

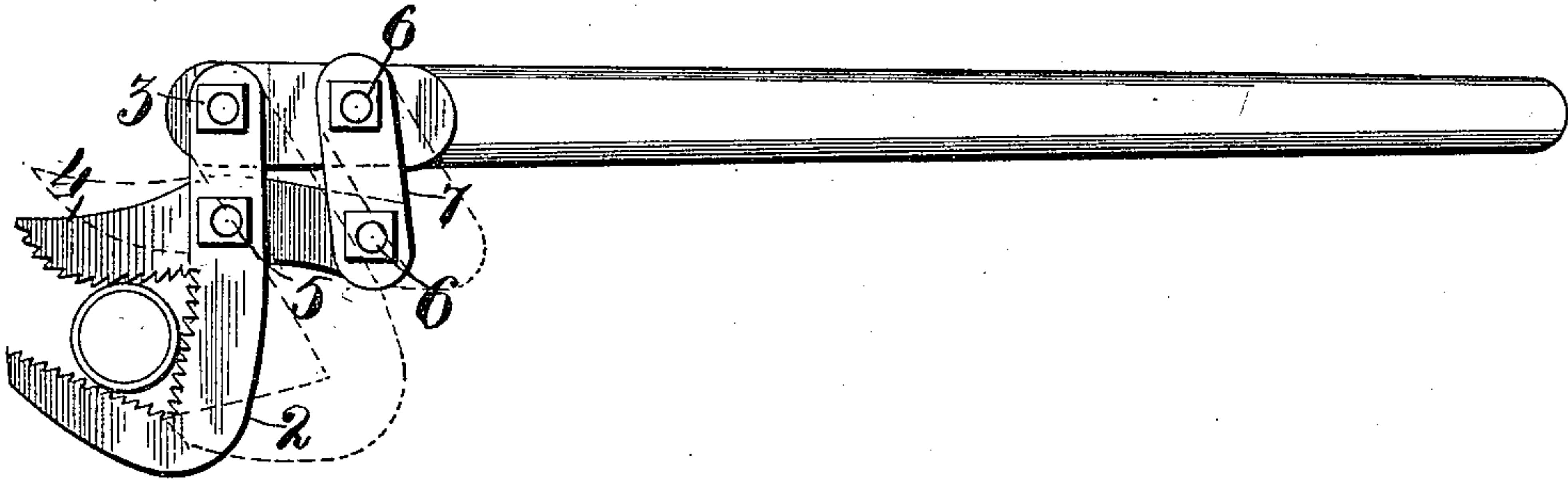
(No Model.)

T. NEWMAN.  
PIPE WRENCH.

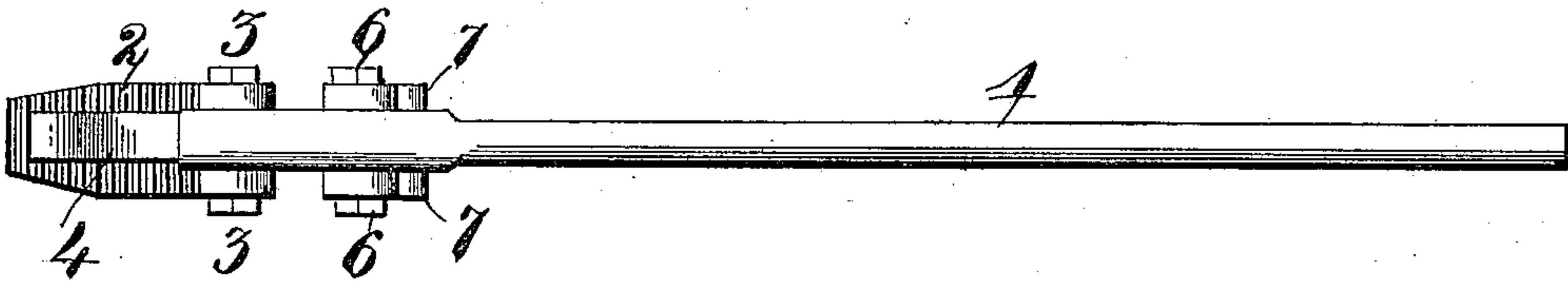
No. 450,972.

Patented Apr. 21, 1891.

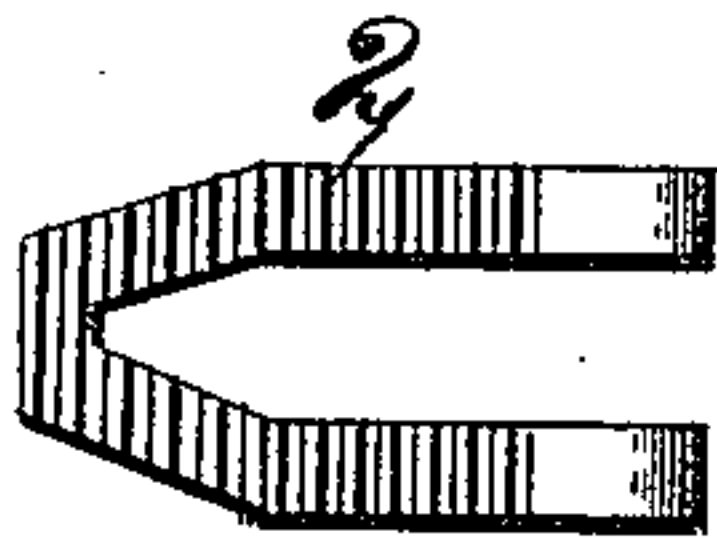
*Fig. 1.*



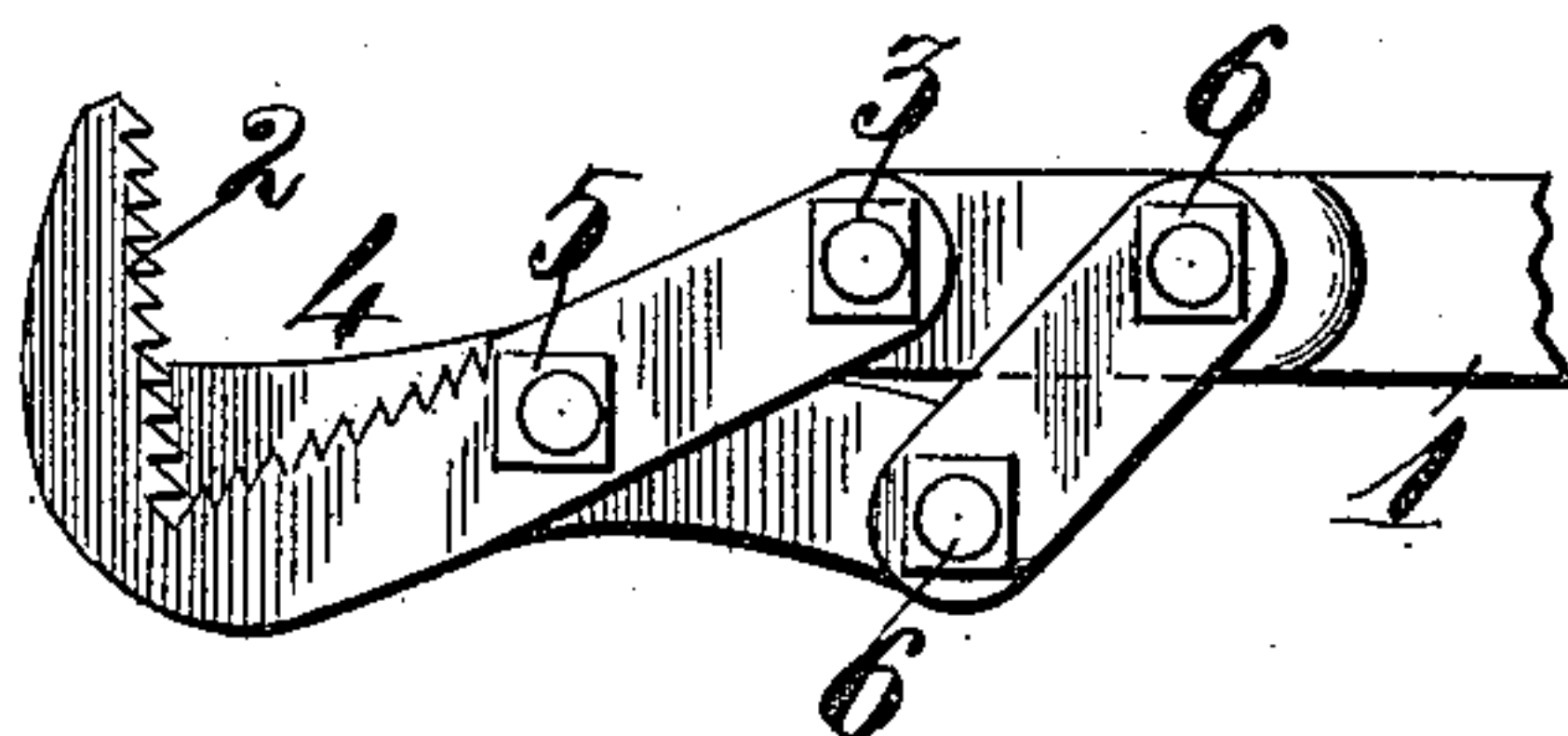
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 450,972, dated April 21, 1891.

Application filed January 10, 1891. Serial No. 377,368. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS NEWMAN, of Poplar Bluff, Butler county, Missouri, have invented certain new and useful Improvements in Pipe-Wrenches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in pipe-wrenches; and it consists in the novel arrangement and combination of parts, as will be more fully hereinafter described, and designated in the claim.

In the drawings, Figure 1 is a side elevation of my invention, showing the same applied to an ordinary pipe. Fig. 2 is a top plan view of my invention. Fig. 3 is a top plan view of a bifurcated hooked jaw which I employ in carrying out my invention, and Fig. 4 is a side elevation showing my invention closed or not in a functional position.

Referring to the drawings, 1 indicates an arm or handle by which my invention is manipulated and also functionally operated. To the front end of said arm the bifurcated hooked jaw 2 is pivotally secured by means of a nut-bolt 3. The angular portion of said jaw is provided with a series of ratchet-teeth adapted to impinge and bite whatever object over which said jaw is placed. Said jaw is bifurcated, as above stated, and interposed between the prongs or bifurcations thereof is a small lever 4, the end of which is curved and also provided with upwardly-formed ratchet-teeth. Said lever 4 is pivotally secured between the prongs or bifurcations of jaw 2 by means of a nut-bolt 5.

Pivotally secured by means of nut-bolt 6 to arm 1 and lever 4 are side plates 7, between which said arm and said lever are interposed. Said plates 7 are so secured to said arm 1 and

lever 4 that they generally occupy a parallel position to the main portion of hook 2. This parallel arrangement, in combination with the arm 1 and lever 4, practically operates in the manner of the parallelogram of forces, the principles of which are well understood and need no elucidation.

Having given a fully explicit description of my invention, I will now proceed to describe its application and its use. The parts are made and constructed substantially as hereinbefore described. When it is desired to turn a pipe or any other object, the operator should lower or depress jaw 2, by which operation lever 4 is elevated, thereby affording sufficient space between said jaw and said lever for the reception of the desired pipe. When arm 1 is elevated, the power applied to said arm is transmitted to plates 7, and from thence to lever 4, and is ultimately transmitted in the form of pressure against the pipe or to whatever object the wrench is applied. The greater the power applied to arm 1 the greater will be the impinging contact between lever 4 and the resistance of the pipe or whatever is being turned.

Having fully described my invention, what I claim is—

A pipe-wrench consisting of an arm 1, a bifurcated jaw 2, pivotally secured to said arm, a lever 4, pivotally secured to said jaw, and plates 7, pivotally secured to said arm and lever for transmitting the power applied to the arm to the resistance to be overcome, substantially as set forth.

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

THOMAS NEWMAN.

Witnesses:

THOS. M. LANE,  
SAMUEL GARDNER.