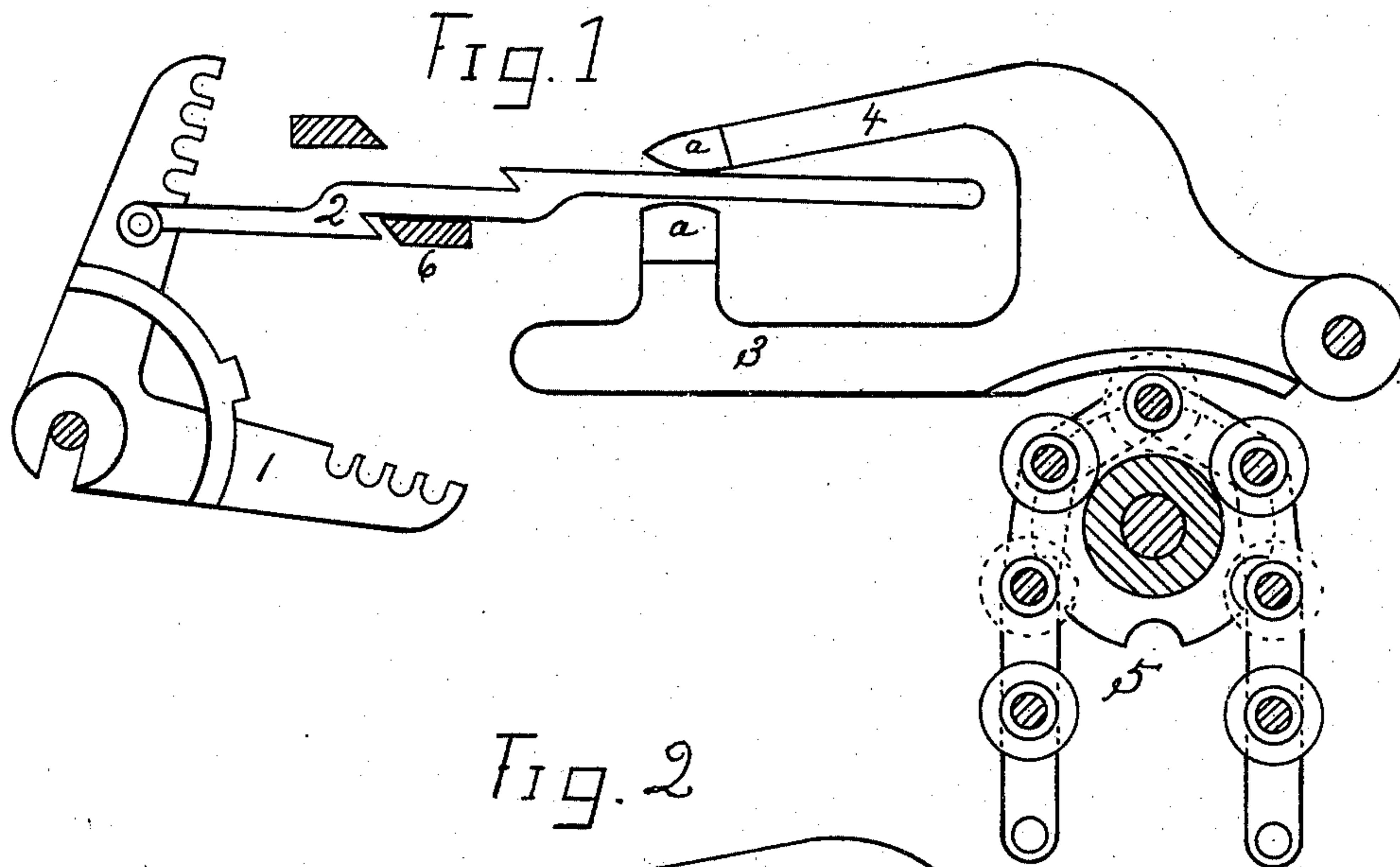
No. 612,645.

Patented Oct. 18, 1898.

J. HILTON.  
HARNESS MOTION FOR LOOMS.

(Application filed Nov. 22, 1897.)

(No Model.)



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHN HILTON, OF PHILADELPHIA, PENNSYLVANIA.

## HARNESS-MOTION FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 612,645, dated October 18, 1898.

Application filed November 22, 1897. Serial No. 659,518. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN HILTON, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in Harness-Motions for Looms, of which the following is a specification.

My invention relates to improvements in the mechanism for operating the harness or heddle-frames in looms and to that part of the mechanism which communicates the movements made by the pattern-chain to the horizontal-sliding jacks.

The objects of my invention are to make the pattern-chain act positively and prevent mis-picks in the pattern by a wrong movement of the heddles; and it consists in combining with the vibrator finger or lever a yoke that prevents a rebound of the jack when dropped by the roller in the pattern-chain. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a diagram showing a face view of a right-angled lever, a jack, a vibrator lever or finger provided with my improvement, and a section of a roller pattern-chain. Fig. 2 is a face view of the vibrator-lever and yoke. Fig. 3 is an edge view of Fig. 2.

Similar letters and numerals of reference refer to like parts in all views.

1 represents the right-angled harness-lever; 2, the double-hook moving jack; 3, the vibrator-lever; 4, the yoke, and 5 a section of

a roller pattern-chain. The lever 1, jack 2, lever 3, and pattern-chain 5 are such as are extensively used and are well known in the arts. Therefore a description here is not required.

My invention solely resides in the yoke 4, combined with lever 3 and jack 2, and is plainly shown in Figs. 1 and 2. The yoke 4 is cast to and forms a part of the lever 3. The jaw *a a* is such that it permits the jack 2 to freely slide between.

When looms are run at a high speed, the roller pattern-chain 5 moves quick, and when the roller drops the lever 3 (if no yoke to prevent) sometimes the lever 3 rebounds and knife 6 will miss the bottom hook in jack 2 and make a mispick. If lever 3 is provided with the yoke 4, a miss cannot happen.

With my improvements I am able to run the loom faster and make perfect cloth.

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

In a heddle-motion for looms, the combination of a pattern-controlling mechanism, a vibrator-lever, having formed thereon a yoke, a double-hook sliding jack engaging between said yoke, whereby a rebound of the jack is prevented; in the movement given it by the pattern mechanism, all substantially as shown and described.

JOHN HILTON.

Witnesses:

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