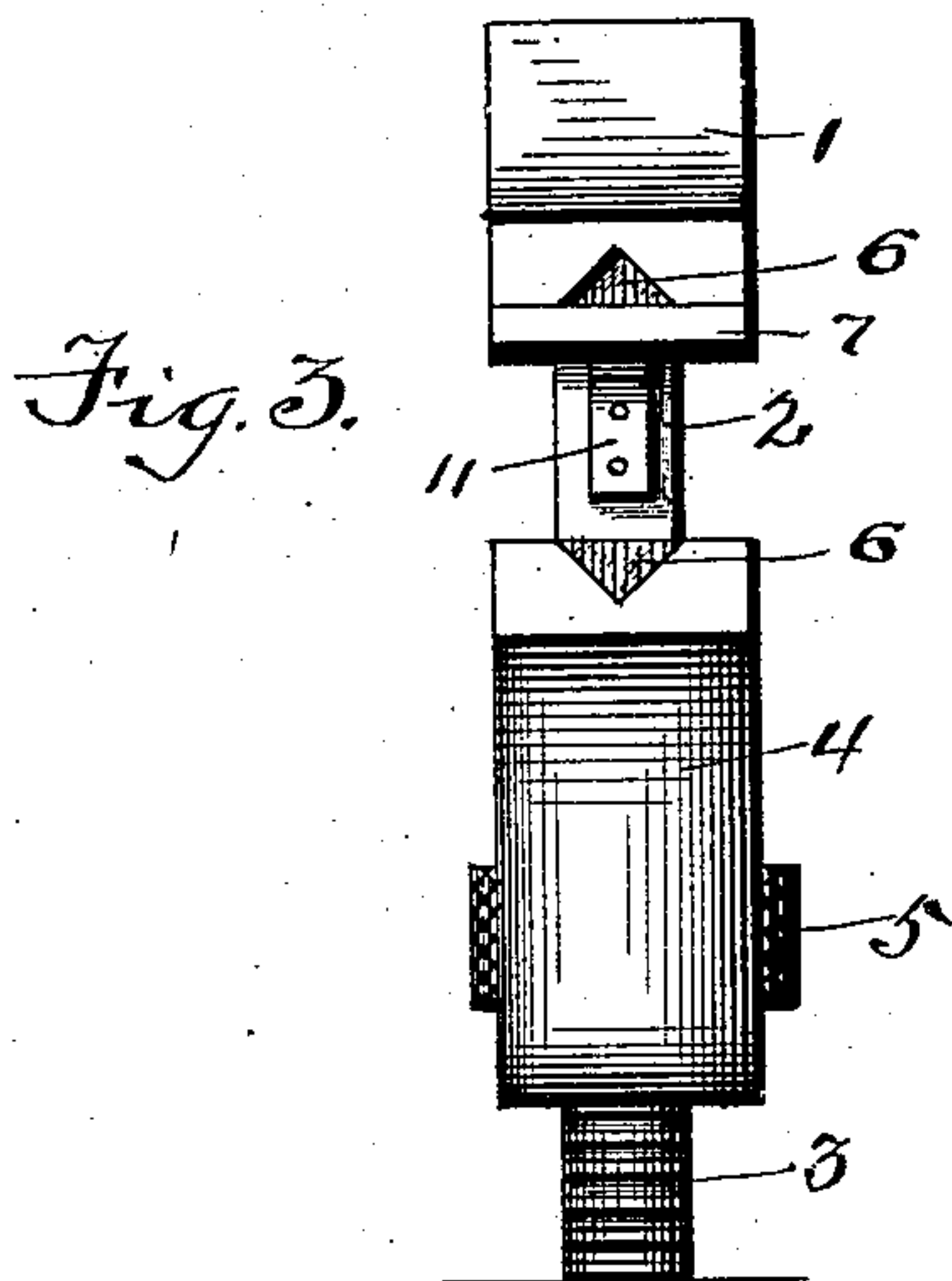
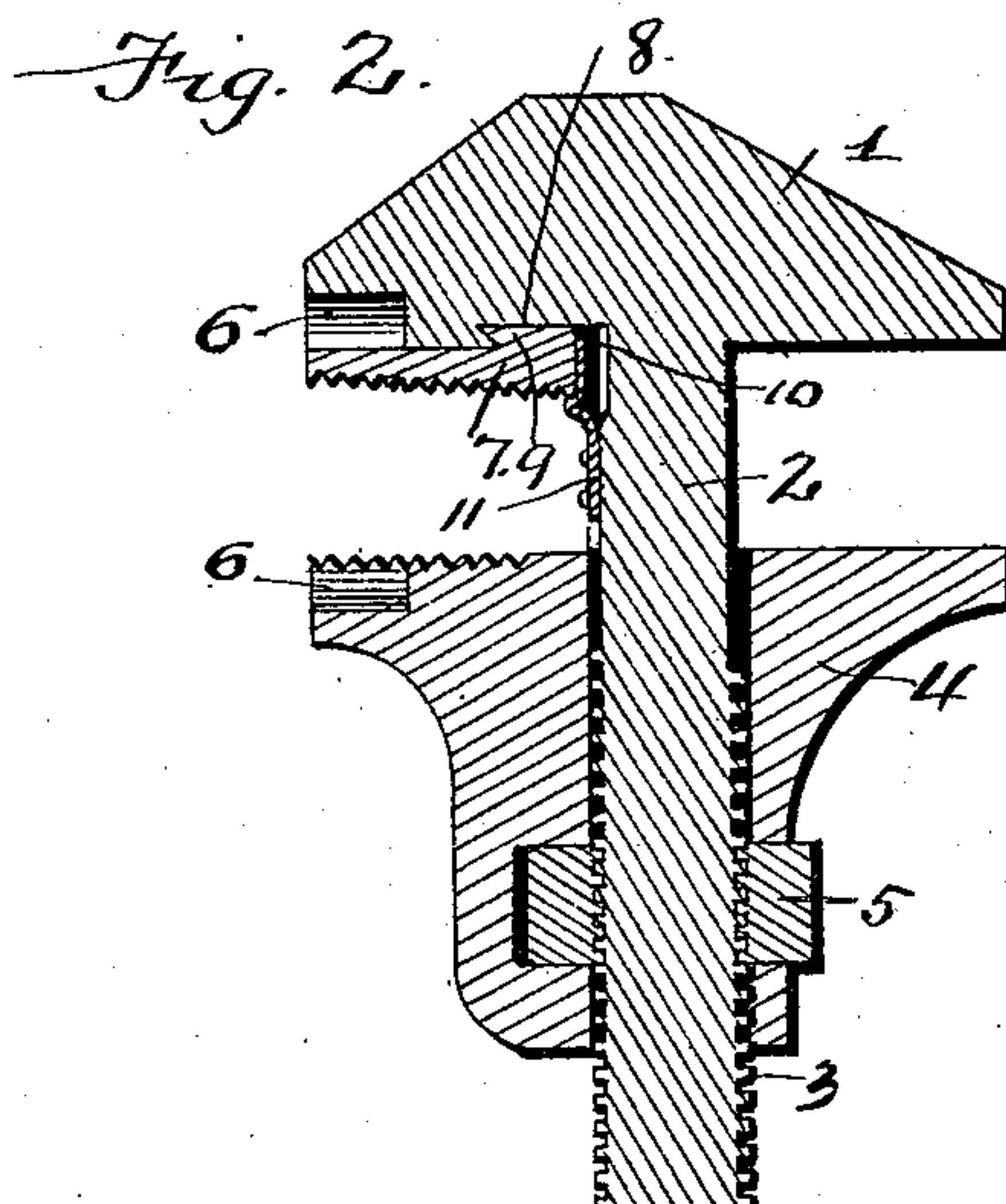
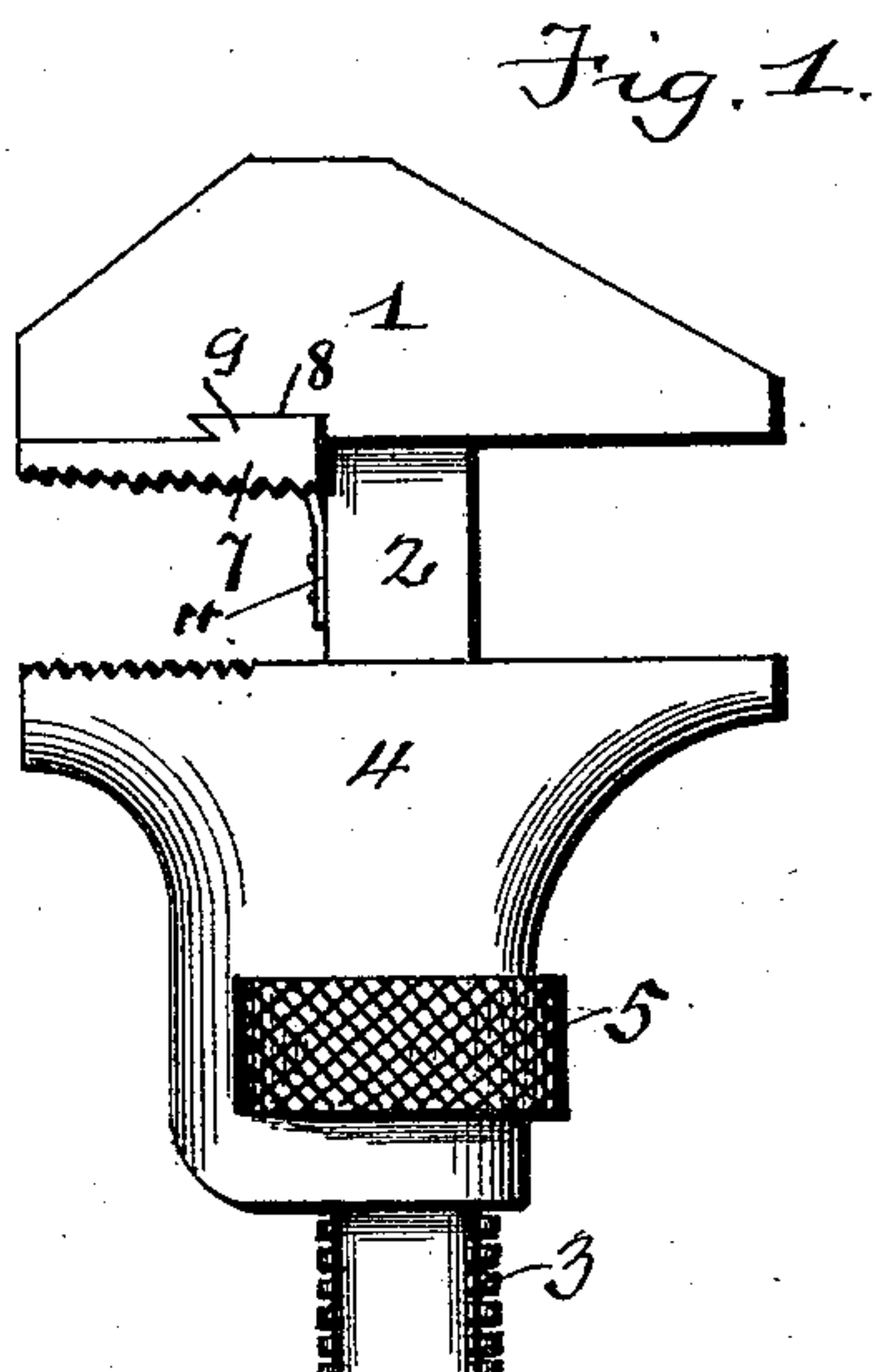


(No Model.)

T. McC. SIMCOE.
WRENCH.

No. 534,453.

Patented Feb. 19, 1895.



Witnesses:-
Horace G. Sutz
J. M. Coppenhaver.

Inventor:-
THOMAS MCCARROLL SIMCOE.
By his Attorney Geo. H. Holgate

UNITED STATES PATENT OFFICE.

THOMAS MCCARROLL SIMCOE, OF ALLENTOWN, PENNSYLVANIA.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 534,453, dated February 19, 1895.

Application filed July 14, 1894. Serial No. 517,520. (No model.)

To all whom it may concern:

Be it known that I, THOMAS MCCARROLL SIMCOE, a citizen of the United States, and a resident of Allentown, in the county of Lehigh and State of Pennsylvania, have invented a certain new and useful Improvement in Wrenches, of which the following is a full, clear, and exact specification.

My invention relates to improvements in wrenches, and has particular relation to that class of such devices, in which a detachable jaw of peculiar formation is attached to a fixed jaw of the wrench, and thereby transforming it from a nut wrench to a pipe wrench, and vice versa.

The object of my invention is to provide a device of this description, which can be readily used as a monkey wrench, a nut wrench, or a pipe wrench, and which is simple in construction, and is neat and attractive in appearance.

To these ends, my invention consists in the improved construction and combination of parts, as more fully described and pointed out in the claim.

In the drawings:—Figure 1—is a side elevation of my improved wrench with the attachment secured in place. Fig. 2—is a section of the same, and Fig. 3—is a front view of the same.

Similar numerals of reference indicate similar parts in all of the figures of the drawings.

Referring to the drawings, 1 designates the fixed jaw of my improved wrench and 2 designates the shank, which is attached to the fixed jaw, and which has, at its lower end a handle (not shown). The lower portion of the shank 2 is screw threaded, as at 3, for the purpose of tightening the movable jaw 4, by means of the milled wheel 5, which is internally screw-threaded, and which is located in said movable jaw, as shown.

The jaw 1, as will be seen by referring to Figs. 1 and 2, has its ends extending a suitable distance beyond the shank for the purpose of providing, when used in connection with the jaw 4, which extends similarly to jaw 1, on one side a monkey wrench, and on its opposite side a nut wrench, the latter being provided by means of the angular notches 6,

formed in the fixed and movable jaws, as shown in Figs. 2 and 3. By this construction, it will be readily seen that a monkey wrench and nut wrench, of ordinary form are provided to which I make no specific claim.

Coming now to my improvement, 7 designates a detachable jaw, having its lower surface serrated to form a clamping surface, and having its upper face adapted to fit an opening 8 formed in the lower surface of the fixed jaw 1. This opening extends the entire width of the fixed jaw, and has one of its sides cut at an angle to form a dove tail for the insertion of the dove-tailed portion 9 of the jaw 7. The jaw, 7 has at its rear end, a groove 10 for the reception of a spring 11, as shown in Fig. 2. This spring, preferably a leaf spring is secured to the shank 2 of the jaw 1, by any suitable means, and may have, at a suitable distance from its end, a lug formed thereon, either by securing a separate piece of material to it, or may have the spring itself form the lug, by bending it forward and then doubling it upon itself. I do not limit myself to this construction, as the device can be used with simply a plain spring, the purpose being to hold the detachable jaw in position on the fixed jaw. The lower face of the jaw 7, may be formed at an angle to the upper face, as shown in the drawings, but this is not essential.

The upper face of the jaw 4, may be serrated as shown in the drawings.

The operation of the device is as follows:—The wrench, as originally made, forms of itself a monkey wrench, and a nut wrench, but when it is desired to form a pipe wrench, the detachable jaw 7, is secured in position, by placing the dove-tailed portion of the jaw 7, opposite the opening in the fixed jaw, pressing back the spring toward the shank 2, and pushing the jaw 7 into the opening in the jaw 1 and releasing the spring. To remove the jaw 7, the above operation is reversed. The dovetail portion of the jaw 7, when secured in the dovetail opening in jaw 1, will of itself be sufficient to keep the jaw 7 in position, but as an additional means, the lug on the spring is so formed as to rest just beneath the jaw when it is in position. The purpose of the

spring is to keep the jaw from having a lateral motion in the fixed jaw.

Having now described my invention, what I claim as new is—

5 The combination with a combined nut and monkey wrench, the fixed jaw of which is provided with a transverse dove-tailed groove, and the shank of which has a spring attached thereto; of a detachable jaw, having its lower
10 face serrated and having a lug formed on its

upper face, adapted to fit the groove in said fixed jaw, and having also a groove at its rear end, adapted to receive the said spring, substantially as described.

In testimony whereof I have hereunto set 15 my hand in the presence of two witnesses.

THOMAS MCCARROLL SIMCOE.

Witnesses:

C. R. JAMES,

CHAS. W. HARVEY.