

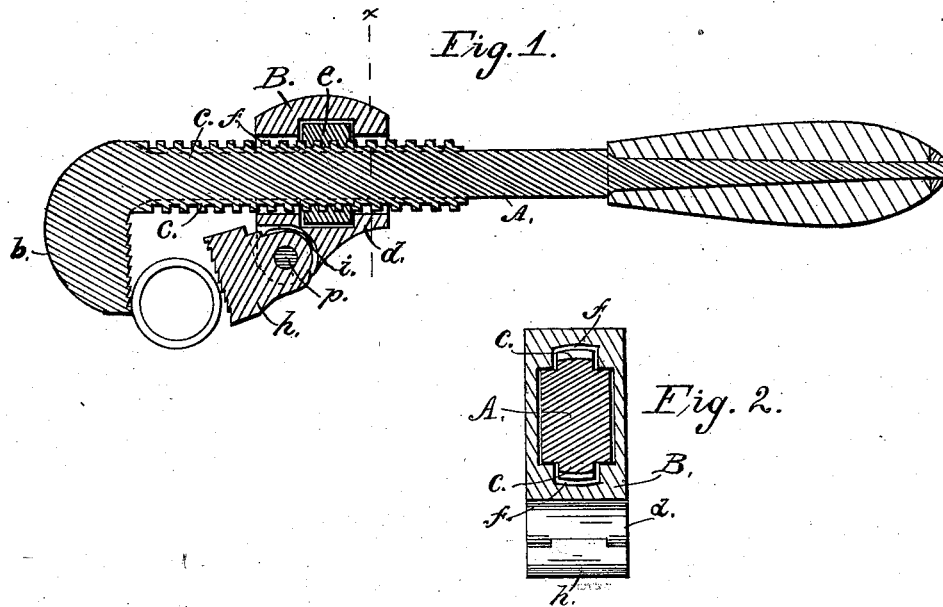
(No Model.)

J. E. SANDERS.

PIPE WRENCH.

No. 261,486.

Patented July 18, 1882.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHN E. SANDERS, OF INDIANAPOLIS, INDIANA.

## PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 261,486, dated July 18, 1882.

Application filed May 26, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN E. SANDERS, a resident of Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Improvement in Pipe-Wrenches, of which the following is a specification, having reference to the accompanying drawings.

My invention relates to that class of pipe-wrenches which consist of a bar having one end turned at a right angle to form a jaw, a screw-thread cut along a portion of said bar, and a sliding jaw moving upon said bar by means of a nut engaging the screw-threaded portion thereof.

My object is to give the sliding jaw a firm and durable bearing on the bar to protect the screw from injury when the sliding jaw is under pressure.

My invention consists in providing narrow ribs formed along two sides of the bar, forming the permanent jaw, and to which the handle is attached, in which ribs screw-threads are formed, the width of said ribs being less than the thickness of the bar, and the sliding jaw formed to fit nicely on the bar, and provided with internal recesses for the passage of the ribs, as hereinafter fully explained.

The accompanying drawings illustrate my invention, Figure 1 being a longitudinal section; and Fig. 2, a transverse section through *a*, Fig. 1, enlarged.

*A* represents a bar, preferably a forging of steel, having the permanent jaw *b* formed on one end and the other end adapted to receive a handle. Ribs *c c* are formed on the two sides of bar *A*, and are cut to form segments of a screw-thread. Said ribs are narrower than the thickness of the bar, so that a rabbet is formed on each side, as clearly shown in Fig. 2.

The sliding jaw *B* is formed in two parts. One part, *d*, embraces the bar and slides thereon, being recessed at *f*, so as to clear the

threaded ribs, and is mortised to receive the nut *e*, which fits and works upon the screw-thread formed in the ribs *c*. A serrated block, *h*, is pivoted between lugs formed on *d* in such a position that said block forms a companion jaw to jaw *b*, the serrated surface of *h*, when in its normal position, forming, with the serrated surface of jaw *b*, a wedge-shaped opening, as shown. Block *h* is held in its normal position by spring *i*.

The operation of my invention is as follows: The sliding jaw is moved forward on the bar *A* by means of nut *e* until the jaws come in contact with the pipe. Force being now applied to turn the wrench, the pipe is rolled farther into the wedge-shaped opening formed by the jaws, and the block *h*, yielding on its pivot, tends to assume a position more nearly parallel with jaw *b*; but the position of pivot *p* is such that the pipe cannot pass its center, and the surface of *h* consequently approaches nearer to jaw *b*, and the pipe is firmly gripped. To release the pipe it is only necessary to turn the wrench in the opposite direction. The sliding jaw being fitted to slide on the bar without touching the ribs *c*, all danger of jamming the threads is avoided; and by means of the general arrangement of all the parts a compact wrench is formed capable of working in close places and with great gripping power.

I claim as my invention—

In a pipe-wrench, the screw-threaded ribs *c c*, formed upon and integral with the bar *A*, in combination with nut *e* and sliding jaw *B*, recessed, as shown and described, and fitting to and sliding on the bar *A* without touching ribs *c*, substantially in the manner and for the purpose set forth.

JOHN E. SANDERS.

Witnesses:

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W. S. ROLLINGS.