

No. 771,451.

PATENTED OCT. 4, 1904.

R. ASHWORTH.
WRENCH.

APPLICATION FILED JULY 5, 1904.

NO MODEL.

Fig. 1.

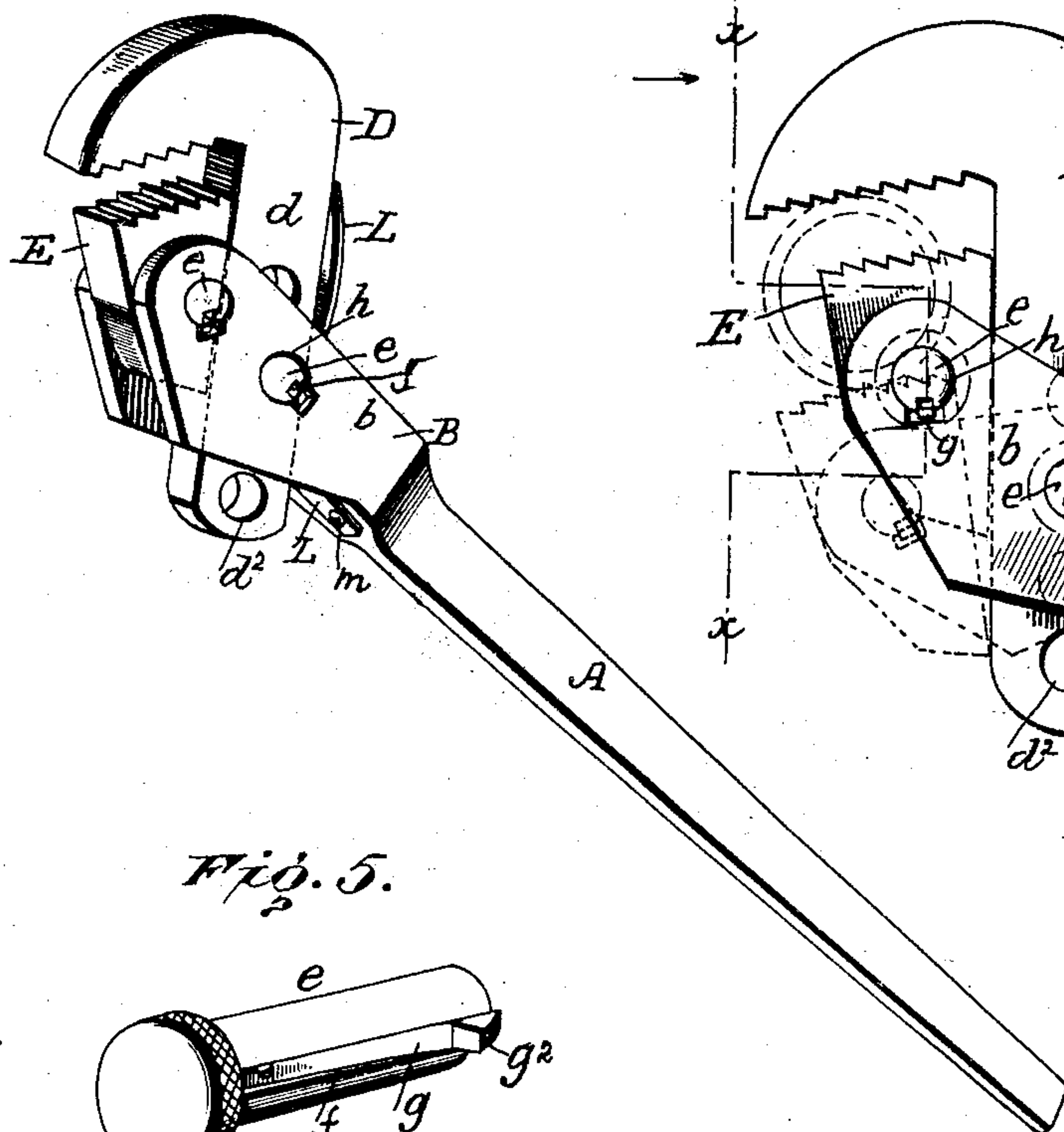


Fig. 2.

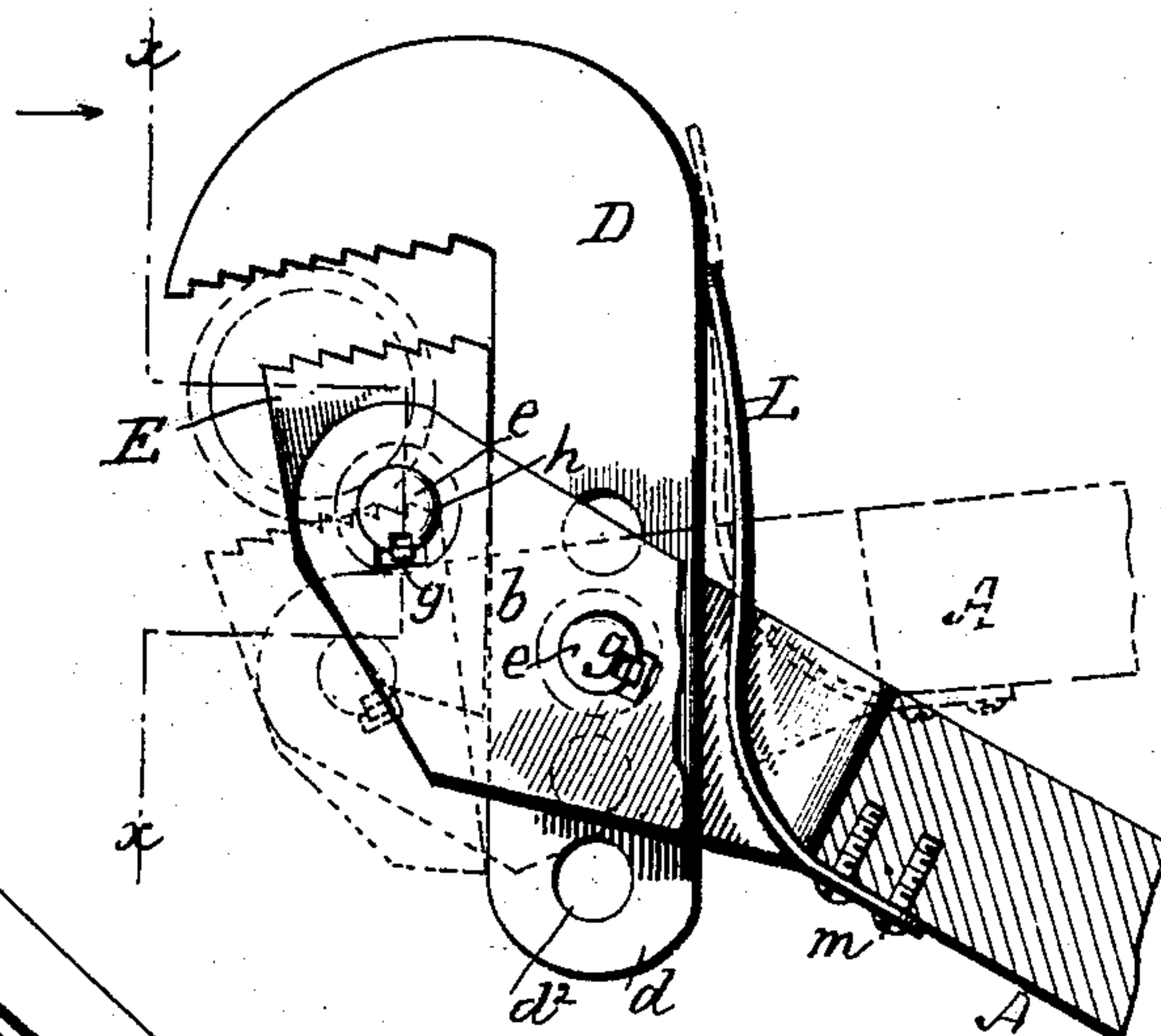


Fig. 5.

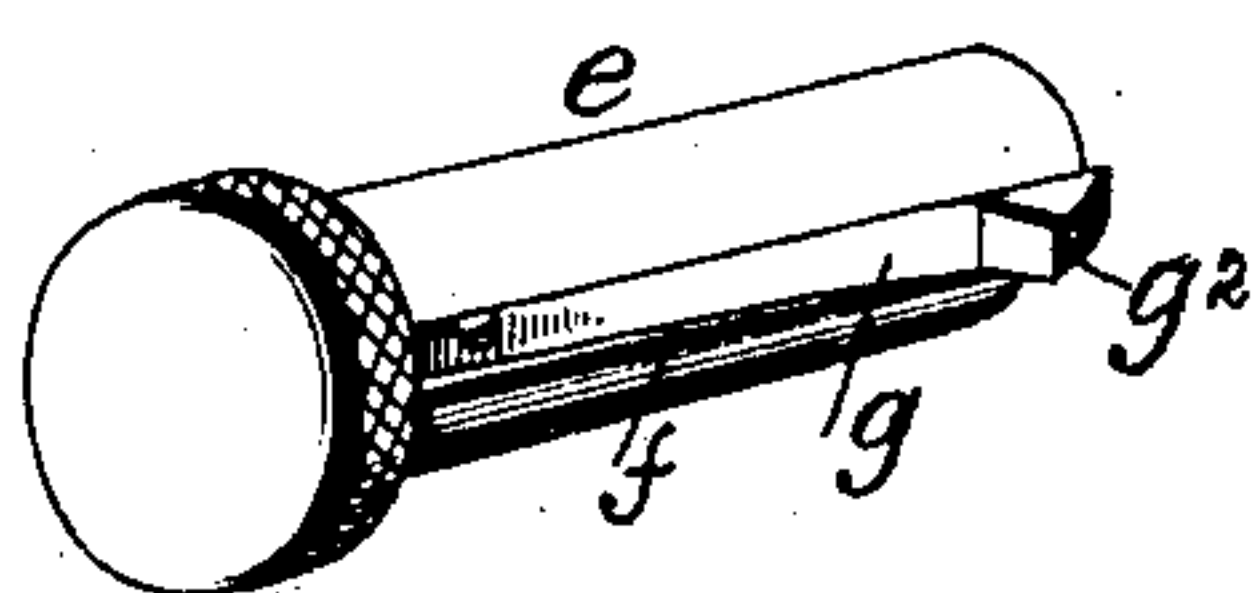


Fig. 4.

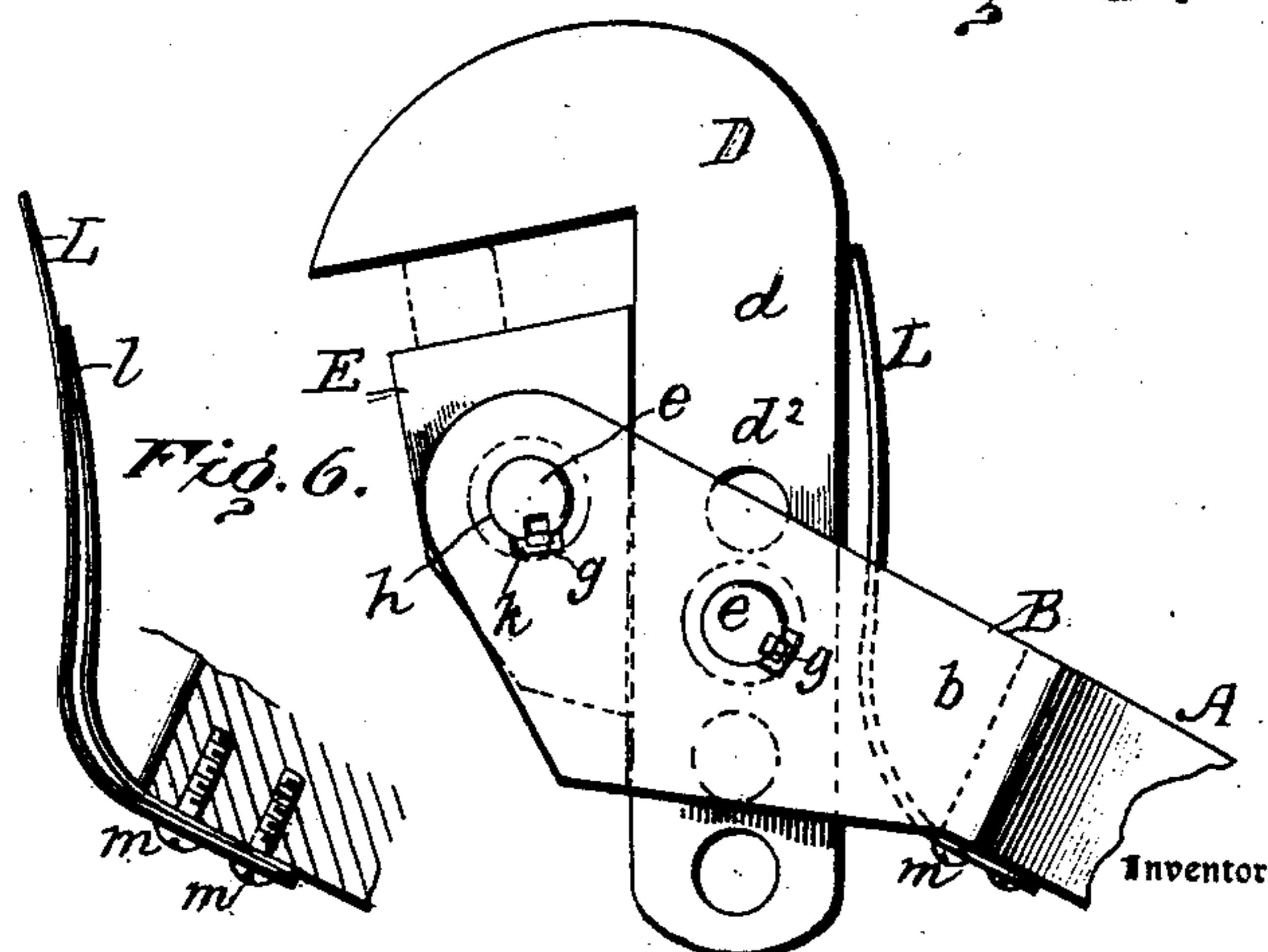


Fig. 3.

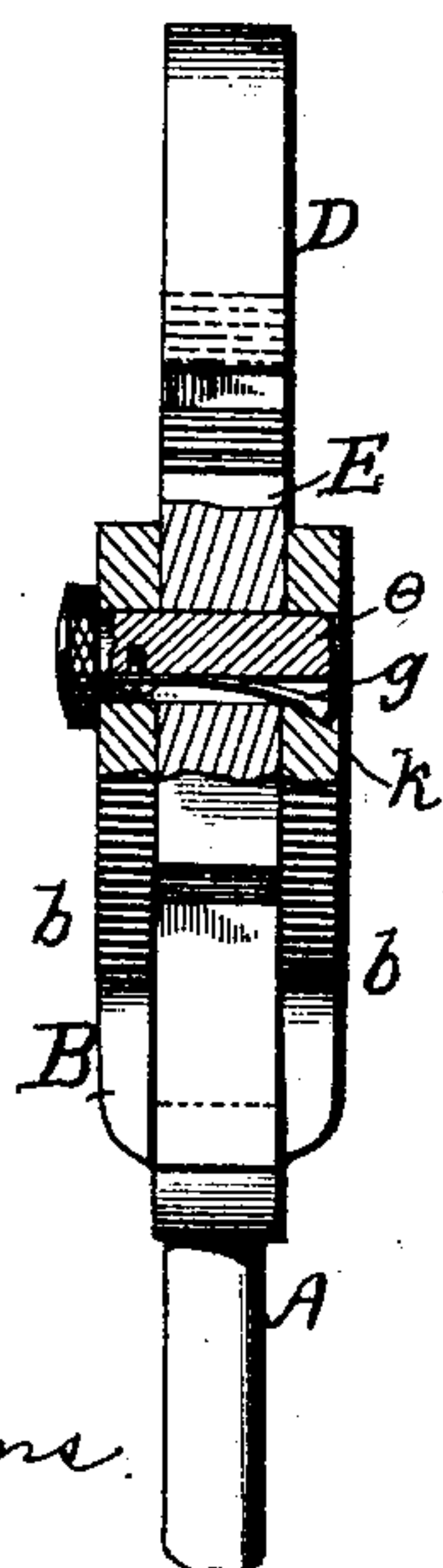
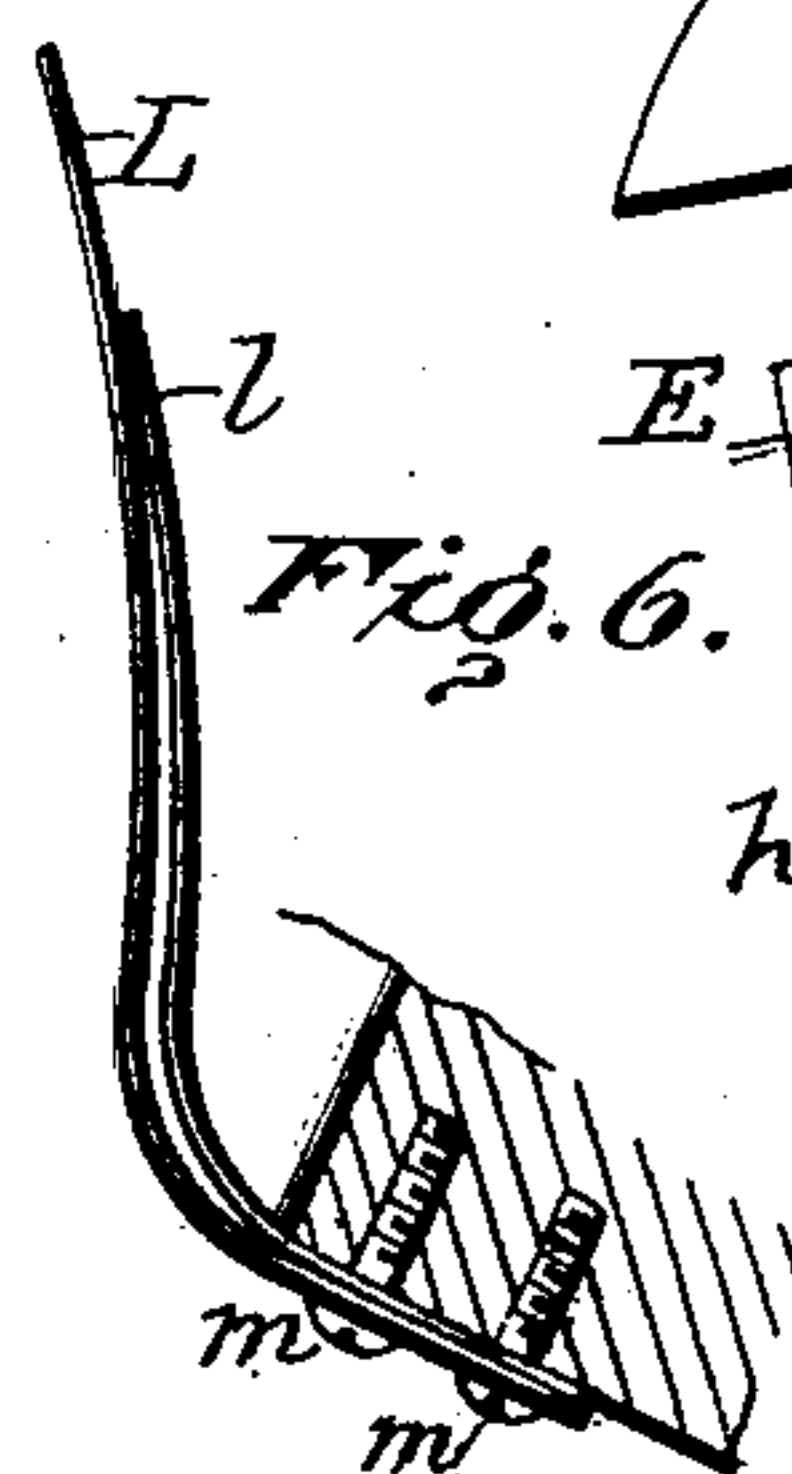


Fig. 6.



Witnesses
W. A. Williams.
H. H. Masson

Robert Ashworth.

G. C. Masson.

Attorney

UNITED STATES PATENT OFFICE.

ROBERT ASHWORTH, OF ST. CLOUD, MINNESOTA.

WRENCH.

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Application filed July 5, 1904. Serial No. 215,304. (No model.)

To all whom it may concern:

Be it known that I, ROBERT ASHWORTH, a citizen of the United States, residing at St. Cloud, in the county of Stearns 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 having a pivoted jaw opposite a pivoted bearing-surface, and is mainly for wrenches intended to grasp a pipe or cylindrical body, although it is adapted to be used as a nut-wrench; and the objects of my invention are to provide a simple and inexpensive wrench of that class that will be adapted to grasp a pipe lying against a wall as well as in other more open locations, said wrench being provided with two jaws independently pivoted but mounted upon the same handle, the pivot for each jaw being substantially across the axis of said handle.

I attain these objects by the constructions illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a pipe-wrench constructed in accordance with my invention. Fig. 2 is a side view of the forked jaw portion of the same, one of the cheeks of the fork being broken away to clearly show the construction and the jaw-supporting spring attached to the handle, said handle being in section. The parts are shown also in dotted lines grasping a pipe. Fig. 3 is a transverse section of the same on line *xx* of Fig. 2 to show one of the pivot-pins. Fig. 4 is a side view of a portion of the wrench, showing jaws adapted to retain a nut or a square body. Fig. 5 is a perspective view of one of the pivot-pins on a larger scale. Fig. 6 shows a portion of the handle with two light springs attached thereto.

In the drawings, A represents the handle of the implement, the inner end B of which is slotted or forked lengthwise to obtain two flat branches or cheeks *b*, between which the two jaws D and E can be oscillated upon pins *e*, passing therethrough and across the axis-line of the handle, and also through the branches *b*. The grasping end of the outer or longest jaw D is substantially at right an-

gle to its body *d*, and the latter has a series of perforations *d*², any one of which is adapted to receive the pivot-pin *e*, so that the implement is capable of engaging with pipes or other bodies varying greatly in size. To the outer end of the branches *b* is pivoted the jaw E, the bearing-face of which is wider than its opposite end.

When the device is intended for use as a pipe-wrench, the bearing-face of each jaw is provided with a large number of bearing-teeth, as shown in Figs. 1 and 2; but when the implement is to be used as a nut-wrench the jaws are preferably provided with flat bearing-faces, as shown in Fig. 4.

To retain each jaw secured to the branches *b* of the end B of the handle by its pivot-pin *e*, the latter is formed with a groove *f* lengthwise thereof, in which is placed a spring-latch *g*, the inner end of which is secured to the pin *e* adjacent to its milled head. The opposite end of the latch is bent outwardly and provided with a head *g*², the outer portion of which is beveled to facilitate its introduction into the perforations *h*, made in the branches *b*. To retain the pins latched into the perforations *h*, the latter are chambered on one side at *k* on an incline leading inwardly of said perforation *h*. To prevent the accidental unlatching of the pins *e* when the wrench is thrown carelessly on the ground, the body of each pin and latch is made slightly shorter than the width of the instrument, as shown in Fig. 3, so that the small end of the pin will not come in contact with said ground.

The outer jaw D is held normally pressed forward toward the jaw E by means of a flat spring L, the outer end of which bears against the back of the jaw D. The central portion of the spring L passes between the flat branches *b* of the inner end B of the handle A and is secured to the under side of said handle by means of two screws *m*, as shown in Fig. 2. Generally one spring will answer the purpose in regard to strength and stiffness; but if thin sheet-spring is preferred an additional spring *l* can be added, as shown in Fig. 6. Said spring or springs render the jaws substantially self-grasping by bearing the under side of the upper jaw against the ob-

ject to be grasped and lowering the outer end of the handle from the position shown by dotted lines in Fig. 2.

Having now fully described my invention,
5 I claim—

1. A wrench consisting of a handle having its inner end forked, each branch having two perforations, two pivot-pins therein, each pin crossing the axis-line of the handle, an inner
10 jaw on the outer pin, an outer jaw on the inner pin, and a spring secured to the under side of the handle and passing between the branches, its outer end bearing against the outer jaw, substantially as described.

15 2. In a wrench, the combination of a handle having its inner end forked, each branch of said fork having two perforations, the perforations in one of the branches having an inwardly-tapering latch-seat, two pivot-pins
20 crossing the axis-line of the handle, each having a spring-latch mounted thereon, two op-

positely-disposed jaws pivotally mounted upon said pins, and a spring secured to the under side of the handle and passing between the branches, its outer end bearing against
25 the outer jaw, substantially as described.

3. In a wrench, the combination of a handle having its inner end forked, each branch having two perforations, the axis of each crossing the axis-line of the handle, two pivot-pins
30 in said perforations, an inner jaw on the outer pin, an outer jaw on the inner pin, and a spring secured to the handle and passing between the branches, its outer end bearing against the outer jaw, substantially as de- 35 scribed.

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

ROBERT ASHWORTH.

Witnesses:

ANDREW C. ROBERTSON,
F. MCGUIRE.