

No. 775,398.

PATENTED NOV. 22, 1904.

F. HACHMANN.
WRENCH.

APPLICATION FILED APR. 6, 1904.

NO MODEL.

Fig. 1.

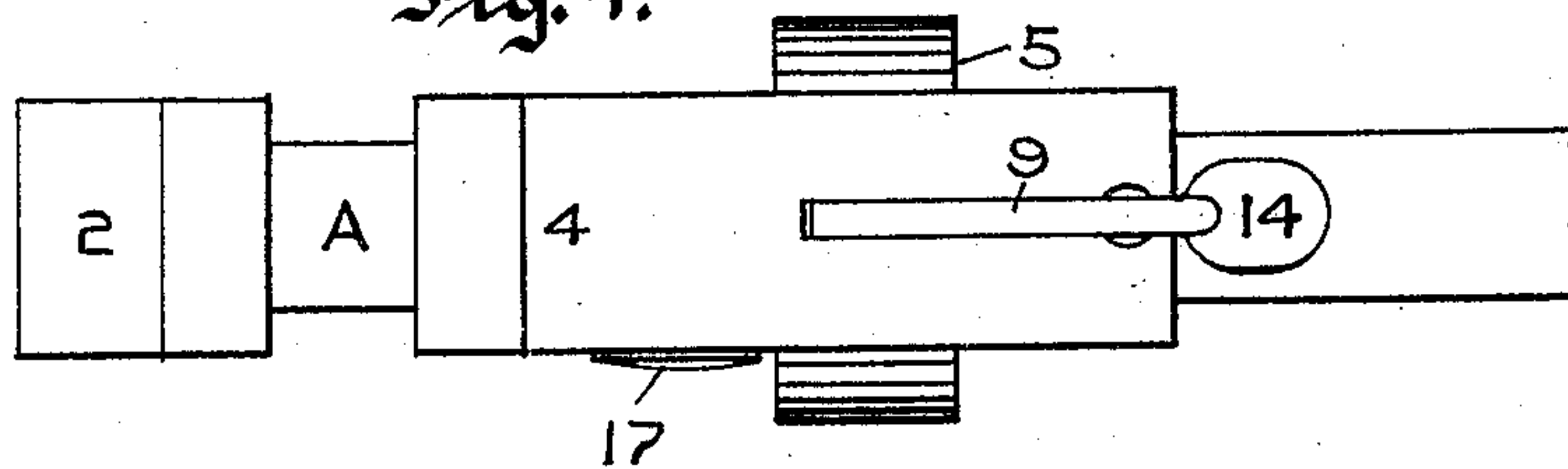


Fig. 3.

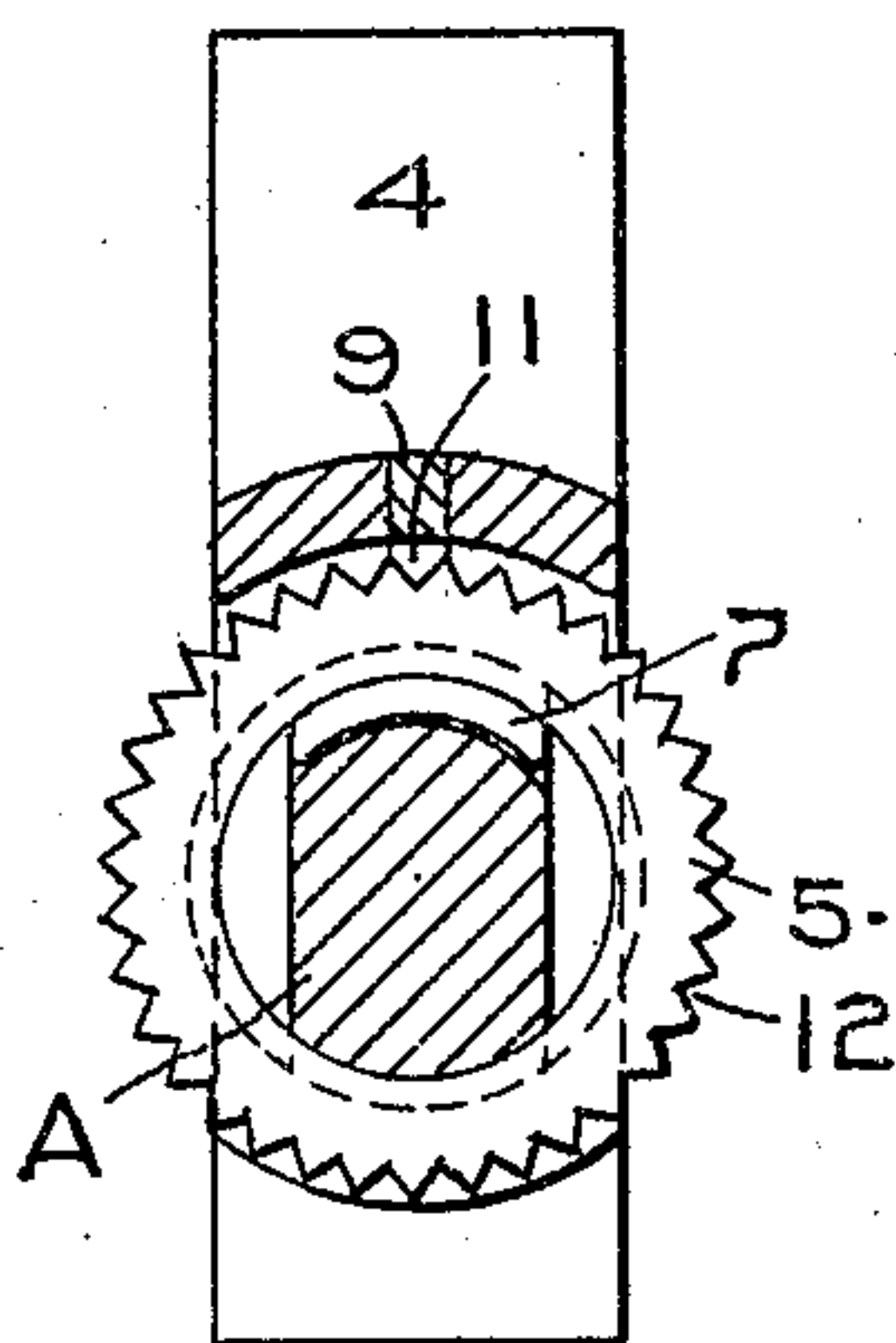


Fig. 2.

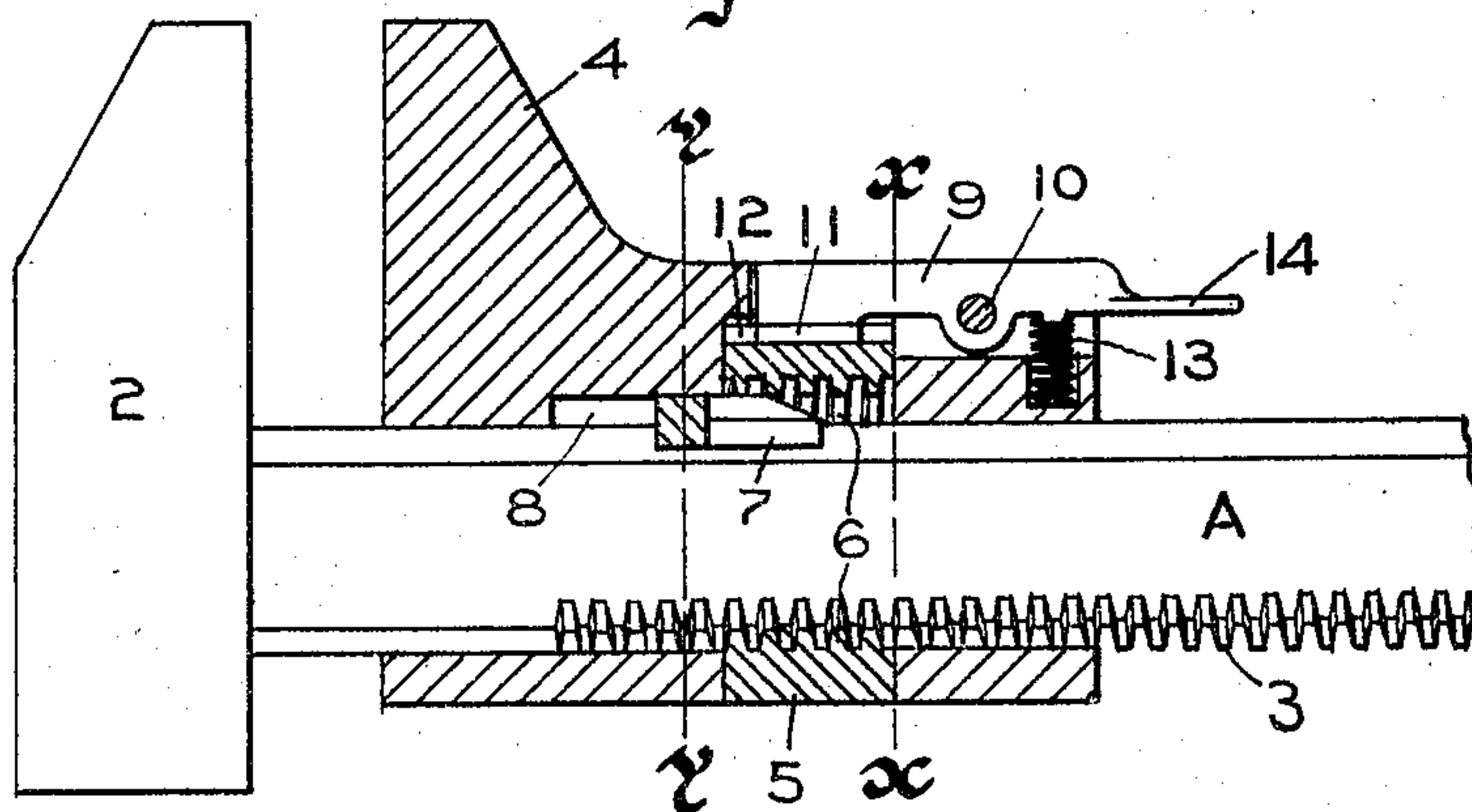


Fig. 4.

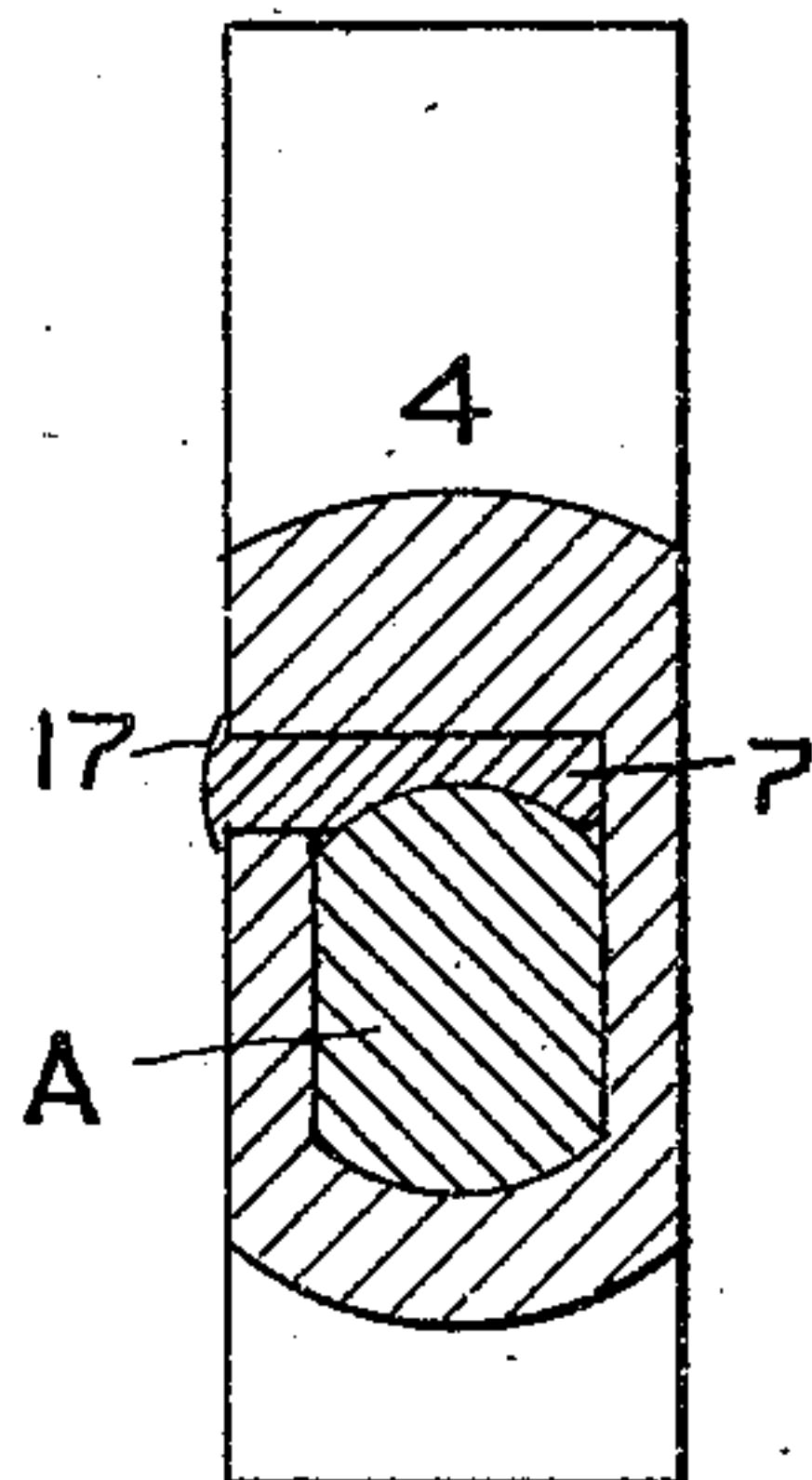


Fig. 5.



Fig. 6.

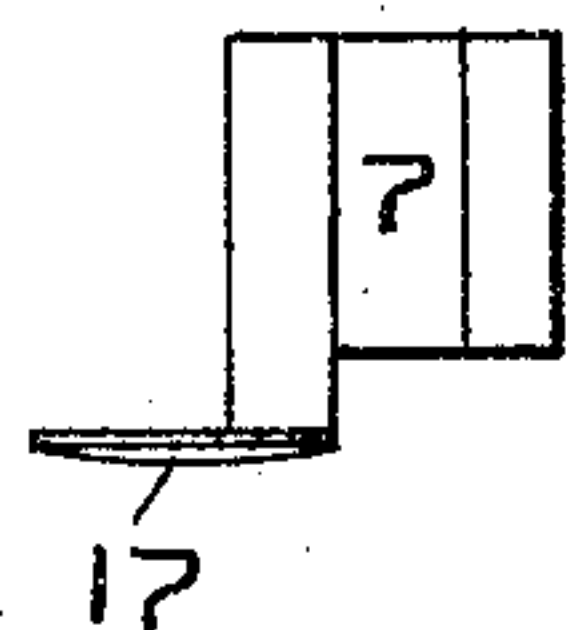
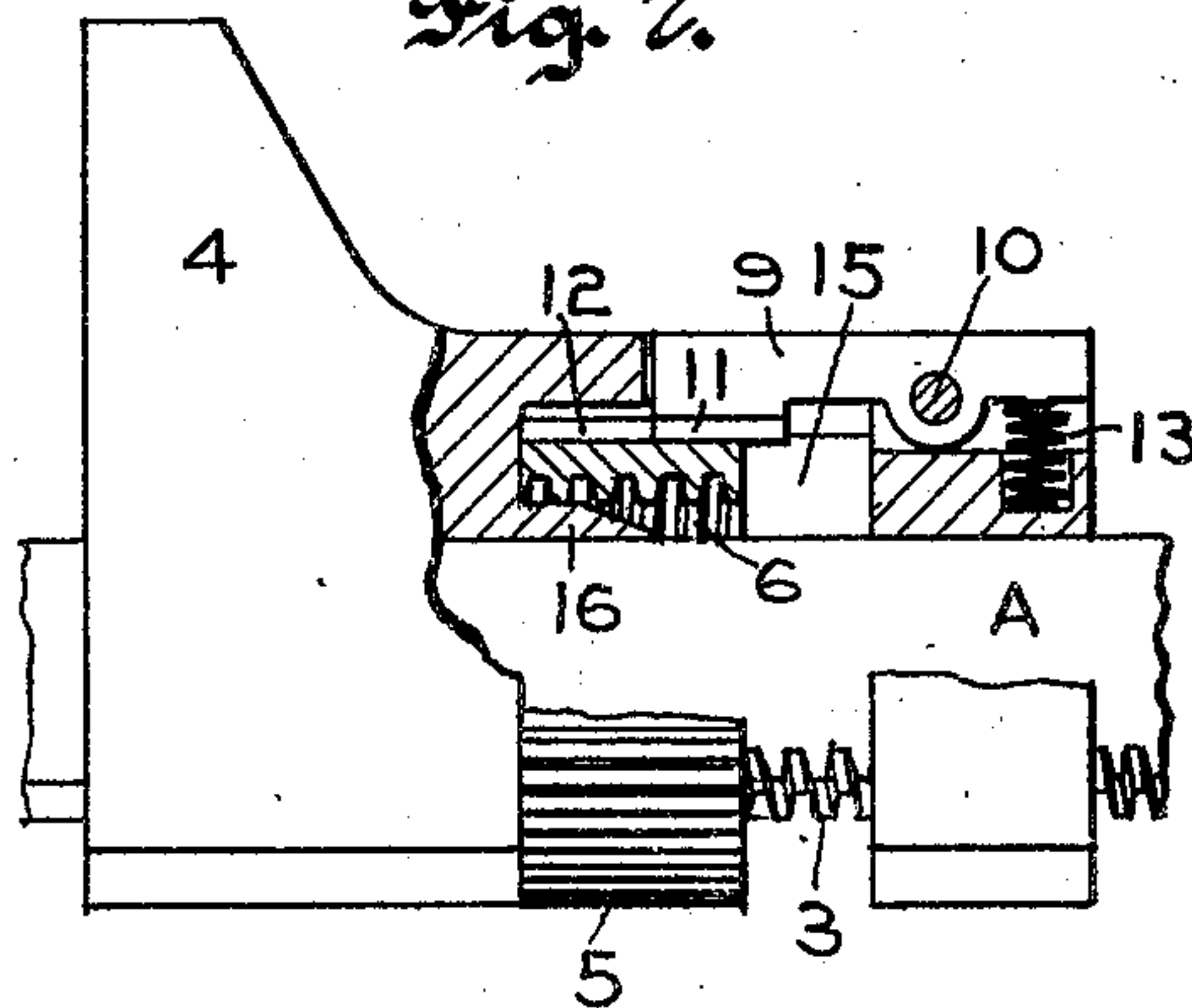


Fig. 7.



Witnesses,
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UNITED STATES PATENT OFFICE.

FREDERICK HACHMANN, OF ST. PAUL, MINNESOTA, ASSIGNOR OF ONE-THIRD TO L. H. STILES, OF RED WING, MINNESOTA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 775,398, dated November 22, 1904.

Application filed April 6, 1904. Serial No. 201,789. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK HACHMANN, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

My invention relates to improvements in wrenches; and it consists in the features of construction and combination hereinafter particularly described and claimed.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of my improved wrench. Fig. 2 is a side elevation partly in section. Fig. 3 is a section on line *x x* of Fig. 2. Fig. 4 is a section on line *y y* of Fig. 2. Figs. 5 and 6 are detail views of a slide forming part of my invention; and Fig. 7 is a side elevation of a portion of the wrench, shown partly in section and showing a modified form of operating parts.

In the drawings, A represents the main bar of the wrench formed with a laterally-projecting jaw 2 and is formed upon its outer side with threads 3.

4 represents a jaw slidable upon the bar A. Loosely fitted within an opening in the side of the jaw and surrounding the guide-bar is a ring 5, formed with inner threads 6 to engage with the threads 3 to form an adjusting-nut for the slidable jaw. The nut 5 is sufficiently larger than the guide-bar to stand out of contact with the threads 3 when in lowered position. In order to raise the nut and bring it into engagement with the thread 3, I provide a cam 7, slidable upon the inner face of the guide-bar within the opening 8 in the slidable jaw and having a thumb-piece 17. The nut is raised by sliding the cam forward within the nut, as shown in Fig. 2. In order to hold the nut in inoperative position, I provide a lever 9, having fulcrum-support 10 upon the slidable jaw and provided with a tapered end 11, engaging with the serrations 12 of the nut, the lever being held pressed against the nut by means of a suitable spring 13. The lever may be provided with an actuating-handle 14.

In the modified form shown in Fig. 7 the nut itself is slidable in an opening 15 in the slidable jaw and is actuated by being shoved over the cam 16, carried by the jaw. The construction otherwise corresponds with that shown in the remaining figures.

In the operation of the preferred form the cam is shoved within the nut to carry the nut into engagement with the thread 3, when by turning the nut in the ordinary manner the movable jaw is adjusted. When the cam is moved out of engagement with the nut, the lever 9 will hold the nut out of engagement with the thread 3, allowing the slidable jaw to be moved upon the guide-bar.

In the form shown in Fig. 7 the same results are accomplished by moving the nut and jaw to carry the cam 16 into or out of the nut.

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

1. A wrench of the class described, consisting of a bar carrying a fixed jaw and provided with threads upon one side, a movable jaw, a nut within said jaw, and a cam engaging with said nut to carry it into engagement with said thread.

2. In combination, a wrench-bar being threaded upon one side and provided with a fixed jaw, a jaw slidable upon said bar, a movable nut carried by said slidable jaw, means normally holding said nut out of engagement with the threaded side of said bar, and means for actuating said nut to carry it into engagement with the threaded side of said bar.

3. A wrench of the class described, comprising a bar threaded upon one side and provided with a fixed jaw, a jaw slidable upon said bar, an interiorly-threaded nut loosely surrounding said bar, a spring-pressed lever normally holding said nut out of engagement with the threaded side of said bar, and means for carrying said nut into engagement with the threaded side of said bar.

4. A wrench of the class described, comprising in combination, a bar threaded upon one side and carrying a fixed jaw, a jaw slidable upon said bar, an interiorly-threaded

nut loosely surrounding said bar, a spring-pressed lever arranged to hold said nut out of engagement with the threaded side of the bar, and a cam arranged to engage with the inner face of said nut to carry the same into engagement with the threaded side of said bar.

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10 5. A wrench of the class described, comprising in combination a bar threaded upon one side and carrying a fixed jaw, a jaw slidable upon said bar, a nut loosely arranged within said jaw and surrounding said bar, a spring-pressed lever normally holding said

nut out of engagement with the threaded side of said bar, and a slidable cam arranged to engage with the inner face of said nut and to hold the same in engagement with the threaded side of said bar.

In testimony whereof I affix my signature in presence of two witnesses.

FREDERICK HACHMANN.

Witnesses:

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