

No. 889,246.

PATENTED JUNE 2, 1908.

M. E. LAYNE & S. N. HALL.

WRENCH.

APPLICATION FILED DEC. 3, 1907.

2 SHEETS-SHEET 1.

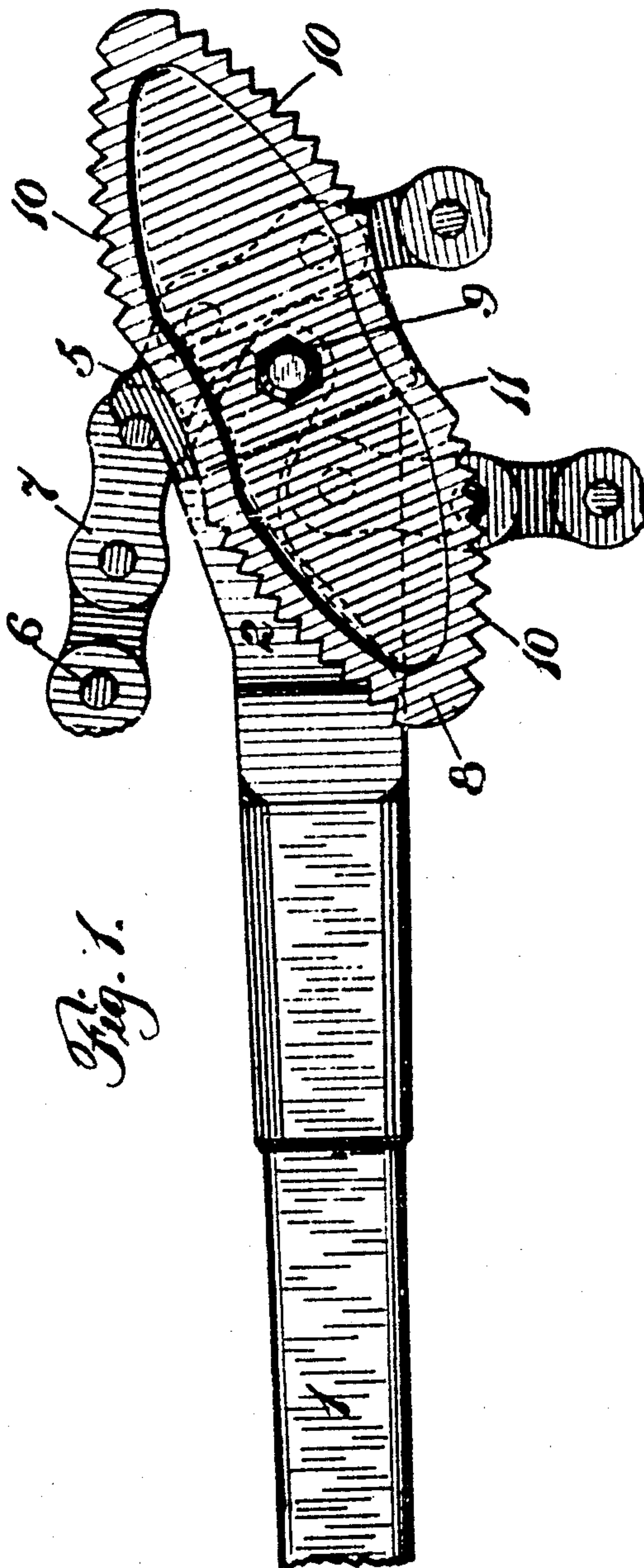


Fig. 1.

WITNESSES

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2 SHEETS—SHEET 2.

Fig. 2.

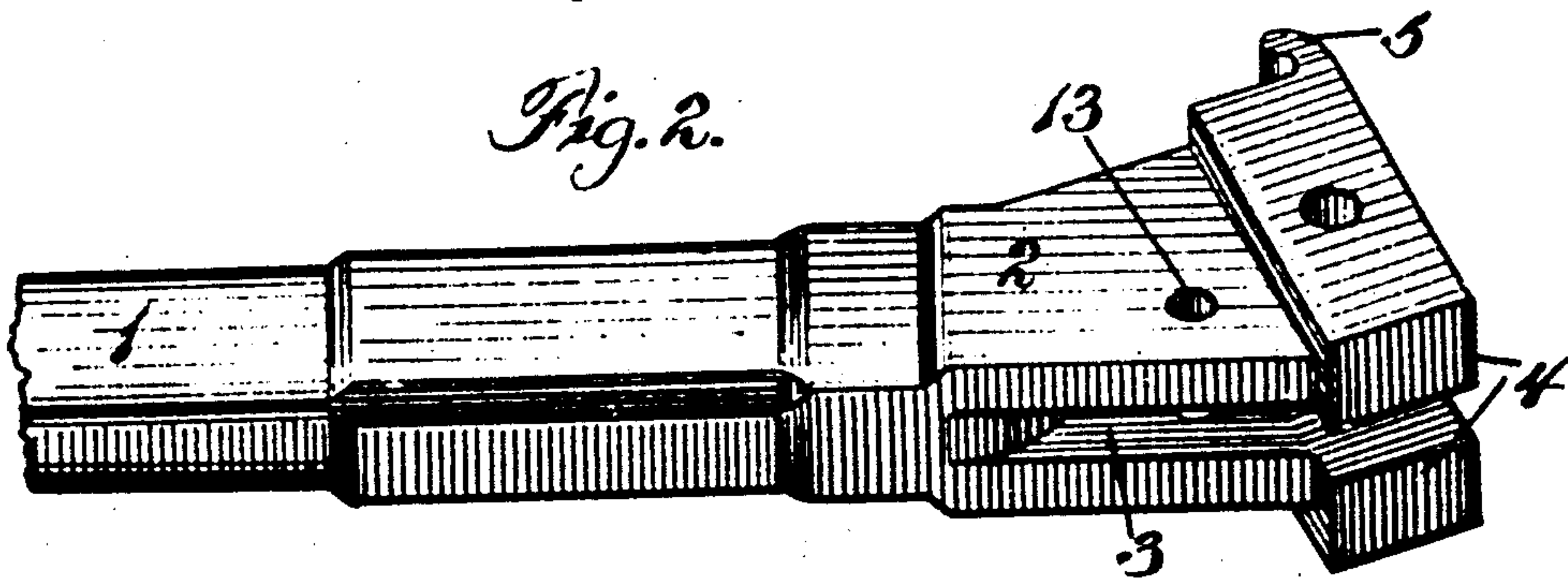


Fig. 3.

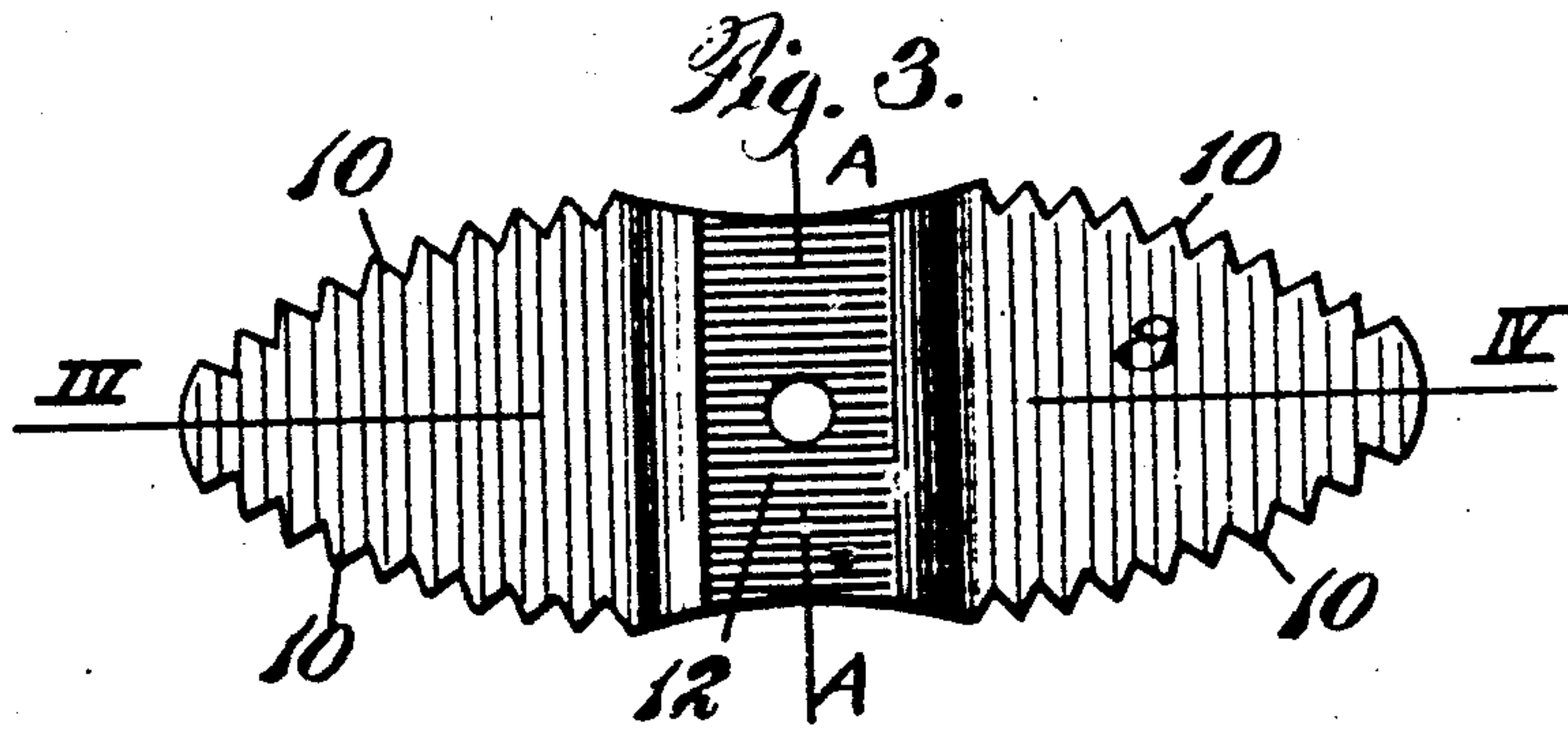
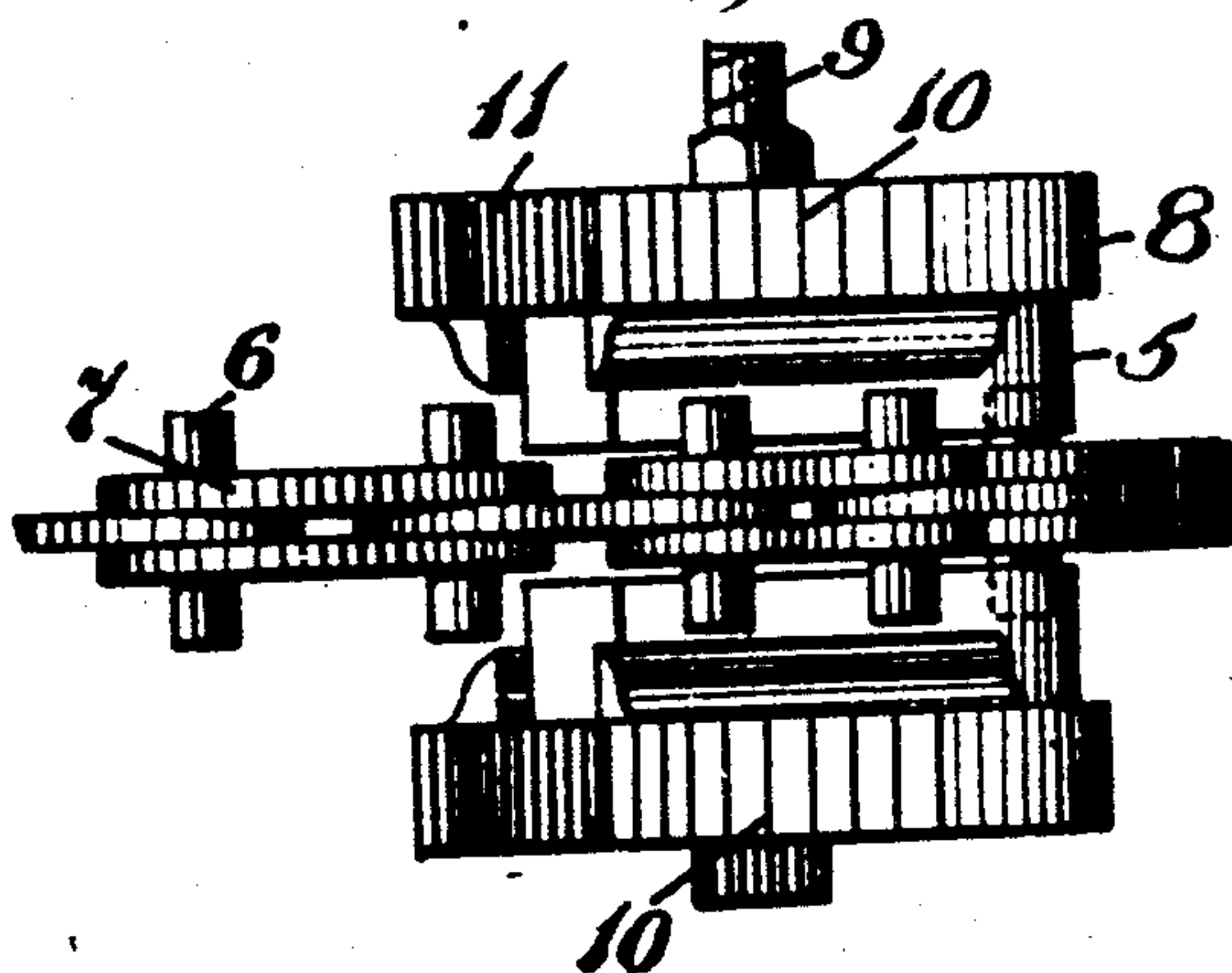


Fig. 4.



Fig. 5.



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UNITED STATES PATENT OFFICE.

MAHLON E. LAYNE AND SAMUEL N. HALL, OF HOUSTON, TEXAS.

WRENCH.

No. 889,246.

Specification of Letters Patent.

Patented June 2, 1908.

Application filed December 3, 1907. Serial No. 404,936.

To all whom it may concern:

Be it known that we, MAHLON E. LAYNE and SAMUEL N. HALL, citizens of the United States, residing at Houston, in the county of Harris and State of Texas, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

The invention relates to wrenches and particularly to pipe wrenches of the chain type. The invention has for its primary object; the provision of a double acting wrench in which both of the jaws are similar and interchangeable and are provided with additional sets of teeth whereby the life of the jaws is increased. One embodiment of the invention is illustrated in the accompanying drawing, wherein:—

Figure 1 is a side elevation of the operative parts of the wrench, a portion of the handle and of the grip chain being broken away,

Figure 2 is a perspective view of the end of the handle,

Figure 3 is a side elevation of the inside face of one of the jaw plates,

Figure 4 is a longitudinal section through one of the grip jaw on the line IV—IV of Figure 3, and

Figure 5 is an end elevation of the wrench.

The wrench is of the general type shown in our co-pending applications serial No. 404,935, but constitutes an improvement thereover, in that the jaw plates are each provided with a pair of additional sets of teeth, which may be used after the other teeth are dulled and worn, thereby materially lengthening the life of the wrench.

Referring to the drawing, 1 is the handle having the operating end 2 as shown in detail in Figure 2. As here illustrated the end is enlarged and provided with the slot 3 for the reception of the chain, and the cross blocks 4 provided at their upper ends with the hooks 5, for detachably engaging the chain. The chain is of the type ordinarily employed in devices of this kind, wherein the pintles 6 project past the side plates 7, which construction adapts the chain to fit between the sides of the hooks 5; while the ends of the pintles project out laterally a sufficient distance to engage the front sides of such hooks. 8 are the jaw plates, one of which is fitted to each side of the end of the handle, and clamped in position by means of the transverse bolt 9 passing through such jaw plates and the cross blocks 4. Each of the plates is provided at its

opposite side with the two sets of teeth 10, whereby the device is made double acting and whereby after one side of the jaw plates is worn out, they may be turned over and the unworn sets of teeth brought into position for use. The recess 11 is provided intermediate the sets of teeth 10, on each side of the jaw plates in order to permit of the transfer of the pipe from one set of teeth to the other without releasing the chain, and in order to provide the slack in the chain for its release when the pipe is placed in such central recess 11. Each of the jaw plates is provided with the transverse groove 12 for fitting over the cross blocks 4, whereby the plates are held rigidly against turning when the clamp bolt 9 is tightened. It will be noted that the jaw plates are symmetrical on opposite sides of the center line A—A (figure 3), and also on opposite sides of the line IV—IV, which construction provides for the interchangeability of the jaws from one side of the handle to the other, and also provides for turning the jaws over, so that after the teeth on one side have been worn those on the other side may be brought into position for use. As both jaws are precisely alike, only one set of forging dies is necessary, thus reducing the expense of forging the jaws to a minimum. The end of the grip chain is permanently secured in the slot 3 by means of a pin or rivet passing through the chain, and the openings 13 in the end of the handle. The pin or rivet may be either securely fixed in the handle by means of heads or nuts, or made of the same diameter throughout, and in this case prevented from displacement by means of the jaw plates which overlap the openings 13. It will be seen that by arranging the permanent securing means upon the handle as well as the hooks 5, the construction of the jaw plates 8 is simplified and cheapened and projecting parts on the jaw plates are avoided, which parts would render difficult the making of such jaw plates reversible and interchangeable.

Having thus described our invention and illustrated its use, what we claim as new and desire to secure by Letters Patent is the following:—

1. In a pipe wrench, a handle having at one end means for detachably engaging a grip chain, a pair of elongated interchangeable jaw plates clamped to opposite sides of the handle at an angle thereto, and each provided on its opposite longitudinal sides with

two sets of oppositely acting teeth arranged so that one set operatively engages the pipe when the handle is turned in one direction, and the other set operatively engages the pipe when the movement of the handle is reversed, together with a grip chain anchored to the end of the handle adjacent the jaw plates.

2. In a wrench, a handle having at one end means for detachably engaging a grip chain, a pair of opposing interchangeable jaw plates on opposite sides of the end of the handle, each jaw-plate being provided on its opposite longitudinal sides with two sets of oppositely acting teeth lying at opposite ends of the

side, and positioned so that one of said sets is brought into operation by movement of the handle in one direction and the other set is brought into operation by movement of the handle in a reverse direction, together with a grip chain anchored at one end to the end of the handle carrying the jaw plates. 20

In testimony whereof we have hereto signed our names in the presence of the two subscribed witnesses.

MAHLON E. LAYNE.
SAMUEL N. HALL.

Witnesses:

W. H. REEVES.
R. E. GARRETT.