

(No Model.)

W. L. GIBSON.

WRENCH.

No. 378,585.

Patented Feb. 28, 1888.

Fig. 3.

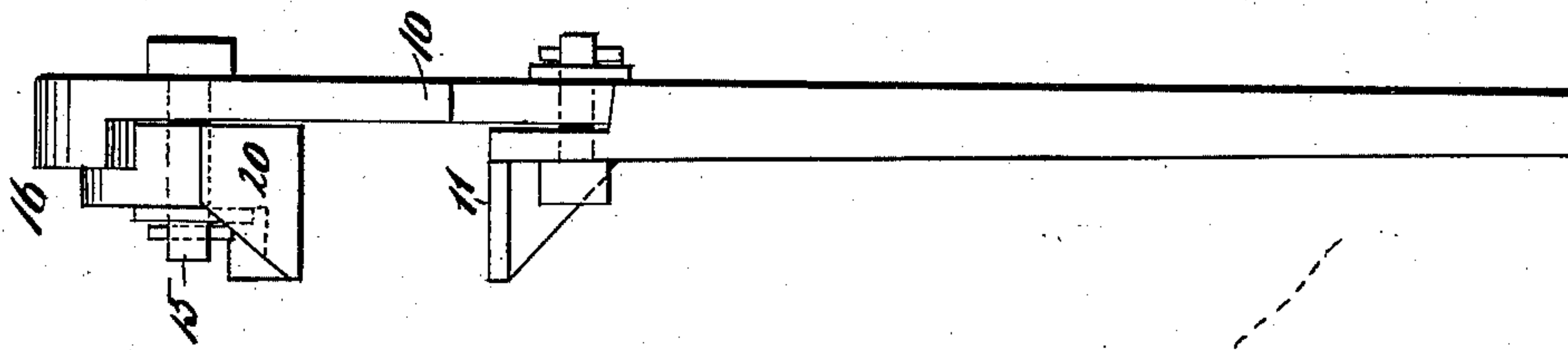


Fig. 2.

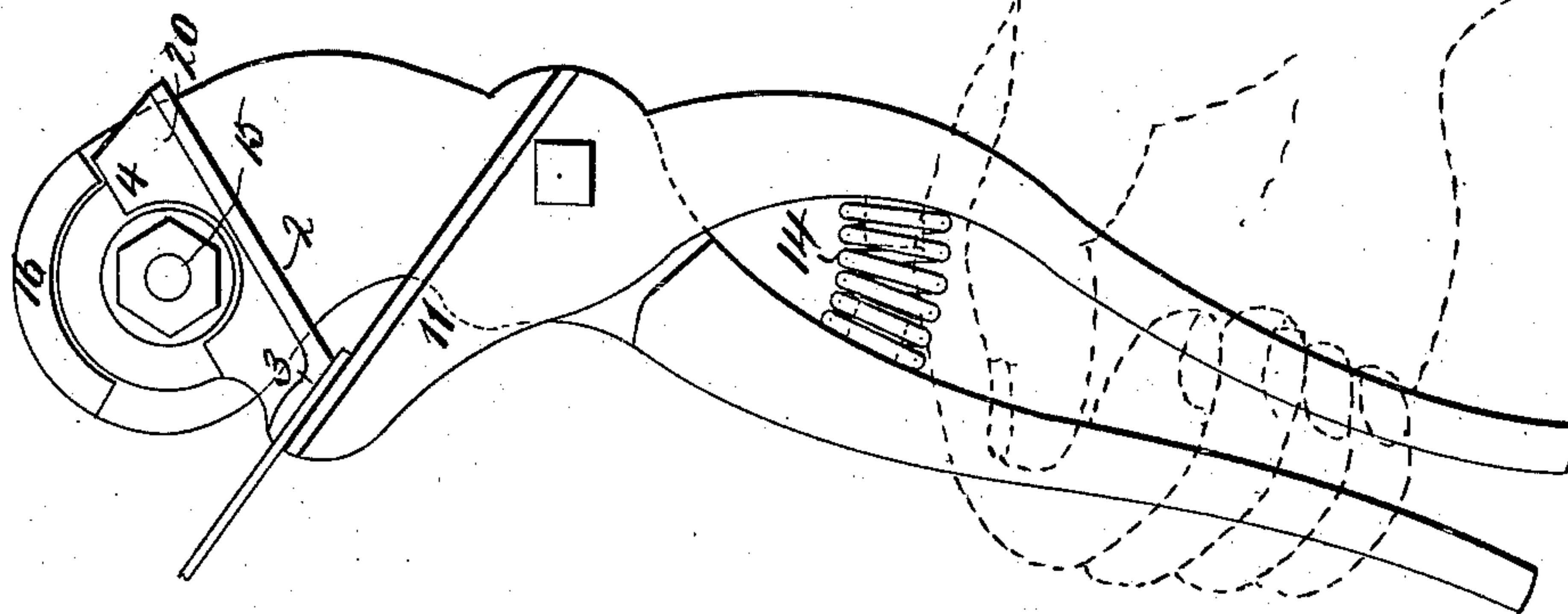
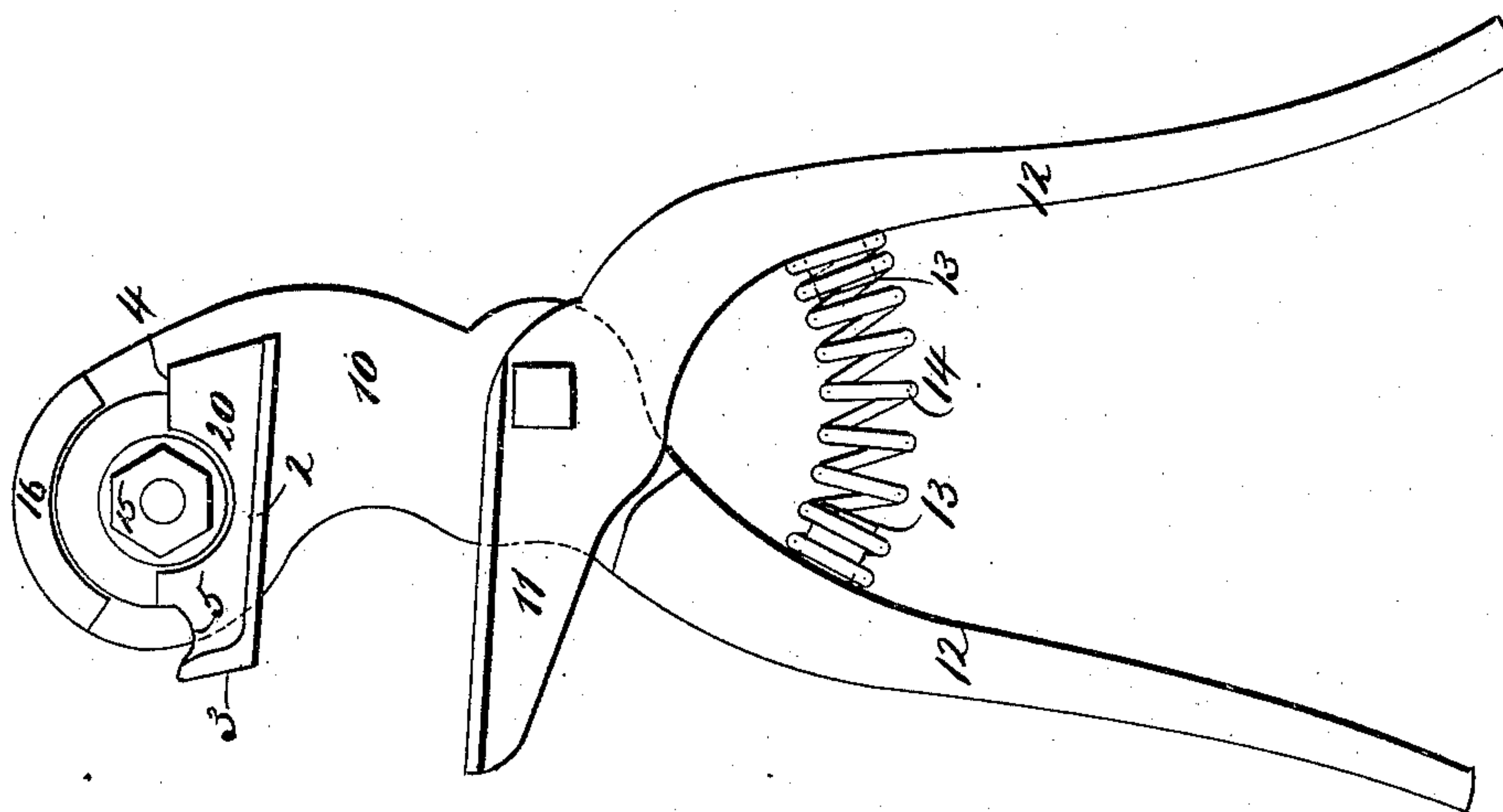


Fig. 1.



WITNESSES:

J. M. Ardle.
C. Sedgwick.

INVENTOR:

W. L. Gibson

BY

Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WALTER LEE GIBSON, OF OVIEDO, FLORIDA, ASSIGNOR TO HIMSELF AND
JAMES H. LEE, OF SAME PLACE.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 378,585, dated February 28, 1888.

Application filed June 20, 1887. Serial No. 241,890. (No model.)

To all whom it may concern:

Be it known that I, WALTER LEE GIBSON, of Oviedo, in the county of Orange and State of Florida, have invented a new and Improved Self-Adjusting Wrench, of which the following is a full, clear, and exact description.

This invention relates to a novel form of self-adjusting wrench, wherein the parts are so arranged that, if desired, the device may be used as a pair of pinchers or pliers.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a side view of the wrench, the parts being represented as they appear when adjusted to receive a large-sized nut or bolt. Fig. 2 is a side view, the parts being represented as they appear when adjusted for use as a pair of pinchers or pliers; and Fig. 3 is a side view, the parts being adjusted as represented in Fig. 1.

In the drawings, 10 represents what in the ordinary form of wrench is a fixed jaw, while 11 is the movable or swinging jaw, the jaws 10 and 11 being provided with handles 12, studs 13 being formed upon the approaching faces of the handles, which studs serve as supports for a spiral spring, 14, which acts to force the jaws to the position in which they are shown in Fig. 1.

In my improved form of wrench the object to be operated upon is not clamped directly by the fixed jaw, but is clamped by a swinging block, 20, that is connected to the fixed jaw by a pin or bolt, 15, said block being formed with a long bearing-face, 2, and a narrow bearing-face, 3, the long bearing-face being much closer to the axis of the pivot pin or bolt 15 than is the narrow face 3.

In order that the motion of the block 20 upon its support may be limited, I form the jaw 10 with a lug or projection, 16, which is concentric with the axis of the block 20, and the block 20 I form with shoulders 4 and 5, which abut against the ends of the ridge or projection 16 and hold the block from turning completely upon its support.

If it is desired to use the wrench in connection with large nuts or bolts, the block 20 is

moved approximately to the position in which it is shown in Fig. 1. The jaw 11 is then brought into engagement with one side of the nut or bolt and the implement is moved until the face 2 of the block 20 bears fairly upon the opposite face of the nut or bolt. Then, if the two handles 12 be brought together and force applied in the usual manner, the nut or bolt may be turned as desired, the greater portion of the strain being taken up at this time by the pivot pin or bolt 15. When small nuts or bolts are to be operated upon, the face 3 of the block 20 is turned down, so as to be substantially parallel with the jaw 11, and the operation is as before described in connection with the face 2; and if the implement is to be used for the purpose of grasping small articles, this may be done by adjusting the parts to the position in which they are shown in Fig. 2.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a wrench, the combination, with the fixed jaw provided with a projection and a movable jaw pivoted to said fixed jaw, of a block formed with bearing-surfaces approximately at right angles to each other and pivoted to the said fixed jaw, substantially as described.

2. In a wrench, the combination, with the fixed jaw 10, provided with the projection 16, and the movable jaw 11, of the block 20, pivoted to the fixed jaw and provided with the bearing-surfaces 2 and 3 and with the shoulders 4 and 5, substantially as herein shown and described.

3. The herein-described wrench, consisting of the fixed jaw 10, having a handle and provided with the projection 16, the block 20, pivoted to the fixed jaw and provided with the faces 2 and 3 and with the shoulders 4 and 5, the movable jaw 11, having a handle and pivoted to the stationary jaw, and the spring 14, interposed between the handles, as specified.

WALTER LEE GIBSON.

Witnesses:

I. W. C. PARKER,
J. M. RICE.