

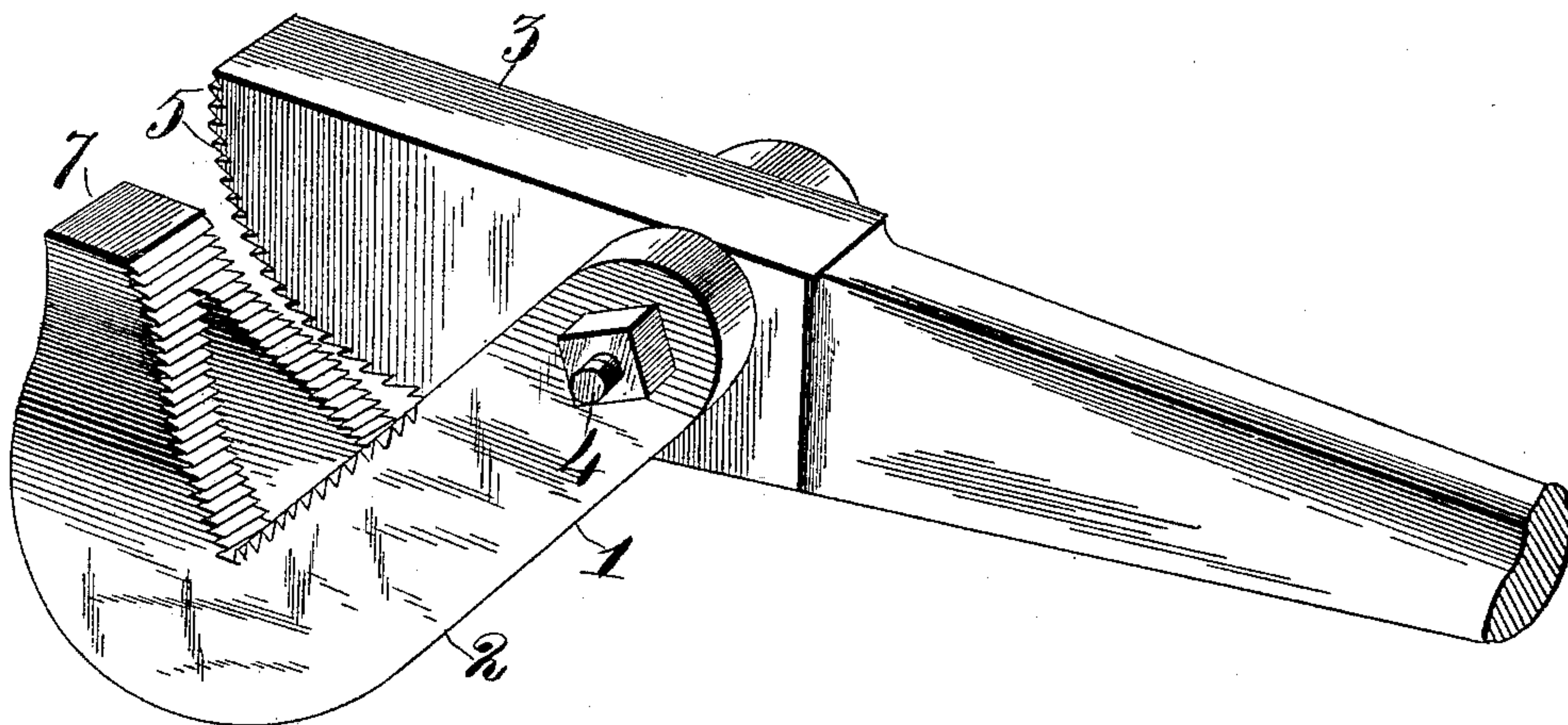
(No Model.)

T. NEWMAN.  
PIPE WRENCH.

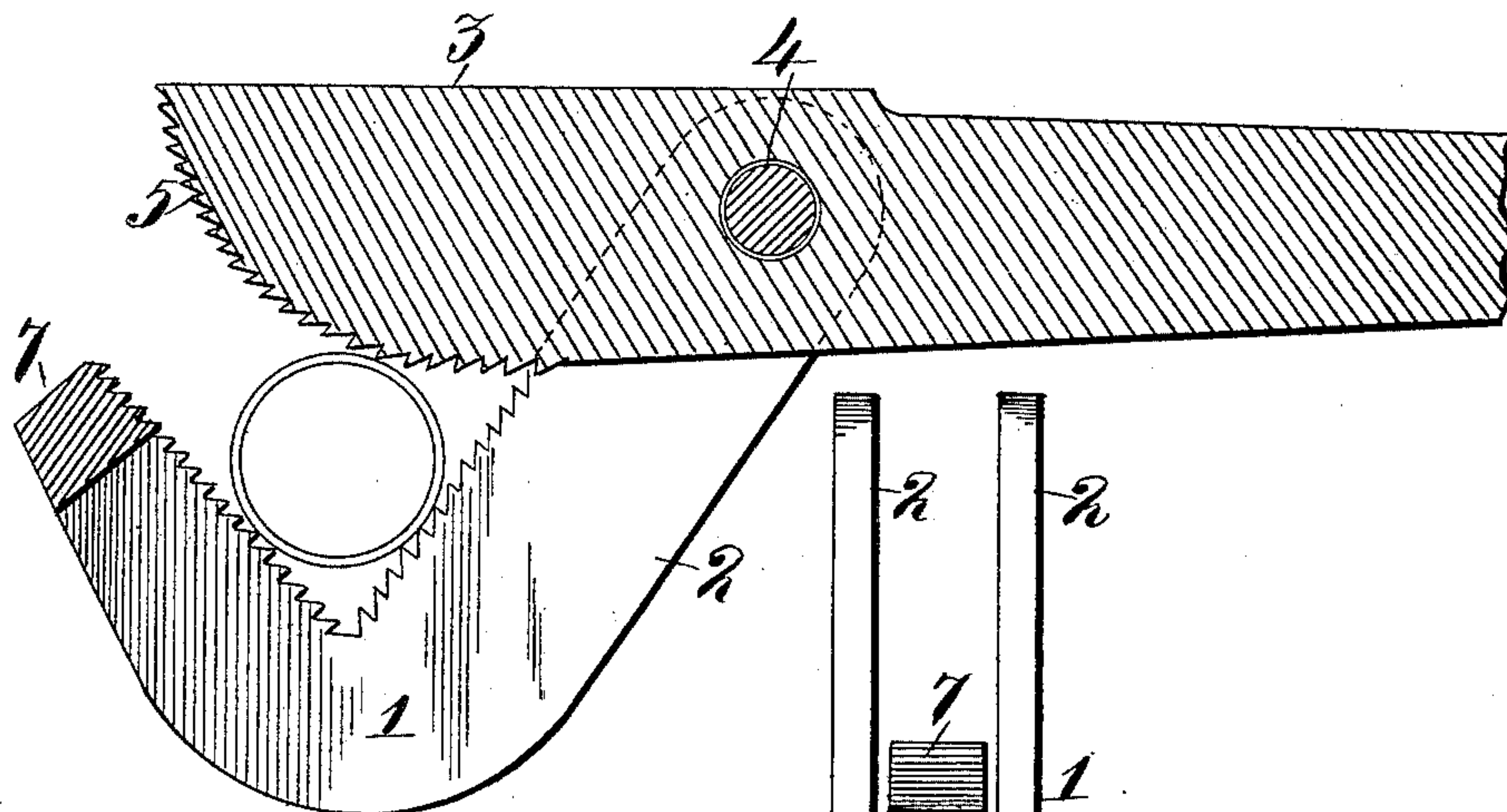
No. 450,676.

Patented Apr. 21, 1891.

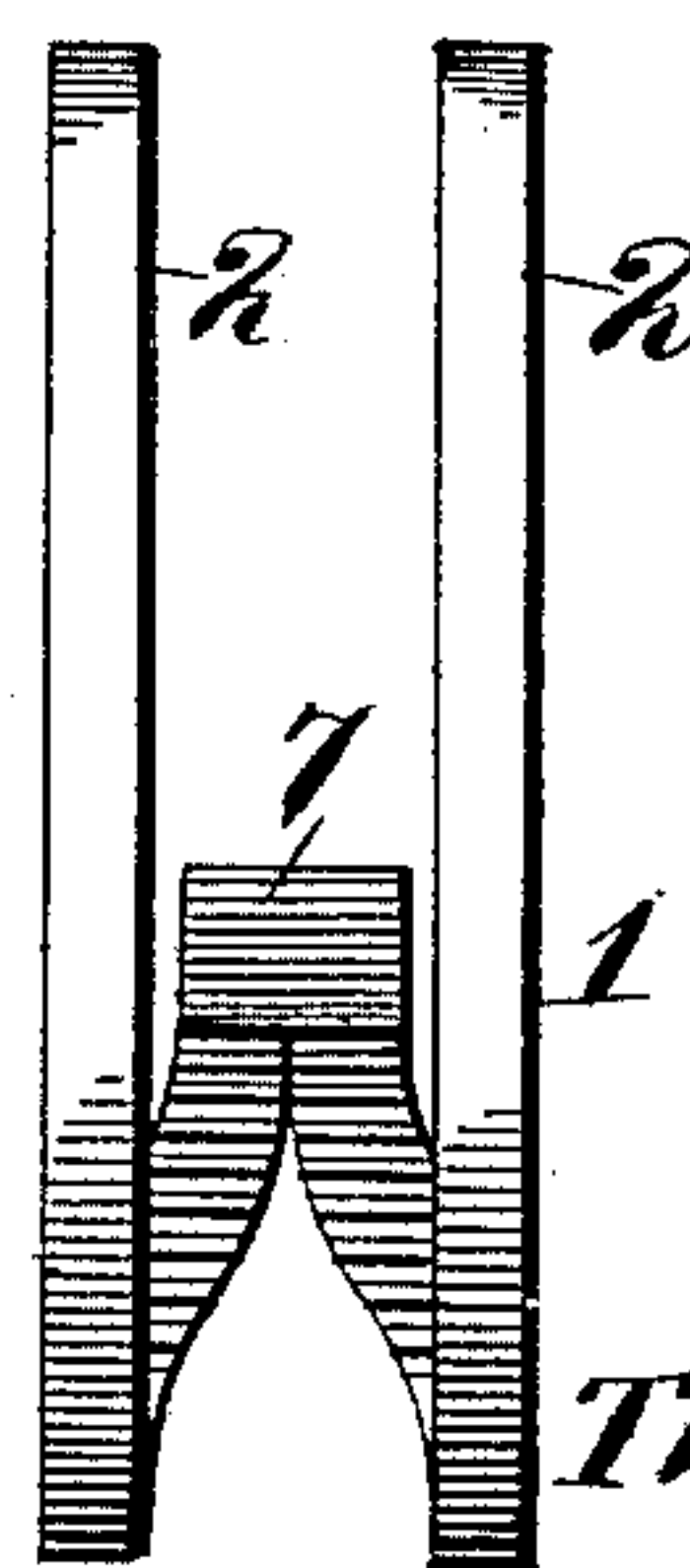
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses  
O. H. Heller.  
Edward Everett Longan.

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Thomas Newman.  
By His Attorneys Higdon & Higdon



# UNITED STATES PATENT OFFICE.

THOMAS NEWMAN, OF POPLAR BLUFF, MISSOURI.

## PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 450,676, dated April 21, 1891.

Application filed January 30, 1891. Serial No. 379,731. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS NEWMAN, of the city of Poplar Bluff, Butler county, State of 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 construction, arrangement, and combination of parts, as will be more fully hereinafter described, and designated in the claims.

In the drawings, Figure 1 is a perspective view of my complete invention, showing the peculiar construction and position of the teeth. Fig. 2 is a vertical longitudinal section of my device when applied to a pipe, and Fig. 3 is a rear view of the bifurcated jaw detached.

Referring to the drawings, 1 indicates a bifurcated jaw, which is preferably constructed out of one piece of material by the material being bent at its median portion and compressed together where the lap is made, but the free and extended portions stand asunder for the purposes hereinafter stated. Said jaw may also be made of one solid piece of metal and split, thereby forming the bifurcations. Said jaw is provided with an upright portion 7 and bifurcations 2, between which bifurcations arm or lever 3 is interposed and therein pivotally secured.

The bifurcations 2, as well as the upright portion 7 of jaw 1, are provided on their inner surfaces with a series of ratchet-teeth. The ratchet-teeth formed on the upright portions of the jaw slant downwardly, and those formed on the bifurcations 2 project toward arm 3 when the same is secured in its normal position. Arm 3 is pivotally secured between the bifurcations 2 by means of a bolt or rivet 4, thereby permitting the jaw to freely move in its pivotal connection. The front and lower terminal portion of arm 3 is provided with an approximately parabolic marginal surface, the same being provided with a series of ratchet-teeth 5. Said ratchet-teeth are formed with their lower surfaces approximately parallel to each other and also parallel to the straight and plain upper portion of arm 3, so that when they are functionally applied to a pipe and when power is applied to

said arm they impinge and bite directly against the surface of the same. The angle formed by the upright portion 7 of jaw 1 and the bifurcations 2 is acute, so that when the same is placed over a pipe and the curved portion of arm 1 is brought against said pipe three portions of said pipe will be subjected to an impinging contact. One portion being in direct contact with the ratchet-teeth formed on the upright portion 7 of jaw 1, another portion of the pipe in contact with the ratchet-teeth formed on the bifurcations 2, and the third in contact with the ratchet-teeth formed on the rounded portion of arm 3, or, in other words, by the formation of the acute angle between the upright portion 7 and bifurcations 2 of jaw 1 and by the arm 3 being provided with a bulged or parabolic marginal surface, the pipe is subjected to more contact-surface than would otherwise be effected by any other construction. The bifurcations 2 are situated asunder at such a distance that the front and terminal portion of arm 3 is free to move downwardly between the same at any desired distance or pass clear through.

The essential feature of my invention is in the construction of a wrench with few and simple parts and adapted to receive various sizes of pipes embodying an easy adjustment to receive different sizes.

Having fully described my invention, what I claim is—

1. A pipe-wrench consisting of an arm the lower front terminal portion of which is provided with an indented bulged surface and an angular jaw, the inner surface of the upright portion of said jaw being provided with downwardly-formed teeth, substantially as set forth.

2. A pipe-wrench consisting of an arm the lower front terminal portion of which is provided with an indented bulged surface and an angular bifurcated jaw, the inner surface of the upright portion of said bifurcation being provided with downwardly-formed teeth, substantially as set forth.

3. A pipe-wrench consisting of an arm the lower front terminal portion of which is provided with a bulged surface, the same being provided with ratchet-teeth, the lower surfaces of which teeth are parallel and also parallel to the straight upper face of said arm,

and an angular bifurcated jaw, the inner surface of said bifurcations being likewise provided with ratchet-teeth and interposed between the bifurcations thereof said arm is  
5 pivotally and permanently secured, substantially as set forth.

4. A pipe-wrench consisting of the gripping-jaws formed by the curved lower end of the lever arm or handle of the tool from a center or pivot outward and the angular bifur-

cated depending jaw pivoted thereto, said jaws being provided with ratchet-teeth to grip and hold the pipe, substantially as shown and described.

In testimony whereof I affix my signature in  
presence of two witnesses. 15

THOMAS NEWMAN.

Witnesses:

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