

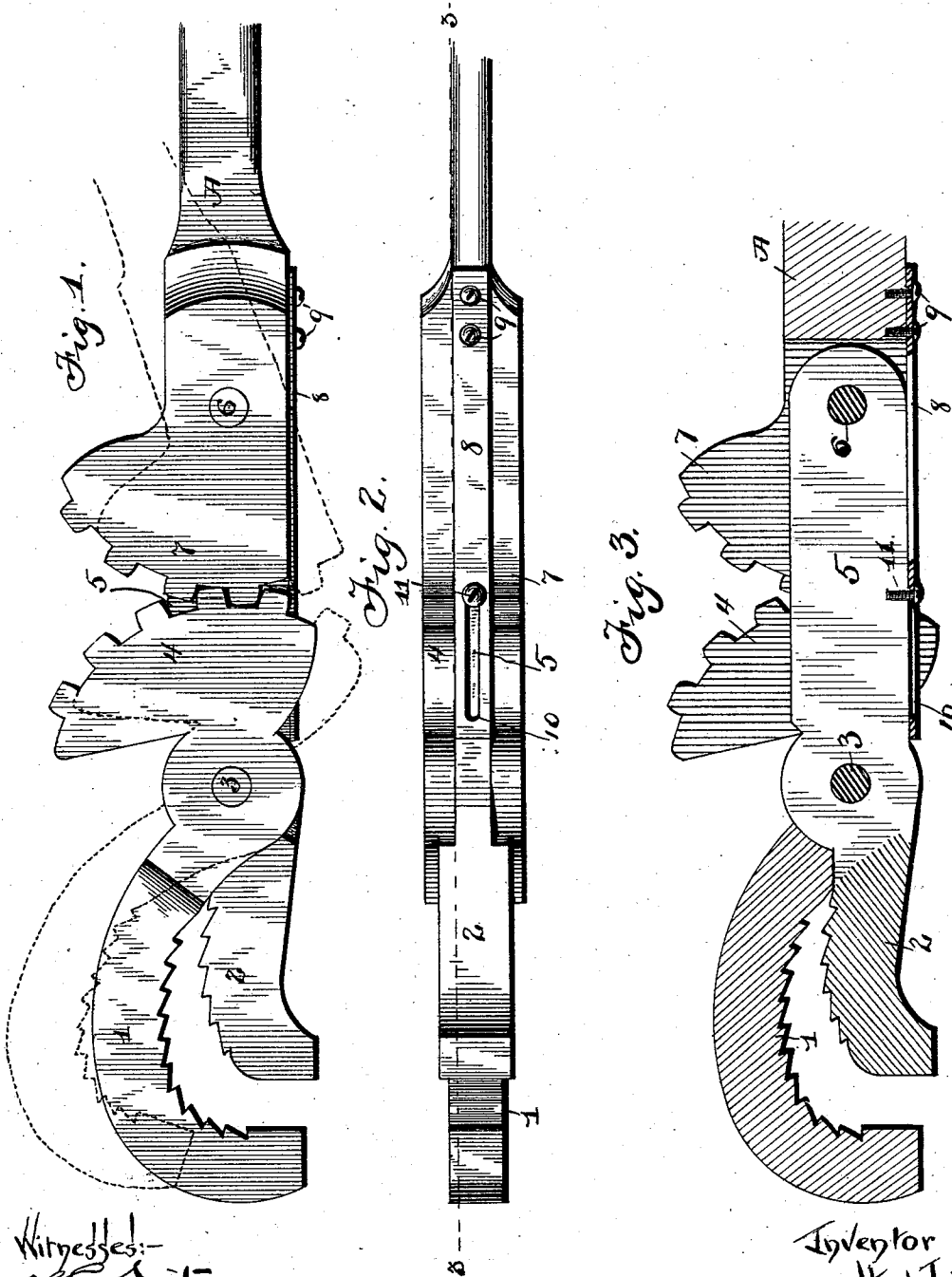
(No Model.)

2 Sheets—Sheet 1.

H. LIND.
PIPE WRENCH.

No. 531,125.

Patented Dec. 18, 1894.



Witnesses:
W. S. Seitz.
E. D. Eadsom, By his Attorney,

Inventor:
Hugh Lind.
Grover & Stigge

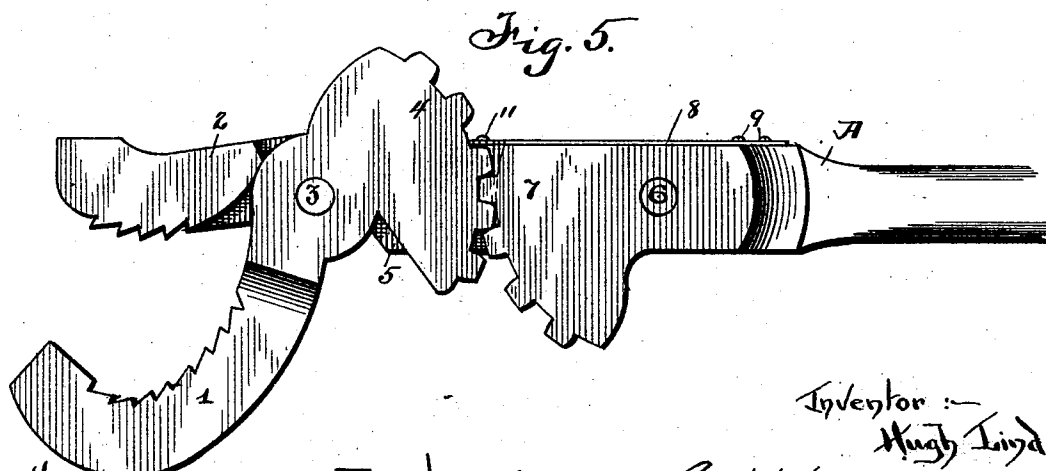
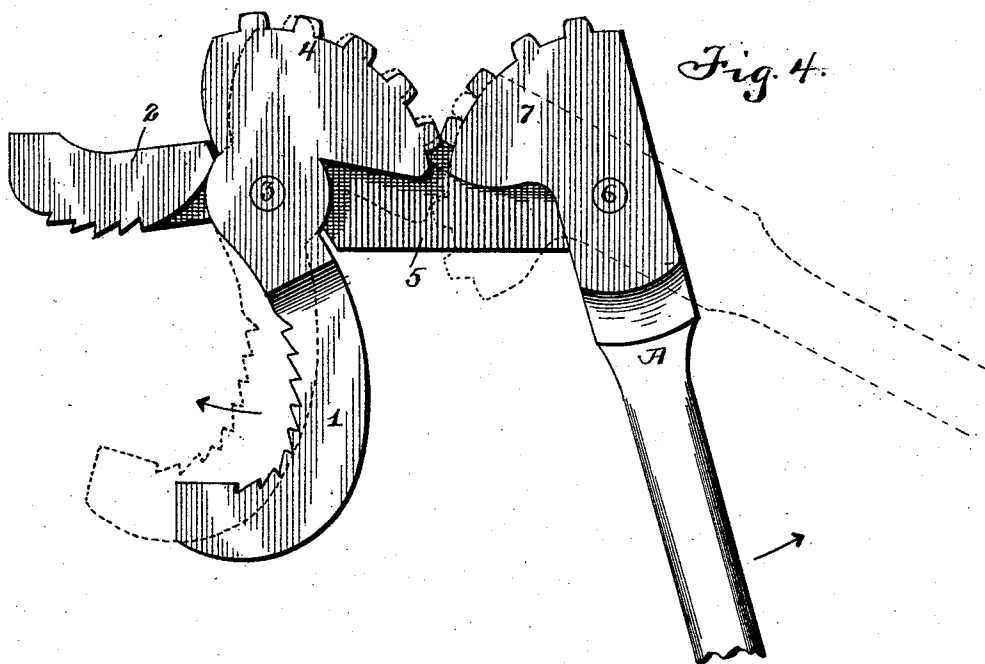
(No Model.)

2 Sheets—Sheet 2.

H. LIND.
PIPE WRENCH.

No. 531,125.

Patented Dec. 18, 1894.



Witnesses:
H. B. Smith
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Inventor: Hugh Lind.
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UNITED STATES PATENT OFFICE.

HUGH LIND, OF WHITEWATER, COLORADO.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 531,125, dated December 18, 1894.

Application filed April 23, 1894. Serial No. 508,666. (No model.)

To all whom it may concern:

Be it known that I, HUGH LIND, a citizen of the United States, residing at Whitewater, in the county of Mesa and State of Colorado, have invented certain new and useful Improvements in Pipe or Rod Wrenches, of which the following is a full, clear, and exact description, and which will enable others skilled in the art to which the invention appertains to make and use the same.

My invention relates to pipe and rod wrenches and has particular reference to that class of such devices in which gear segments are employed to enable the jaws of the wrench to be readily adapted to different sizes of pipes or rods, while necessitating a very slight movement of the jaws when clamping or unclamping a pipe or rod.

The object of my invention is to produce a wrench of this character, in which the gear segments will be kept in engagement in any of their adjusted positions, and yet permit of the free movement of the parts; and my invention has for a further object, simplicity, durability and general efficiency.

To these ends, my invention consists in the improved construction and combination of parts, as hereinafter described and claimed.

In the drawings:—Figure 1 is a side elevation of my complete wrench showing the gear segments in one adjusted position. Fig. 2 is an edge view from the under side of Fig. 1. Fig. 3 is a section taken on line 3—3 of Fig. 2. Fig. 4 is a view showing the parts in a position to which they will be carried to prepare the segments for a different engagement from that shown in Fig. 1, and Fig. 5 is a side elevation, showing the parts in their positions after the segments are brought together from the position shown in Fig. 4.

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

Referring to the drawings, 1 indicates a concave jaw, and 2, the convex jaw pivotally connected at 3. The jaw 1 has a rearwardly extending arm, provided with gear segment 4, the teeth of which are concentric with the pivot 3. The jaw 2 has a rearwardly extending lever arm 5, pivotally connected with the handle A at 6, the handle A having a gear

segment 7 concentric with the pivot point 6, and adapted to mesh with the segment 4.

To the edge of the handle A is rigidly connected one end of a spring 8, as by means of the screws 9. The other end of the spring 8 is provided with a longitudinal slot 10, through which a screw or bolt 11 extends into the edge of the lever arm 5. This spring is preferably a light one, having such strength only as may be necessary to preserve the lever arm and handle in normal alignment. When the wrench is in an open position, or the position shown in Fig. 4 of the drawings, the spring will yieldingly press against the end of the lever arm 5, the said end being rounded as shown in Fig. 3, the spring following the curvature of the said lever arm.

In the use of my wrench, when a small rod or pipe is to be turned, the segments will be in mesh with each other, as indicated in full lines in Fig. 1. In placing the wrench upon the pipe or rod, the handle is moved as indicated by dotted lines in Fig. 1, thus causing the lever arm 5 to turn on its pivot 3, and open the jaw 2, away from the jaw 1. A reverse movement of the handle causes the jaw 2 to grasp the rod or pipe between it and the jaw 1, and a further movement of the handle causes the turning of the pipe or rod. When a larger pipe is to be operated upon, the handle A is turned around until the segments are disengaged and at this point the handle can be turned upon its pivot 6 to a position such as indicated in Fig. 4. Then, rocking the lever arm 5 upon its pivot 3, brings the teeth of the segments into a different engagement, such as indicated in Fig. 5. When the parts are in this latter position, a larger pipe or rod can be grasped and operated by the same movement of the handle as described in connection with the adjustment shown in Fig. 1. The spring 8 serves to prevent the segments from rocking on their pivots so as to become disengaged, and yet, owing to the slot in the spring, the parts can be, when desired, adjusted and operated as above described.

Having thus described my invention, what I claim is—

1. In a pipe or rod wrench, the combination of the two jaws thereof, one of which has a gear segment concentric with the pivot of the

two jaws, and the other having an extended lever arm, of a handle pivotally connected with the latter, and having a gear segment concentric with its pivot and meshing with
5 the first mentioned gear segment, and a spring for yieldingly preserving the alignment of the parts, substantially as described.

2. In a pipe or rod wrench, the combination
10 with the jaws 1 and 2, pivotally connected to each other, the jaw 1 having the gear segment 4, of the lever arm 5, extending from the jaw 2, the handle A pivotally connected with the

lever arm 5 and having the gear segment 7 adapted to mesh with, or be thrown out of engagement from the gear segment 4, and the 15 spring 8, yieldingly connecting the handle A and the jaw 2, substantially as described.

In testimony whereof I have hereunto affixed my signature in the presence of two witnesses.

HUGH LIND.

Witnesses:

M. E. SNYDER,
JOSEPHINE LYNCH.