

No. 674,278.

Patented May. 14, 1901.

J. McNUTT.
WRENCH AND CLAMP.

(Application filed Oct. 3, 1900.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

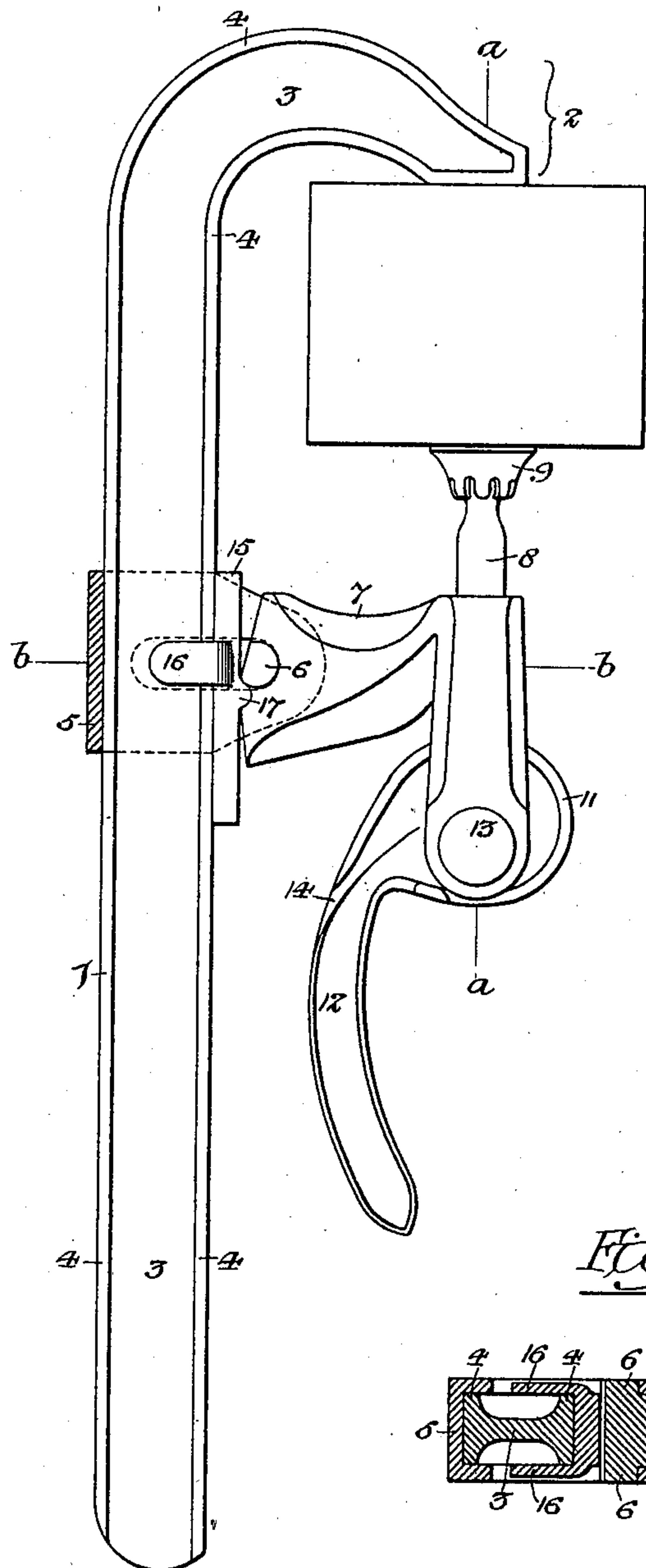


Fig. 2.

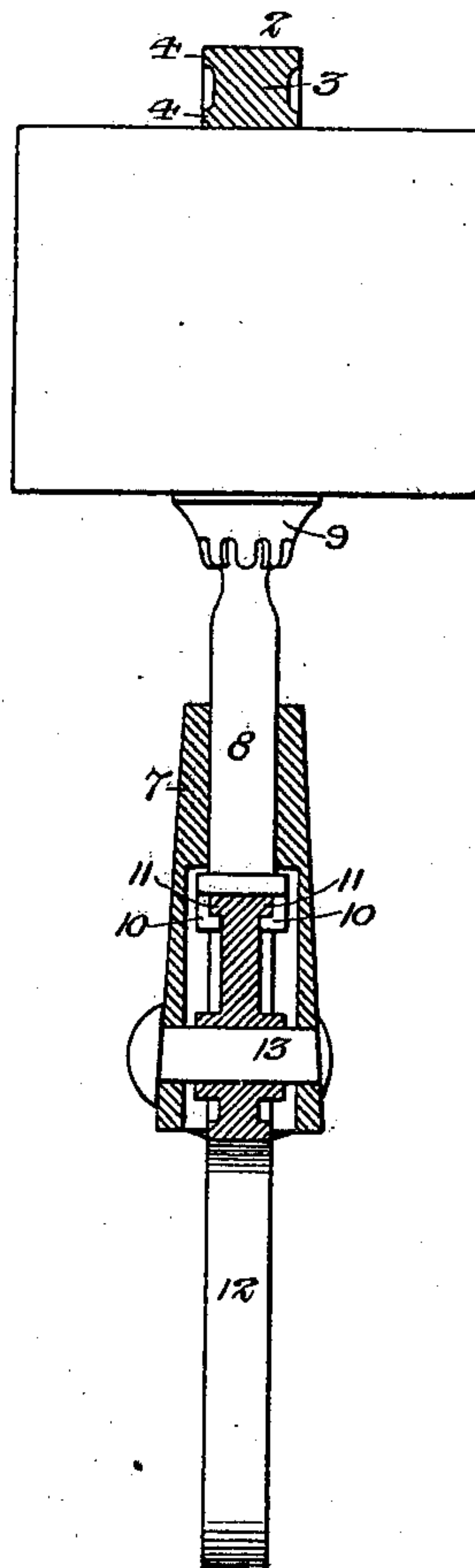
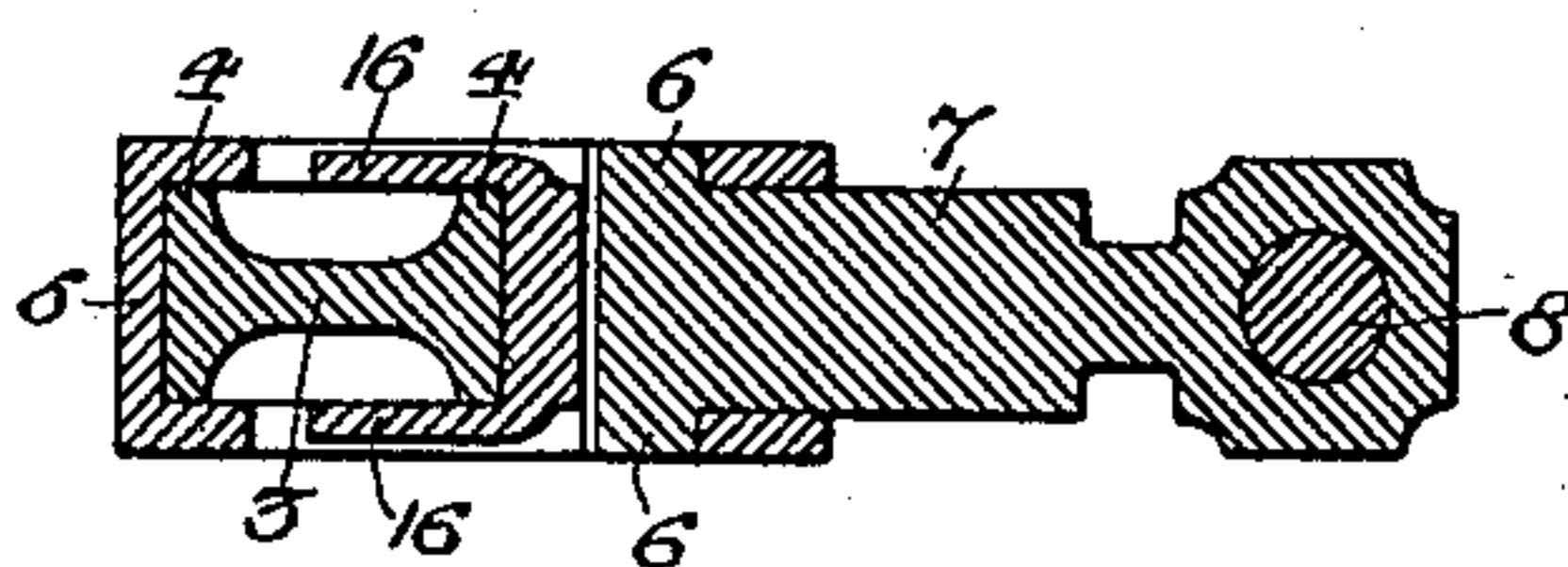


Fig. 3.



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2 Sheets—Sheet 2.

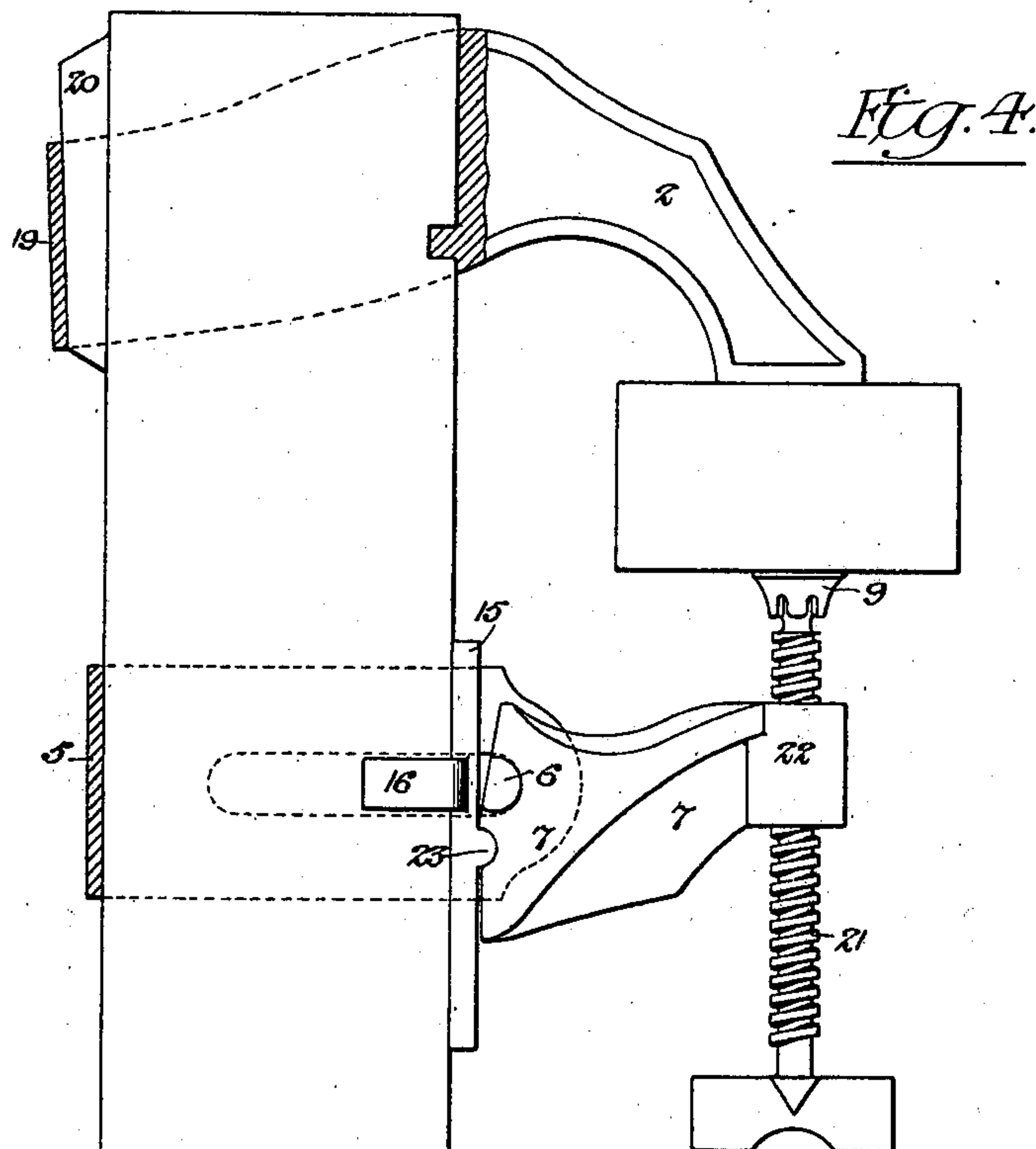
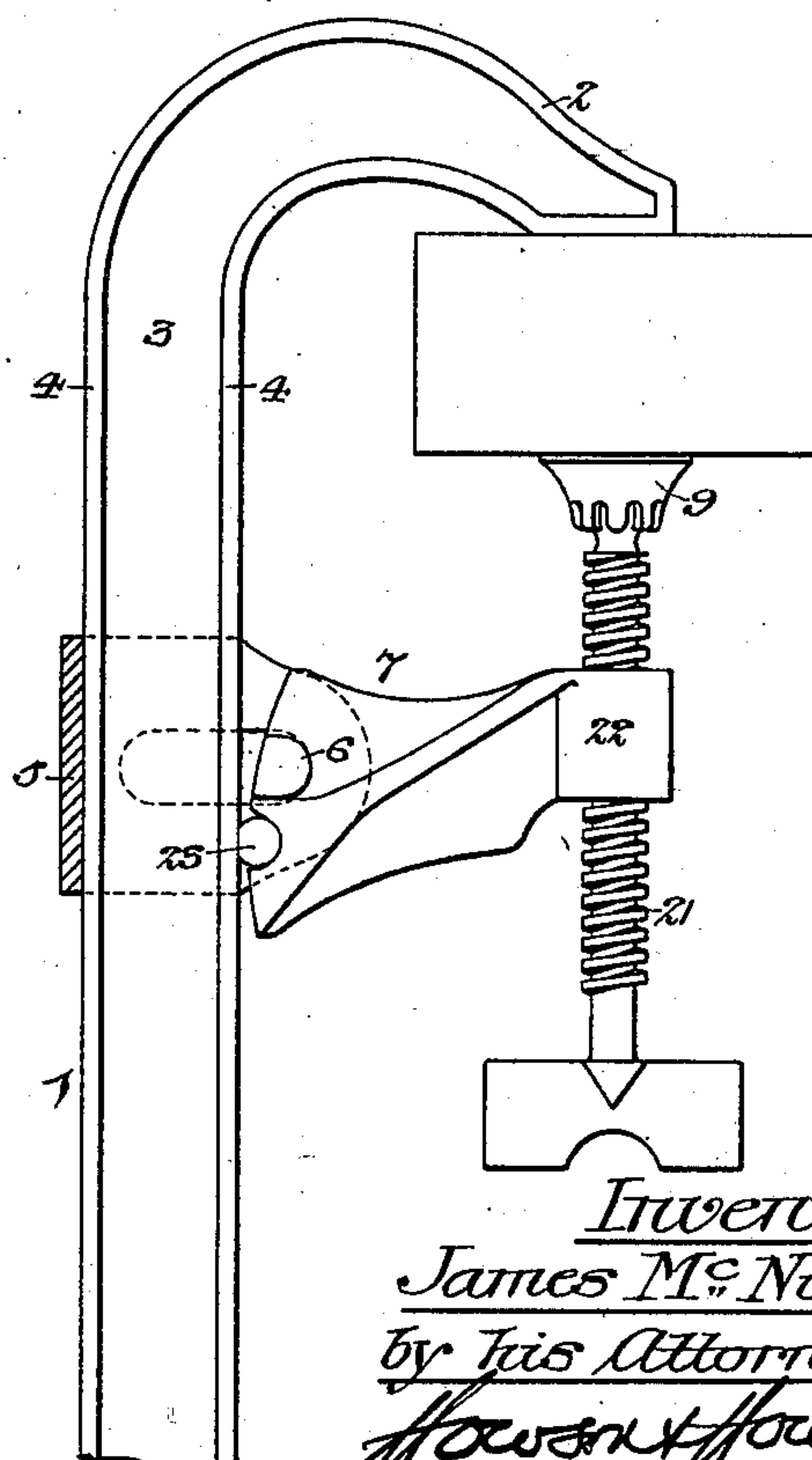


Fig. 5.



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UNITED STATES PATENT OFFICE.

JAMES McNUTT, OF PHILADELPHIA, PENNSYLVANIA.

WRENCH AND CLAMP.

SPECIFICATION forming part of Letters Patent No. 674,278, dated May 14, 1901.

Application filed October 3, 1900. Serial No. 31,915. (No model.)

To all whom it may concern:

Be it known that I, JAMES McNUTT, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain
5 Improvements in Wrenches and Clamps, of which the following is a specification.

My invention relates to that class of clamps and wrenches in which a slide on the stem or shank of the wrench carries a lever upon
10 which is mounted a secondary lever, screw, or other clamping device, the objects of my invention being to so construct such a clamp or wrench as to obtain the maximum of strength with the minimum of weight, to in-
15 sure a powerful gripping action upon the stem or shank, and to facilitate the fitting together of the various parts. These objects I attain in the manner hereinafter set forth, reference being had to the accompanying
20 drawings, in which—

Figure 1 is a side view, partly in section, of a wrench constructed in accordance with my invention. Fig. 2 is a transverse section on the line *a a*, Fig. 1. Fig. 3 is a section on the
25 line *b b*, Fig. 1; and Figs. 4 and 5 are views similar to Fig. 1, but illustrating other modifications of my invention.

In the wrench shown in Figs. 1, 2, and 3 the stem of the wrench is represented at 1, this stem being bent at one end, so as to form
30 a clamping-jaw 2, and being composed of a central web 3, with projecting edge flanges 4, so as to form a bar of substantially H-shaped cross-section, as shown in Fig. 3, the flanges
35 extending around the bent end or jaw of the wrench, so as to obtain the maximum of strength with the minimum of weight. Movable on the stem 1 is a slide 5, having wings embracing the stem and projecting forwardly
40 beyond the same, these wings being slotted, as shown by dotted lines in Fig. 1, and the forward ends of the wings forming bearings for projecting pivot pins or trunnions 6 on a lever 7, the outer portion of which constitutes
45 a guide for a rod 8, carrying a universally-pivoted jaw 9, between which and the jaw 2 the object to be held is firmly clamped. The inner end of the rod 8 terminates in jaws 10, which embrace flanges 11, formed upon a
50 cam-lever 12, which plays within a forked portion of the lever 7 and is hung thereto by

means of a transverse pin or rivet 13, as shown in Fig. 2.

For the purpose of strengthening the cam-lever 12, the flanges 11 are continued around
55 the same, except at one point 14, this gap in the flanges permitting the ready engagement of the jaws 10 with the same either before or after the rod 8 has been inserted in its place in the lever 7 and before the cam-lever 12 has
60 been hung to said lever 7 by means of the transverse pin or rivet 13.

Between the lever 7 and the face of the stem 1 of the wrench is interposed a shoe 15, which has wings 16 embracing said stem and
65 contained within the slots in the wings of the slide 5, and this shoe has a projecting lug 17, which engages with a corresponding recess formed in the face of the lever 7, immediately below the projecting pivot pins or trunnions
70 6 of the same. Hence the power of said lever 7 is exerted upon the shoe 15 at a point close to the fulcrum of said lever and in a direction substantially at right angles to the shoe, so as to press the same firmly against the stem
75 1 of the wrench and effectually prevent any slipping of the slide 5 thereon.

In Fig. 4 I have shown my invention applied to a clamp in which a beam or bar 18 takes the place of the stem 1, the jaw 2 hav-
80 ing a yoke 19 embracing this beam and secured thereto by means of a wedge 20. In this form of the device also a screw-stem 21, adapted to a nut 22 on the lever 7, takes the place of the cam-lever 12 and sliding rod 8.
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In the wrench shown in Fig. 5 the screw-stem and lever, with nut for the reception of the same, are also employed, and in this case a small shoe 23 bears upon the face of the
90 stem 1 of the wrench and is carried by the lever 7, said shoe being located at a point corresponding with the lug 17 of the shoe 15, so as to obtain the same result of powerful leverage and direct thrust for which said lug is employed.
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Having thus described my invention, I claim and desire to secure by Letters Patent—

1. The combination in a wrench, of a stem or bar having a projecting jaw, a slide movable on said stem and having a lever pivoted thereto, a clamping device carried by the le-
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ver, and a shoe interposed between the lever and stem and projecting into said lever below the pivot of the same, whereby a direct push of the shoe against the stem or bar of the wrench is effected, substantially as specified.

2. The combination in a wrench, of the stem or bar having a projecting jaw, a slide having projecting wings, with slots therein, a lever having trunnions pivoted to said wings, a shoe interposed between the lever and the stem of the wrench, and having wings contained within the slots of the slide, and clamping mechanism carried by the lever, substantially as specified.

3. The combination in a wrench, of the stem having a projecting jaw, a slide having a

pivoted lever, a clamp-rod guided on said lever and having jaws at its inner end, and a cam-lever hung to the main lever and having an edge flange for engaging with the jaws of the clamp-rod, said edge flange having a gap through which the jaws may be passed into engagement with the flange, substantially as specified.

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

JAMES McNUTT.

Witnesses:

F. E. BECHTOLD,
JOS. H. KLEIN.