

No. 777,025

PATENTED DEC. 6, 1904.

H. JACOBSEN.
WRENCH.

APPLICATION FILED MAY 25, 1904.

NO MODEL.

2 SHEETS—SHEET 1.

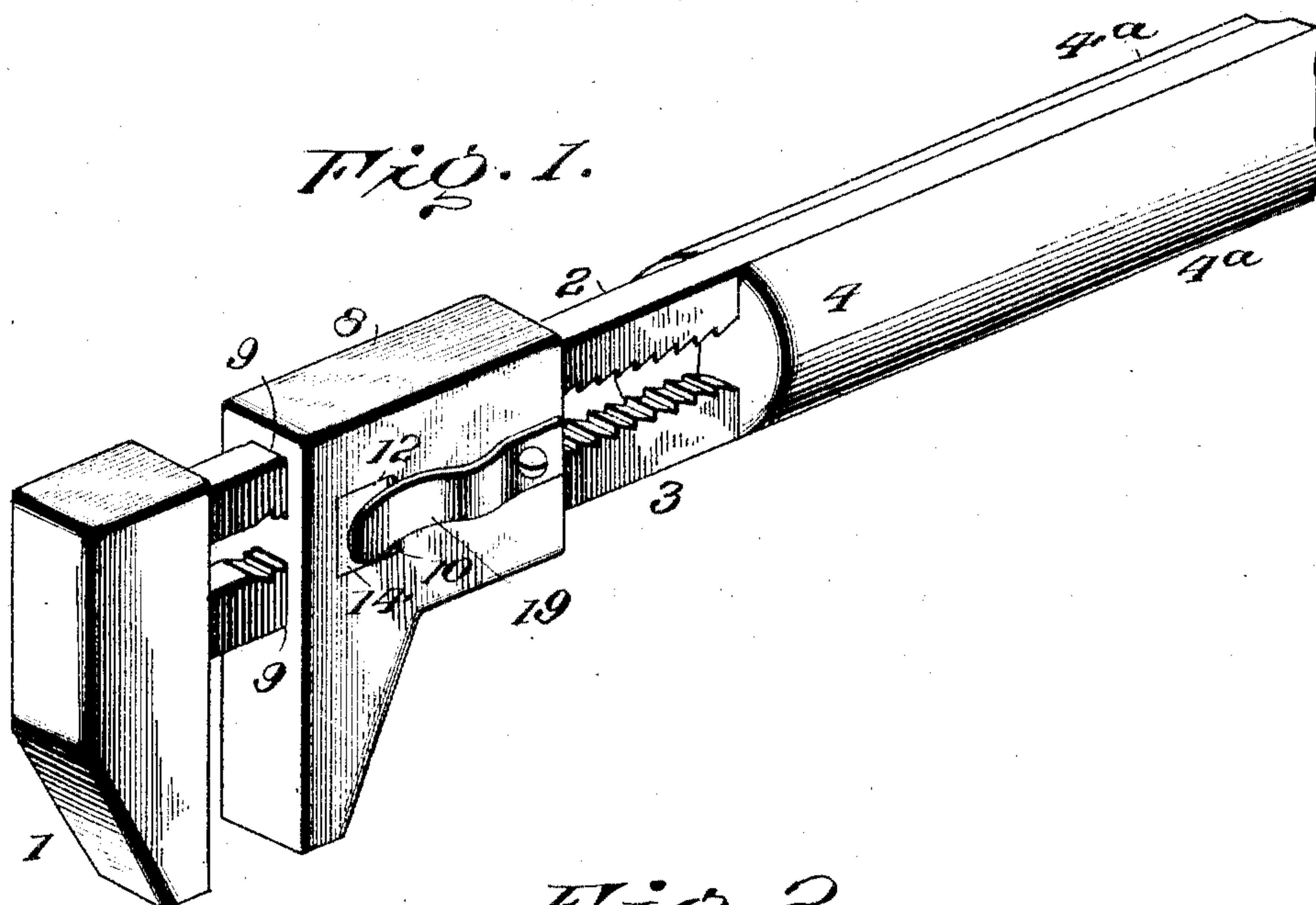


Fig. 2.

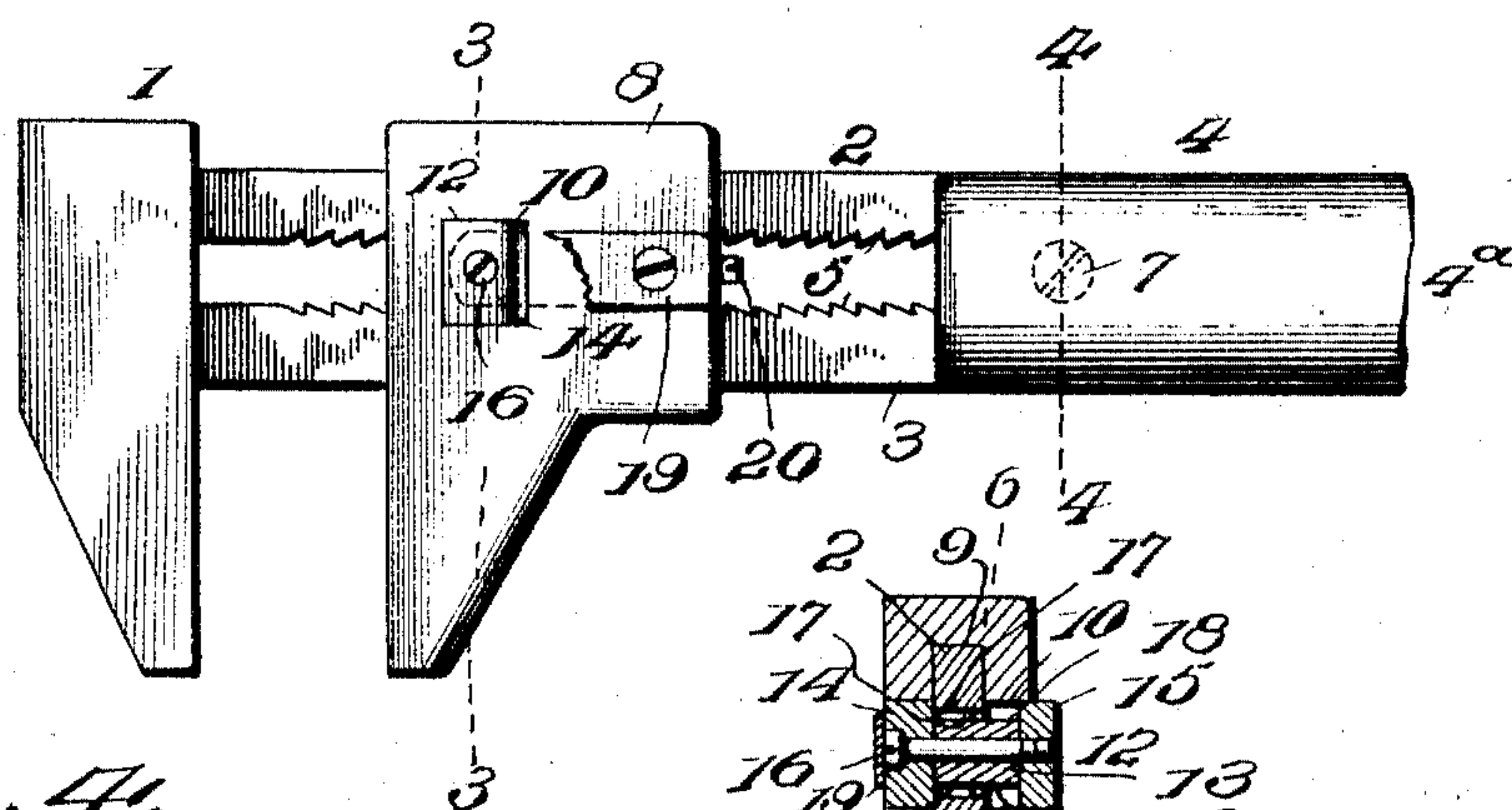


Fig. 4.

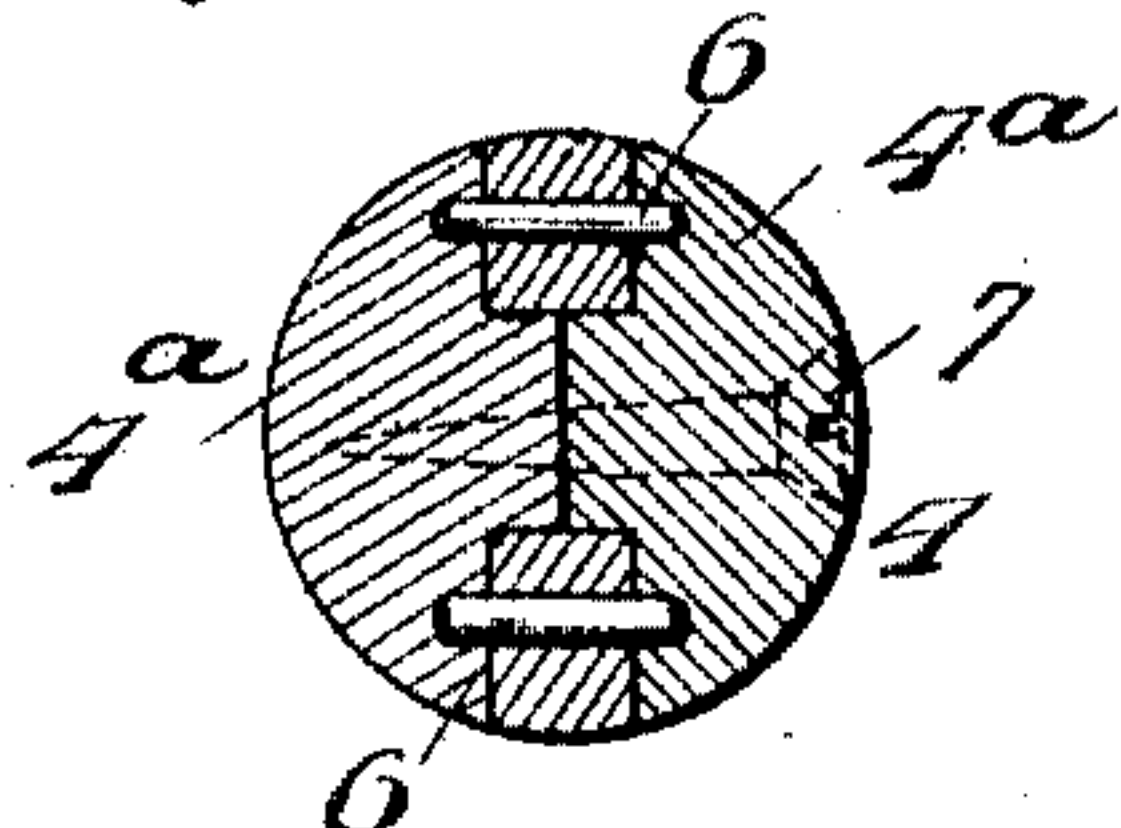
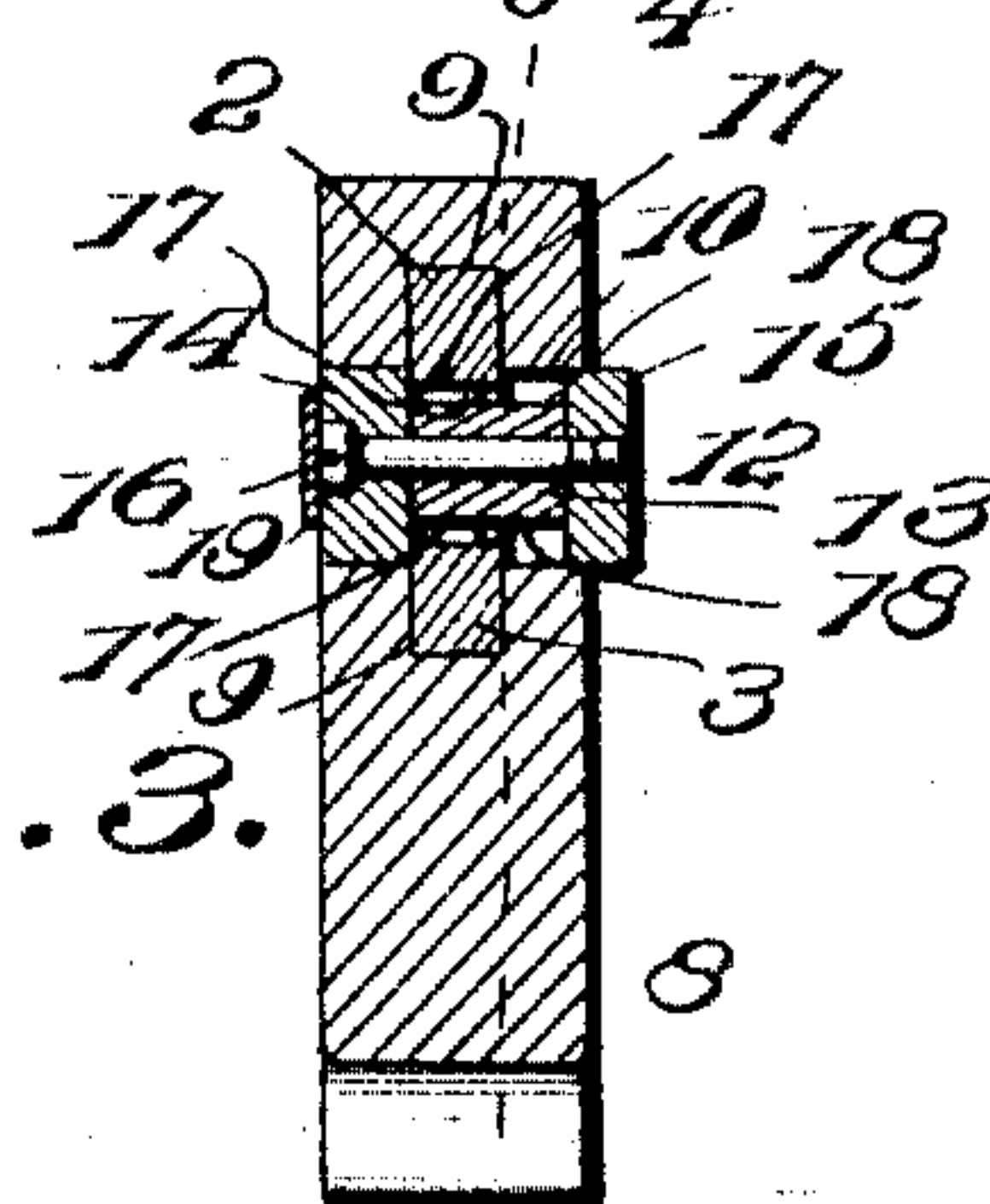


Fig. 3.



Inventor

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Witnesses

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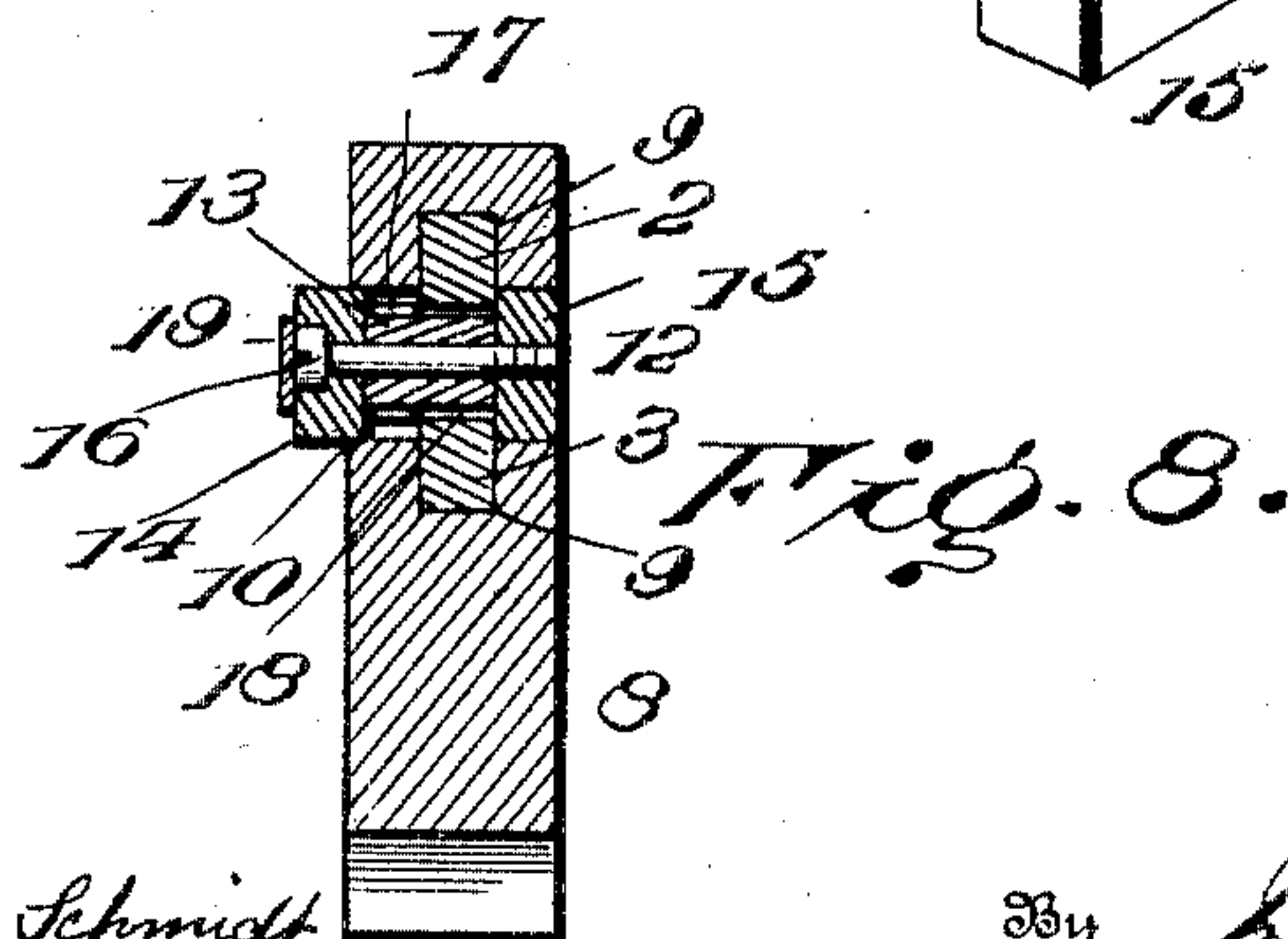
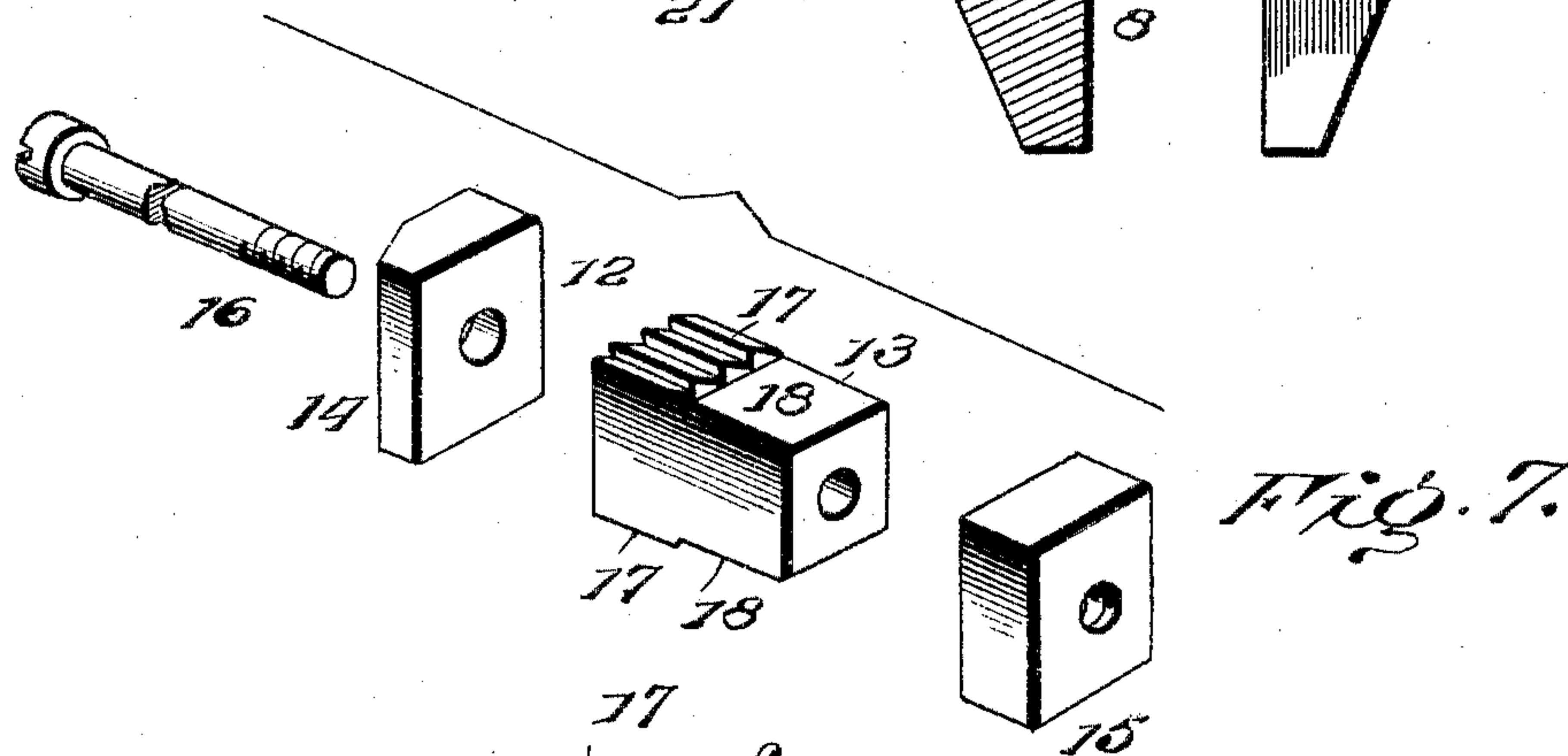
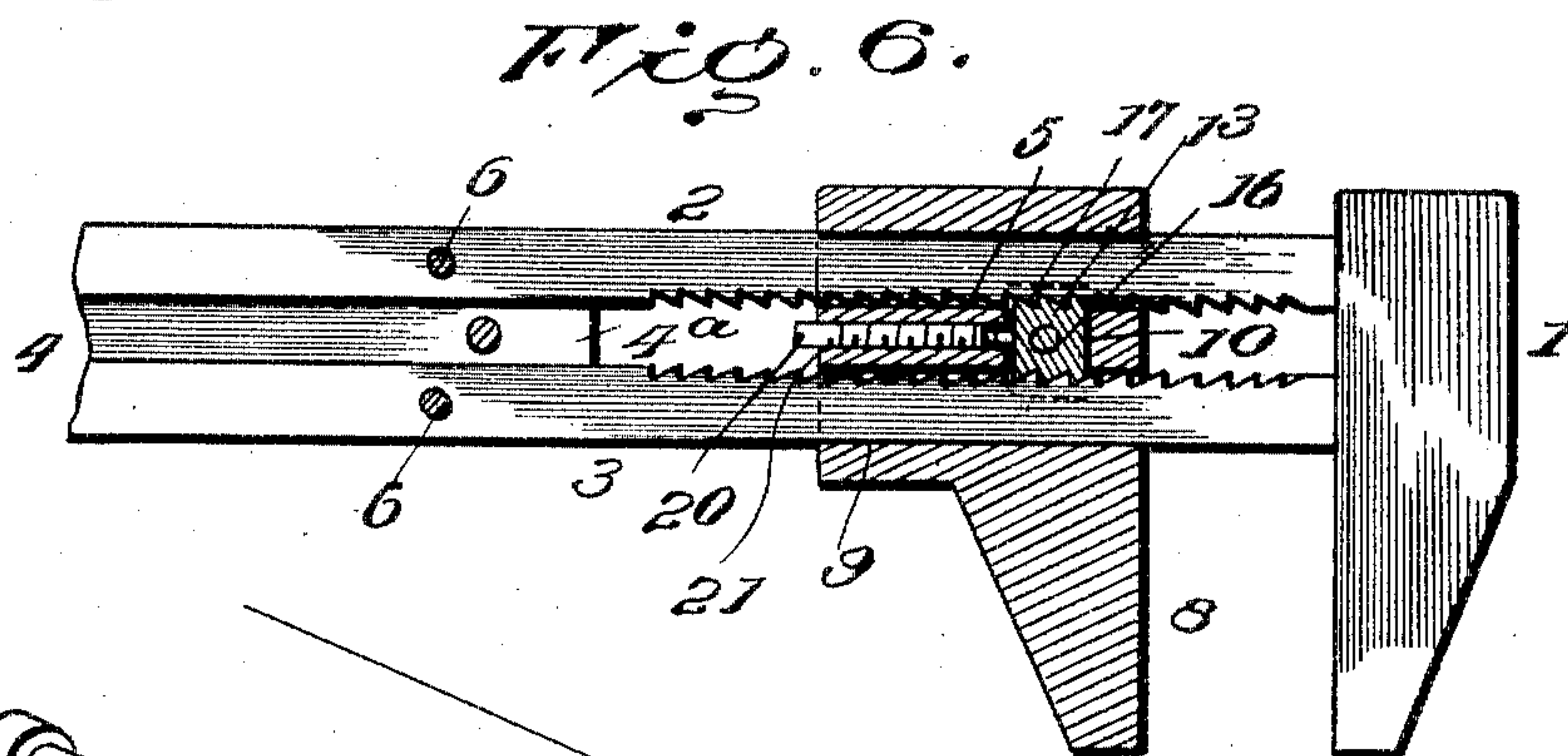
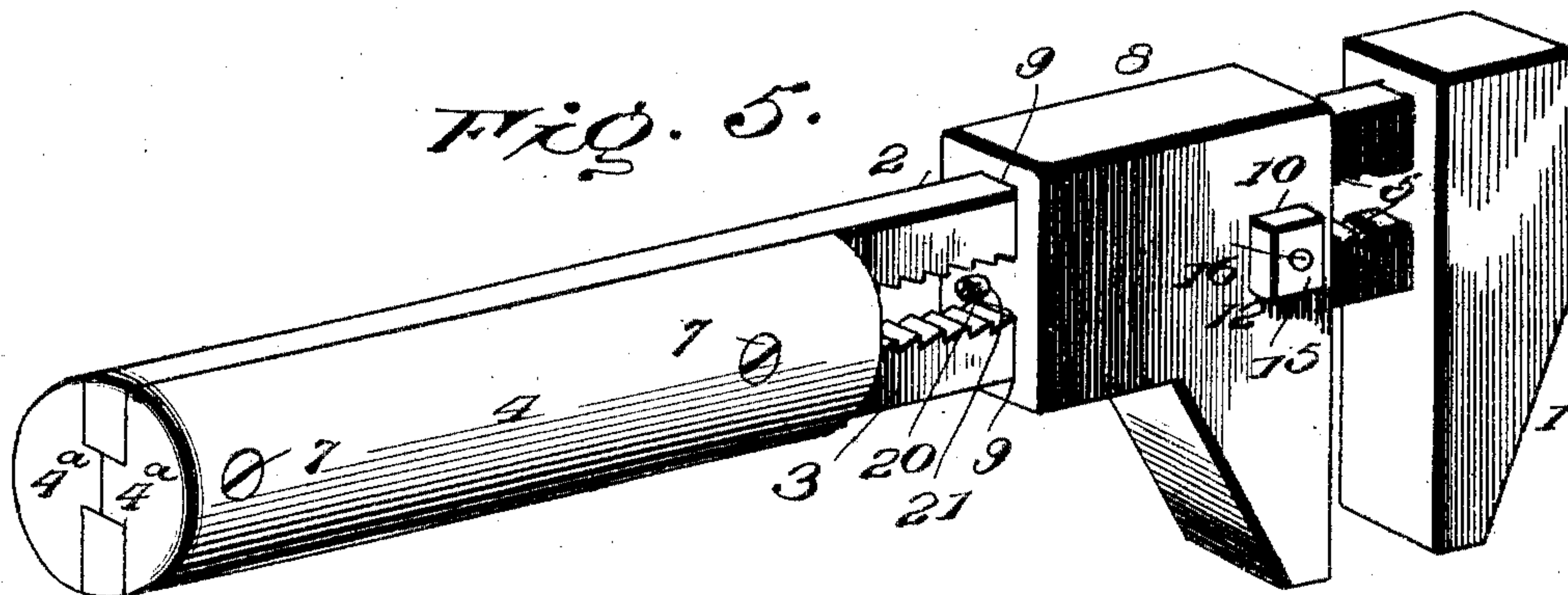
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2 SHEETS—SHEET 2.



Witnesses

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Inventor

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UNITED STATES PATENT OFFICE.

HUGO JACOBSEN, OF KANKAKEE, ILLINOIS.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 777,025, dated December 6, 1904.

Application filed May 25, 1904. Serial No. 209,721. (No model.)

To all whom it may concern

Be it known that I, HUGO JACOBSEN, a citizen of the United States, residing at Kankakee, in the county of Kankakee and State of Illinois, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates to improvements in wrenches; and its object is to provide a cheap and economical structure that will withstand the strain incident to this class of tools.

A further object of the invention is to provide two series of teeth and a slidable holding-dog laterally disposed and movable between the teeth, whereby the movable jaw can be quickly and conveniently located with relation to the fixed jaw.

Many other objects and advantages will be hereinafter referred to, and be particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of my improved wrench. Fig. 2 is a side elevation. Fig. 3 is a cross-section on the line 3 3, Fig. 2. Fig. 4 is a similar view on the line 4 4, Fig. 2. Fig. 5 is a perspective view of my improved wrench looking from the side opposite that shown in Fig. 1. Fig. 6 is a vertical section on the line 6 6, Fig. 3. Fig. 7 is a detail perspective view of the locking-dog and its associated parts. Fig. 8 is a section similar to Fig. 3, the locking-dog being disengaged from its cooperating teeth.

The same numerals refer to like parts in all the figures.

1 represents the stationary jaw; 2 and 3, parallel bars extending from said jaw, and 4 a handle at the opposite ends of the bars. The inner faces of the bars are provided with teeth 5, and their outer ends have dowel-pins 6, which engage openings in the handle. The handle is formed of two sections 4^a 4^a, each section having grooves to receive the bars 2 and 3, and screws 7 secure the section and bars firmly together. This construction and arrangement of the handle and the bars is strong, and the parts can be quickly assembled or repaired, which is of vital importance in a wrench.

The movable jaw 8 is formed with two slots

9, through which the bars 2 and 3 are adapted to freely pass. A transverse slot 10 passes through the movable jaw and intersects the slots 9.

A locking-dog 12 works in the slot 10, and it comprises a dog proper, 13, and two end heads 14 and 15, held together by a screw 16. On the dog 13 are outwardly-extending teeth 17, which engage with the teeth 5 of the bars 2 and 3 and hold the movable jaw in a fixed position. The teeth 17 only extend partially across the faces of the dog, leaving plain surfaces 18 18. The heads are slightly larger than the dog and abut against the opposite sides of the bars 2 and 3, thus limiting the movement of the lock between the teeth. A flat spring 19 has one end secured to the side of the movable dog, and its free end bears against the end of the head 14 and forces it against the bars and the teeth 17 into engagement with the teeth 5.

The teeth 17, as well as the teeth 5, are liable to wear and produce a slight lost motion between the dog and the walls of the transverse slot, and to overcome this action and also to set the dog with relation to its coacting teeth I provide a set-screw 20. This screw passes through a threaded opening 21 in the movable jaw between the bars 2 and 3, and its inner end engages the dog 13 and forces it against the opposite end wall of the slot 10.

In sliding the movable jaw along the bars 2 and 3 the head 15 is pressed in, which disengages the teeth 17 and 5 and brings the plain surfaces 18 in alinement with the teeth of the bars when the jaw is free to be moved. The location of the jaw having been determined, pressure on the head 15 is relieved, and the spring then forces the dog back again to its normal position—i. e., the teeth into engagement with each other. When the teeth are in register, the movable jaw cannot be moved in either direction, as the thickness of the dog 13 and its teeth 17 are such as to fit to a nicety the space between the teeth of the bars 2 and 3. Any desired movement then of the jaw can only be effected by bringing the plain surfaces 18 in alinement with the teeth 5, as will be readily understood by reference to the drawings. The jaw 8 having been spaced from the

stationary jaw and then locked as described, obviously there is no possibility of its becoming accidentally disengaged.

What I claim as new is—

5 1. A wrench comprising a stationary jaw, a pair of bars extending from the jaw, teeth on the inner faces of the bars, a movable jaw slidably mounted in the bars and formed with a transverse slot, a dog having teeth on oppo-
10 site faces and on one end and, adjacent plain surfaces at the other end, and a spring which normally holds the teeth of the dog and of the bars into engagement with each other, the movable jaw being slidable on the bars only
15 when the plain surfaces of the dog are in alignment with the teeth of the bars, substantially as described.

2. A wrench comprising a stationary jaw, a pair of bars extending from said jaw, teeth
20 on the inner faces of the bars, a movable jaw slidably mounted on the bars, a transverse slot in the movable jaw, a dog mounted in the slot, said dog consisting of a dog proper having teeth at one end which engage the
25 teeth of the bars and adjacent plain surfaces, heads on the ends of the dog, said heads limiting the movement of the dog by abutting against the bars, and a spring which normally holds the teeth of the dog and the bars in en-
30 gagement to fix the movable jaw on the bars, said movable jaw being movable in either direction only when the plain surfaces of the dog are in alignment with the teeth of the bars, substantially as described.

35 3. A wrench having a rigid jaw provided with a shank comprising two parallel guide-bars provided with oppositely-disposed teeth, a sliding jaw on the shank, a sliding locking part carried by and movable transversely of

the jaw, and having teeth to engage those on 40 the shank, and a set-screw carried by the movable jaw which bears against the sliding part and adapted to take up wear between the engaging teeth, substantially as described.

4. A wrench comprising a stationary jaw, 45 a slotted bar projecting from the jaw, teeth on the bar, a movable jaw, a dog mounted in the movable jaw, a plain surface at one end of the dog, teeth on the opposite end of the dog and in alignment with the plain surface, 50 a spring for normally holding the teeth in engagement, heads at each end of the dog which are slightly wider than the dog, said heads abutting against the bar and limiting the movement of the dog in either direction, and 55 a fastening device for securing the heads and dog together, substantially as described.

5. A wrench comprising a stationary jaw, a bar projecting from said jaw which is formed with an intermediate slot and provided with 60 oppositely-disposed teeth, a movable jaw surrounding the bar and having an intermediate portion fitting in the slot, a dog fitting in a bearing in the intermediate portion of the jaw, said dog having teeth on opposite sides 65 to cooperate with the teeth of the bar, and a spring which normally holds the teeth of the dog in engagement with the teeth of the bar, the movable jaw being slidable on the bar by pushing the dog laterally until the teeth are 70 out of engagement, substantially as described.

In testimony whereof I have signed my name to this specification in presence of two witnesses.

HUGO JACOBSEN.

Witnesses:

C. O. SAVOIE,

HENRY F. RUEL.