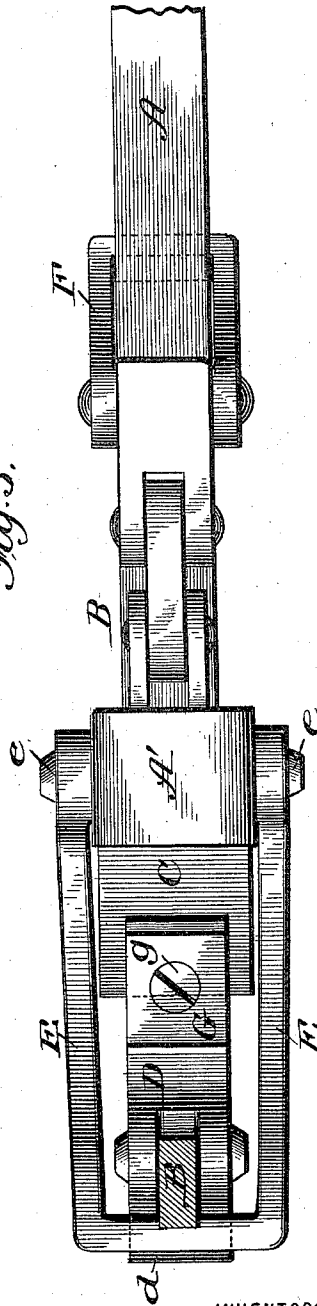
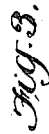


W. H. FURBEE & T. BARRETT.
PIPE WRENCH.

Patented Mar. 16, 1897.



Jos. C. Ryan
P. B. Zupine.

William H. Furbee
Thomas Barrett
BY Munroe

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM H. FURBEE AND THOMAS BARRETT, OF MANNINGTON, WEST VIRGINIA.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 579,053, dated March 16, 1897.

Application filed December 5, 1896; Serial No. 614,557. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM H. FURBEE and THOMAS BARRETT, of Mannington, in the county of Marion and State of West Virginia, have invented a new and useful Improvement in Pipe-Wrenches, of which the following is a specification.

This invention is an improvement in pipe-wrenches, and particularly in that class of such wrenches known as "chain" pipe-wrenches; and the invention consists in certain novel constructions, combinations, and arrangements of parts, as will be hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a side view of our wrench as in use. Fig. 2 is an edge view of the wrench with the chain and end block extended, and Fig. 3 is a sectional view on about line 3 3 of Fig. 1.

The handle A is made in one piece of such size as to give the requisite strength for the purpose for which the wrench is designed. At the upper end or head of this wrench-handle we provide a guide A' for the chain B, and opposite said guide a projection C, which bears against the point of the end gripping-link D and by tilting such link shortens the circle of the chain and binds it upon the pipe or other object to be turned. In connection with the projection for engaging and tilting the gripping-link we provide means for holding the said link so it can be tilted to clamp the pipe. The preferred means for connecting such link to the head consists of a bail E, connected at one end *e* to the handle, preferably pivotally, as shown, and engaging at its other end with the gripping-link, preferably in a depressed seat *d*, formed in the link just in rear of its connection with the adjoining link of the chain.

The chain is secured below the guide by providing its lower end with a loop F, embracing the handle and engaging serrated or notched edge A', so the said end of the chain may be adjusted to suit pipes of different sizes.

In the inner face of the gripping-link we secure the die-block G, which is held in place by the screw *g*, whose head is countersunk in the face of the die-block, as shown. The upper inner edge of the die-block bites into the

pipe on the operative swing of the handle and turns the pipe, while on the reverse movement the die-block slips back along the pipe, alternately biting and slipping, as will be readily understood.

In operation it is evident that if the handle, as shown in Fig. 1, be swung to the left the projection C will bear upon the outer side of the lower end of the gripping-link and press the same in, causing the die-block to bite into the pipe. In this operation the bail E serves to hold the gripping-link to the head of the wrench without interfering with the tilting of the gripping-link by the swinging of the handle, as before described.

In operation it is manifest that the chain when once adjusted may be used on different pipes throughout a considerable range of sizes, the nose or projection of the handle tilting the gripping-link into the necessary extent to properly engage the pipe, such link being properly held at all times to the handle by the bail being thereby connected with the handle by means independent of that by which the link is tilted.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A wrench substantially as described comprising the handle the chain held at one end thereto and provided at its other end with a gripping-link, means for connecting said link with the handle and a projection or portion on the handle arranged to engage and operate the gripping-link substantially as shown and described.

2. A wrench-chain having at its free end a link or section jointed at one end to the adjoining link of the chain whereby its other end may be tilted and provided with a seat for the devices which connect it with the handle, combined with the handle and connecting devices, substantially as shown and described.

3. A chain wrench having its chain provided with a gripping-link and its handle provided with means for holding said link and with independent means for tilting the link substantially as shown and described.

4. In a wrench substantially as described, the combination of the chain having a grip-

ping-link, the handle having a part or projection engaging said link, and the bail by which the said link is held in connection with the handle substantially as shown and described.

5 5. A wrench comprising the chain having a gripping-link and the handle-head provided with a chain-guide and opposite thereto with a projection by which to tilt the gripping-link, and the bail by which the link is held in connection with the handle substantially as shown and described.

10 6. The wrench herein described consisting

of the chain having a loop at one end and a gripping-link at its other end, the handle having a serrated or notched edge and having its head provided with a guide, and a nose or projection by which to operate the gripping-link of the chain, and the bail pivoted to the handle and engaging the gripping-link substantially as shown and described.

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WILLIAM H. FURBEE.
THOS. BARRETT.

Witnesses:

L. J. CARSKADON,
V. T. CLAYTON.