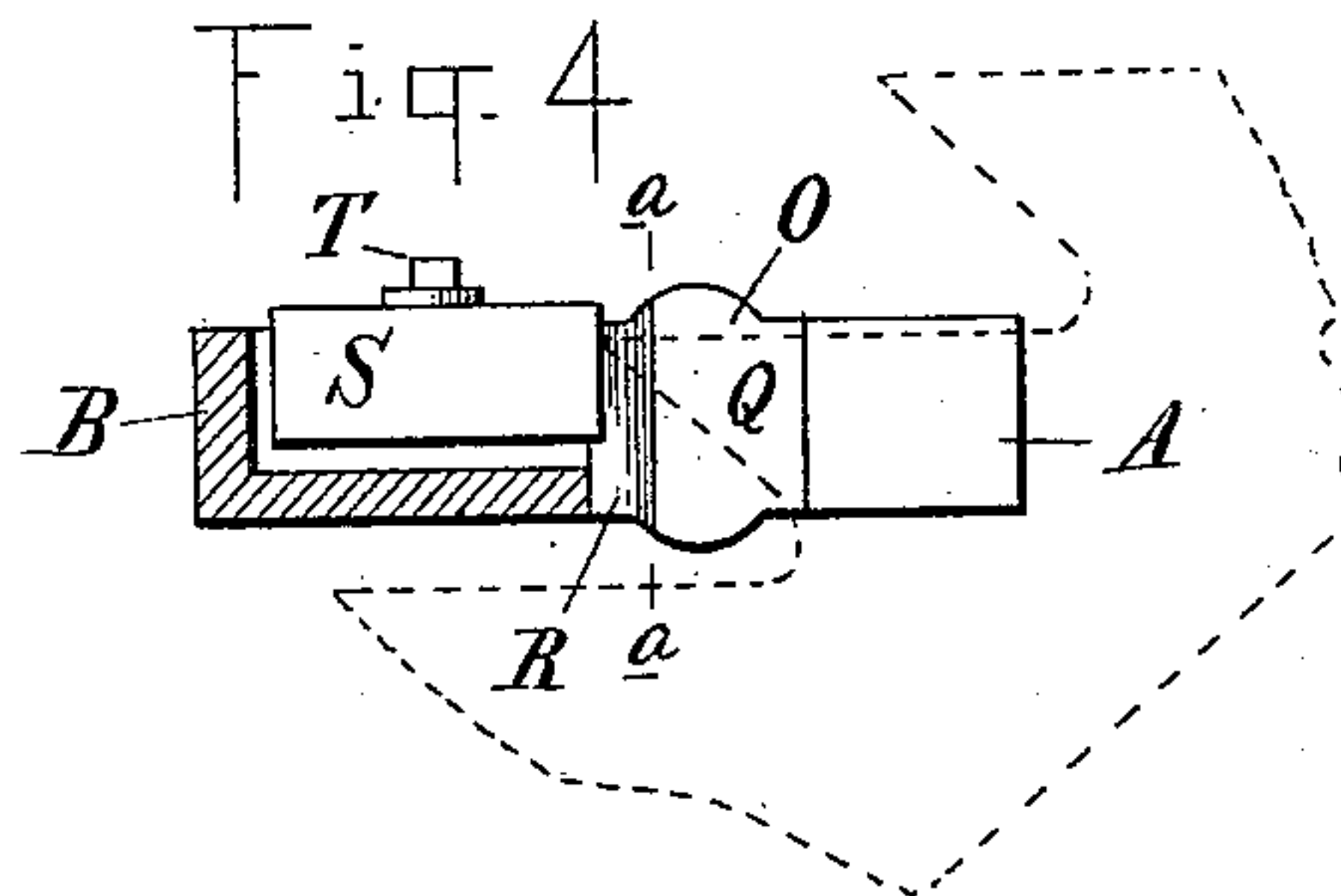
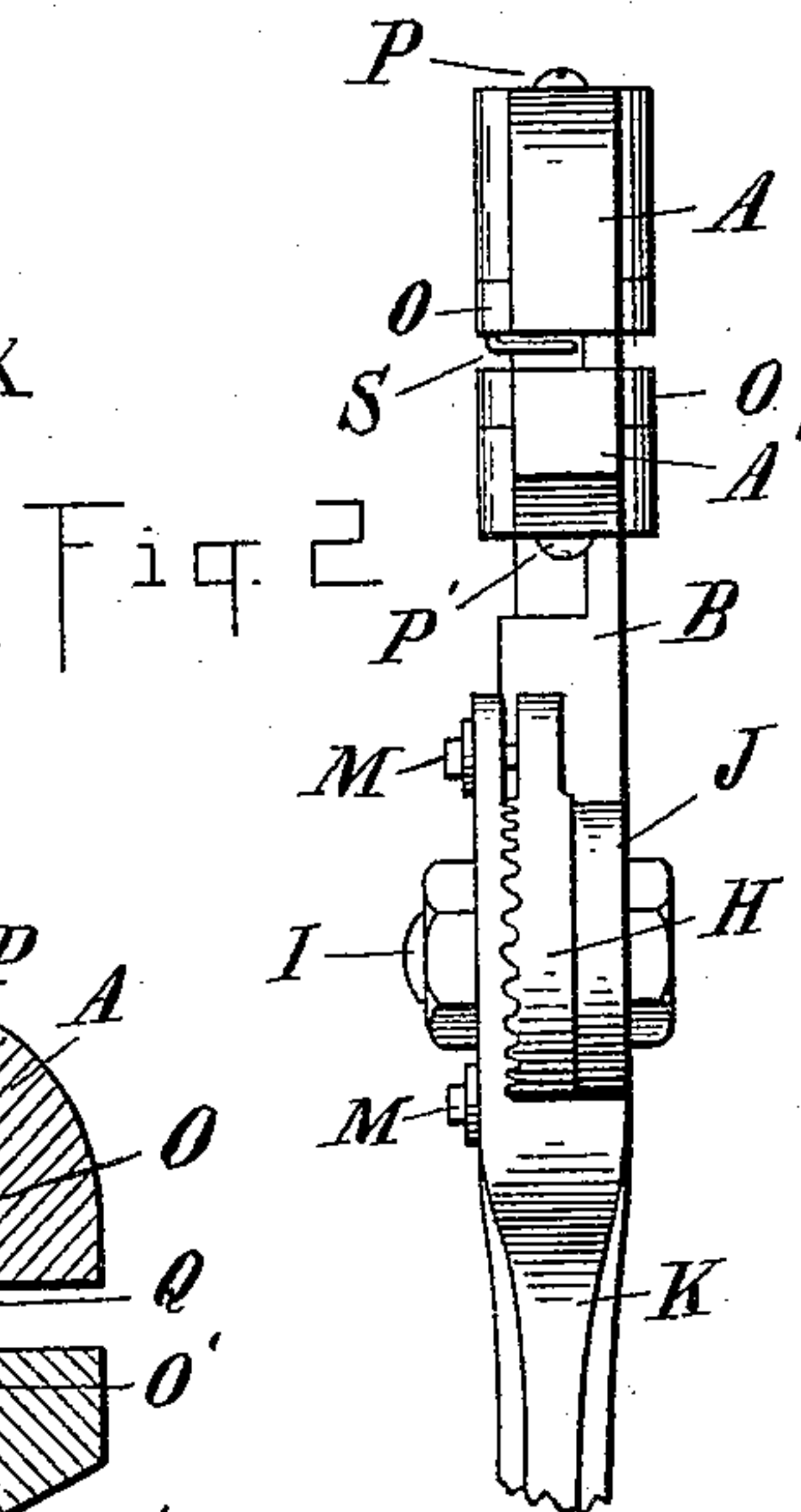
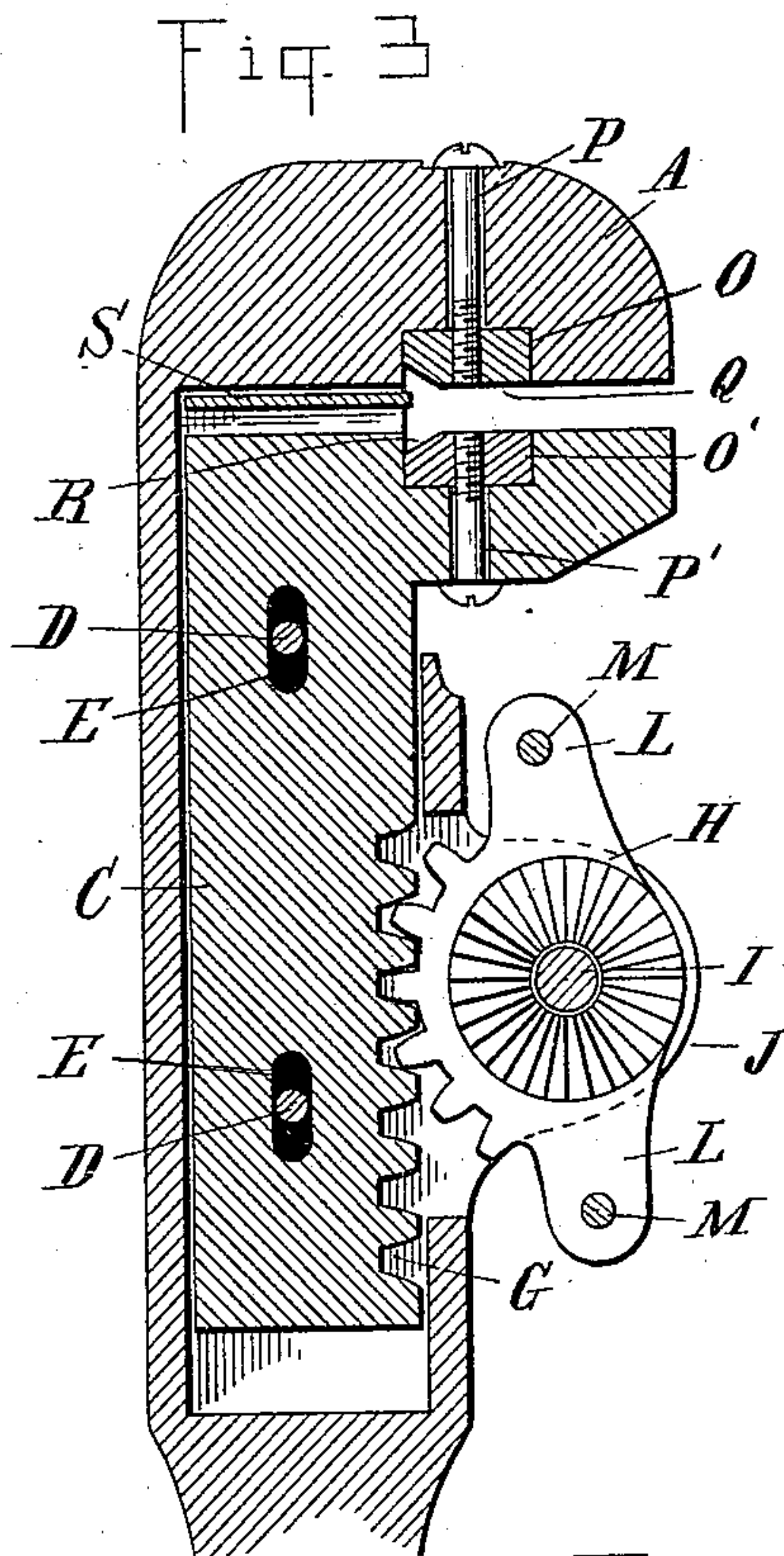
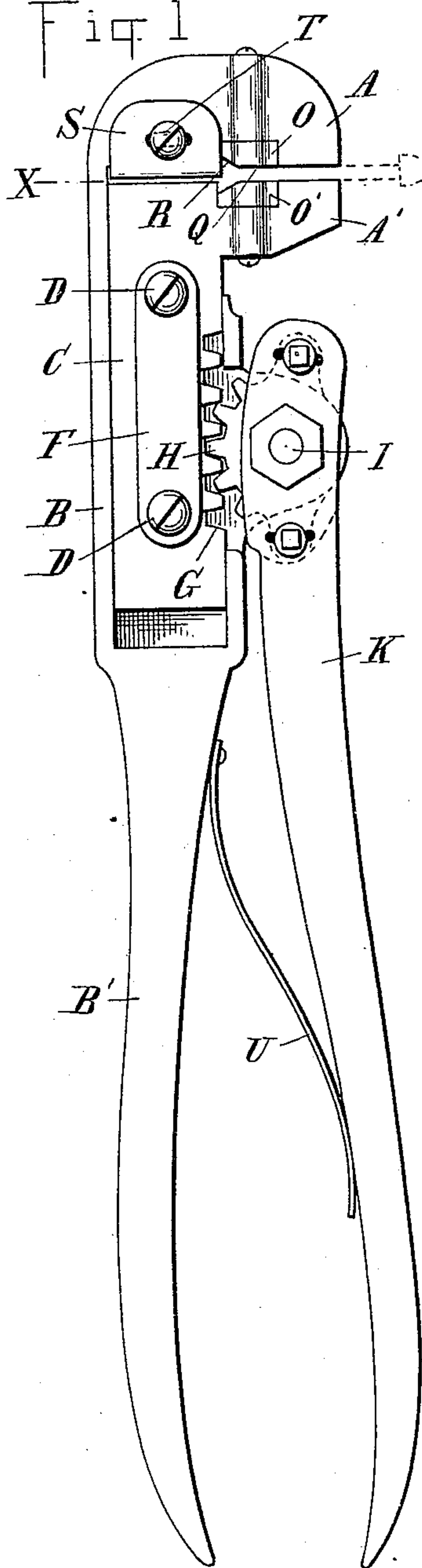


(No Model.)

C. H. WESTON.
DEVICE FOR SIDE DRESSING SAW TEETH.

Patented Apr. 29, 1890.

No. 426,889.



Witnesses:

P. M. Hulbert

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UNITED STATES PATENT OFFICE.

CLINTON HARRISON WESTON, OF MOUNT CLEMENS, MICHIGAN.

DEVICE FOR SIDE-DRESSING SAW-TEETH.

SPECIFICATION forming part of Letters Patent No. 426,889, dated April 29, 1890.

Application filed December 16, 1889. Serial No. 333,939. (No model.)

To all whom it may concern:

Be it known that I, CLINTON HARRISON WESTON, a citizen of the United States, residing at Mount Clemens, in the county of Macomb and State of Michigan, have invented certain new and useful Improvements in Tools for Side-Dressing Saw-Teeth, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in a machine for dressing saw-teeth, or more specifically for side-dressing or side-jointing the saw-teeth after having been operated upon with a saw-swage.

My invention consists, first, in the application of dies for the purpose of dressing the teeth, and, second, in the novel arrangement, construction, and operation of the different parts of the device, all as more fully herein-after described, and shown in the accompanying drawings, in which—

Figure 1 is a side elevation of my device. Fig. 2 is an elevation looking at the front edge of the tool. Fig. 3 is a vertical section in a parallel plane to the elevation in Fig. 1. Fig. 4 is a section on line $x x$ of Fig. 1.

The machine has the general characteristics of tongs provided with laterally-projecting jaws A and A', which are adapted to move parallel to each other, as in a vise. The stationary jaw A is integrally formed at the end of the shank B, which terminates in a handle B', and a movable jaw A' is provided with a shank C, which is slidingly secured to the shank B of the stationary jaw in any suitable manner, such as is shown in the drawings, wherein it is secured in a recess formed in the shank of the stationary jaw by means of the screws D, which pass through slots E, with a washer-plate F interposed between the head of the screws and the shank C. The inner edge of the shank C has formed upon it a toothed rack G, which engages with the teeth of a pinion H. This pinion turns upon a pivot I, which passes through an ear J, formed on the shank B, and has a handle K adjustably secured upon it, preferably as shown in the drawings, wherein L are two ears formed on the pinion to which the handle is secured by means of screws or bolts M, which pass through the circular slots N in the handle. The adjacent faces of the handle

and pinion are preferably provided with radial serrations adapted to engage into each other. By this means the adjustment of the handle in relation to the pinions may be altered for different thicknesses of saw-plate, as will be described more fully hereinafter.

O and O' are two dies secured in corresponding recesses in the inner faces of the jaws A A' near the bottom thereof, and P P' are two screws which detachably secure the two dies in their recesses. The dies are provided with the parallel faces Q and inclined faces R, the former being flush with the inner faces of the jaws.

S is a gage adjustably secured by a screw T or otherwise to the stationary jaw.

In practice, the parts being arranged as shown and described, it is used as follows: The operator, after having clamped the jaw in stationary position, engages the saw-tooth to be dressed between the edges of the machine in relative position, as shown in Fig. 4—that is, with the back of the saw-tooth in the plane of the machine and with the cutting-point of the tooth against the gage S. Then by pressing the two handles B' and K together he grips the jaws firmly against the sides of the tooth. In this position it will be seen that the base portion of the tooth is gripped between the faces of the jaws, while the point of the tooth is gripped between the faces of the dies, with the sides of the swaged portion of the point between the angular faces of the dies. Thus it will be seen both sides of the tooth are dressed at once, and with the same adjustment of the parts every tooth will be dressed alike. After releasing the pressure on the handle the spring U is adapted to open the dies sufficiently to disengage the machine from the tooth, and by means of the adjustment of the movable handle K in relation to the pinion H it will be seen that the two handles may be brought in such relation to each other that the operator may span them both with one hand for the purpose of pressing the jaws together when the saw-plates of different thickness are operated upon, and thus the operator has one hand free to engage the tool and hold it in proper relation upon the saw-tooth that is being operated upon. The saw-gage S, it will be observed, can be adjusted from or toward the

dies, whereby the degree of spread of the cutting-edge is determined.

In the present state of the art side-dressing or side-jointing of the saws is accomplished by filing, and it will be observed that by such a process only a partial dressing can be accomplished, as if a tooth is bent to one side it will not be straightened, nor can a tooth be dressed uniformly if the swaging-machine has not spread the tooth to both sides. My machine, it will be seen, straightens the teeth, and also rectifies any irregularity of the swaging of the teeth. A further advantage of my machine is that the tooth is in no wise weakened, as the material is compressed and distributed on the point of the tooth forward of the line *a a*, as indicated in Fig. 4, which line is at right angles to the back of the saw-teeth.

In side-jointing machines where the dressing is accomplished by filing it will be seen that considerable material is removed and the point is left relatively weak.

What I claim is—

1. In a machine for dressing saw-teeth, the combination of a stationary and movable jaw having parallel outer and inclined inner gripping-faces arranged, respectively, opposite each other, whereby the swaged portion of a saw-tooth may rest between the inclined portion and the sides between the parallel portion, and means for operating the jaws, substantially as described.

2. In a machine for dressing saw-teeth, the

combination of the stationary and movable jaws, the stationary and movable handles for moving the same, of the side dies secured in recesses in the inner faces of the jaws and formed with straight and angular faces, substantially as described.

3. In a machine for dressing saw-teeth, the combination of the stationary and sliding jaws, the stationary and movable handles for clamping them together, the side dies secured in recesses on the inner faces of the jaws and having the angular faces adapted to bear against the sides of the swaged point of the saw-tooth, and the gage adapted to regulate the degree of insertion of the saw-teeth, substantially as described.

4. In a machine for dressing saw-teeth, the combination of the jaws *A A'*, the shank *B* of the stationary jaw having a handle *B'* and provided with a recess, the shank *C* of the movable jaw slidingly secured therein and provided with a rack-bar, the pinion *H*, engaging therein and having the handle *K* adjustably secured thereto, the side dies *O O'*, secured in the jaws, and the saw-gage *S*, substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 18th day of November, 1889.

CLINTON HARRISON WESTON.

Witnesses:

P. M. HULBERT,
GEO. A. GREGG.