(No Model.)

J. LYTLE.

PIPE WRENCH.

No. 522,795. Patented July 10, 1894.

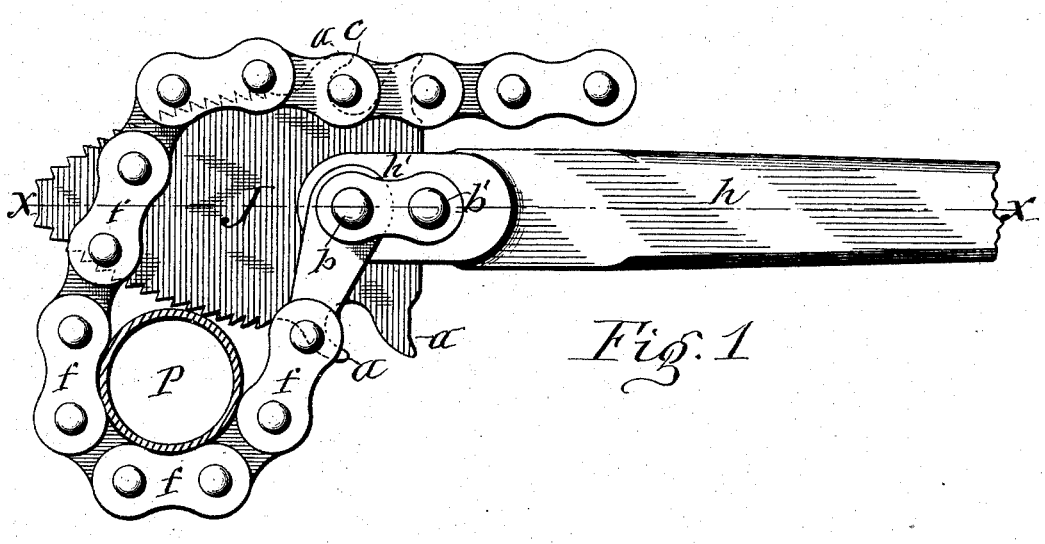

Fig. 1

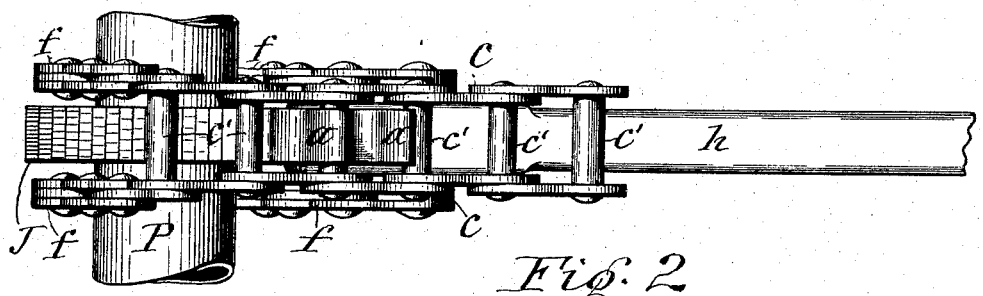

Fig. 2

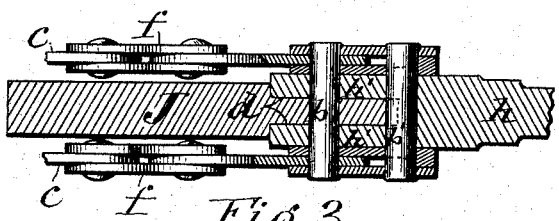

Fig. 3

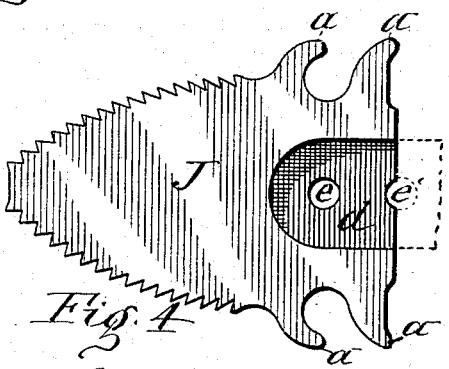

Fig. 4

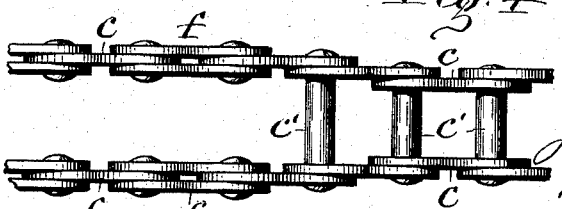

Fig. 5

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UNITED STATES PATENT OFFICE.

JOHN LYTLE, OF ITHACA, NEW YORK.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 522,795, dated July 10, 1894.

Application filed April 14, 1894. Serial No. 507,531. (No model.)

To all whom it may concern:

Be it known that I, JOHN LYTLE, of Ithaca, in the county of Tompkins, in the State of New York, have invented new and useful Improvements in Pipe-Wrenches, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the class of pipe-wrenches which are provided with a rigid serrated jaw and with a chain connected to said jaw which members grip between them the pipe or analogous cylindrical article to be turned.

The object of the invention is to simplify the construction of the wrench so as to reduce the cost of manufacture and at the same time render the wrench convenient and more efficient in its operation, and also stronger. And to that end the invention consists in the improved construction and combination of parts hereinafter described and specifically set forth in the claims.

In the annexed drawings Figure 1 is a side view of a wrench embodying my invention. Fig. 2 is an edge view of the same. Fig. 3 is a longitudinal section on line —X—X— in Fig. 1. Fig. 4 is a detached side view of the jaw, and Fig. 5 is an edge view of a section of the two chains showing the reinforcing links and cross-ties thereof.

Similar letters of reference indicate corresponding parts.

In my invention I employ a single jaw —J— which I cast or forge in one piece of steel. Said jaw is elongated and serrated in opposite edges in the usual manner. —*h*— denotes the handle which I attach to said single jaw by forming the attaching end of said handle with tongues —*h'*—*h'*— between which the jaw is inserted and fastened therein by rivets or bolts —*b*—*b'*— passing through said tongues and through an orifice —*e*— and notch *e'* in the jaw. In order to sustain the said jaw more securely on the handle I form the jaw with mortises —*d*—*d*— in opposite sides and shaped to correspond to the tongues —*h'*—*h'*— which are inserted in said mortises. The base of the jaw is provided with a notch —*e*—, through which the rivet —*b'*— passes and thus prevents lateral displacement of the jaw on the handle —*h*—.

—*c*—*c*— represent the two chains which I hang on opposite sides of the jaw preferably to the protruding ends of the rivet —*b*—. These chains I maintain separated from each other throughout their attached end portions for the purpose of allowing them to straddle the jaw —J— and obtain a firmer or more direct hold on the pipe —P—. The free end portions of the chains are united by cross-ties —*c'*—*c'*— which may consist either of metal tubes or solid bars of a size to allow either of said cross-ties to be entered into one of the hooks —*a*—*a*— formed on opposite edges of the jaw, which hooks allow the free ends of the chains to be connected to either side of the jaw, and the jaw to be applied to either side of the pipe. To reinforce the end portions of the chains which are separated from each other, I provide said portions with additional links —*f*—*f*—.

One of the advantages of my wrench consists in the employment of the single jaw —J— which simplifies the construction and reduces the thickness of the wrench so as to allow it to be used on a short pipe coupling, besides obtaining a more positive hold upon the pipe by the chains —*c*—*c*— straddling said jaw.

What I claim as my invention is—

1. The combination of the handle —*h*— formed with the tongues —*h'*—*h'*—, the jaw —J— inserted between said tongues and provided with hooks —*a*—*a*—, the rivet or bolt —*b*— passing through the tongues and jaw, and the chains —*c*—*c*— straddling the jaw and united at their free end portions by cross-ties —*c'*—*c'*—, substantially as set forth and shown.

2. The improved pipe-wrench consisting of a single jaw —J— formed in one piece and with the hooks —*a*—*a*—, mortises —*d*—*d*— in opposite sides, the handle —*h*— formed with tongues —*h'*—*h'*— inserted in the mortises of the jaw, the rivet —*b*— passing through said tongues and jaw, and the chains —*c*—*c*— hung on the protruding ends of the aforesaid rivet and separated from each other throughout their attached end portions and united at their free end portions by cross-ties —*c'*—*c'*—, substantially as described.

3. The combination of the single jaw —J— formed with the hooks —*a*—*a*— and with the

mortises —*d*—*d*— in opposite sides and provided with the orifice —*e*— and notch —*e'*—, the handle —*h*— formed with tongues —*h'*—*h'*— inserted in said mortises, the rivets —*b*— and —*b'*— passing through said tongues and the orifice and notch, respectively and the chains —*c*—*c*— hung on the protruding ends of one of said rivets and separated from each other at the attached end portions and united at their free end portions by cross-ties —*c'*—*c'*—, as set forth.

4. In combination with the single jaw —J— formed with hooks —*a*—*a*— and the handle —*h*— extending from said jaw, the chains —*c*—*c*— connected to said jaw at opposite sides thereof and separated from each other at their attached end portions and provided thereat with the extra reinforcing links —*f*—*f*— and united at their free end portions by cross-ties —*c'*—*c'*—, substantially as described and shown.

In testimony whereof I have hereunto signed my name this 11th day of April, 1894.

JOHN LYTLE. [L. S.]

Witnesses:
JOHN J. LAASS,
C. L. BENDIXON.