No. 647,937. Patented Apr. 24, 1900.

P. M. BRADLEY.

PIPE WRENCH.

(Application filed Jan. 20, 1900.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

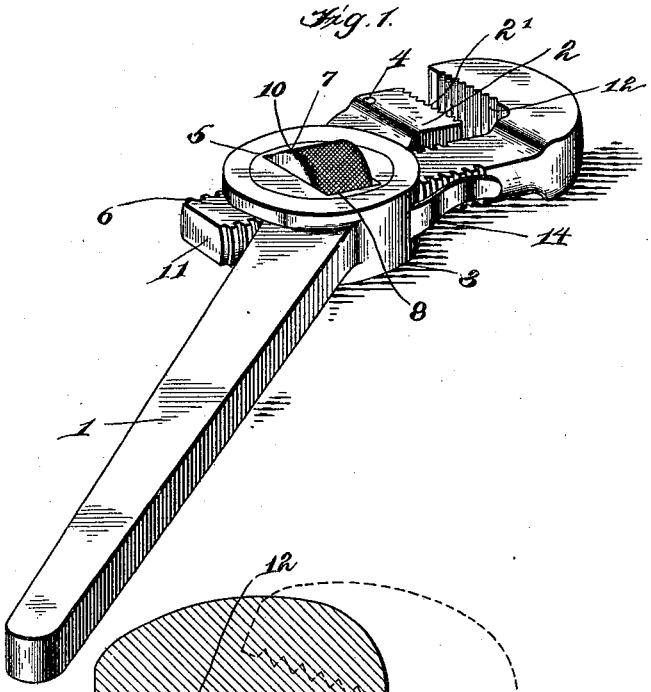

Fig. 2.

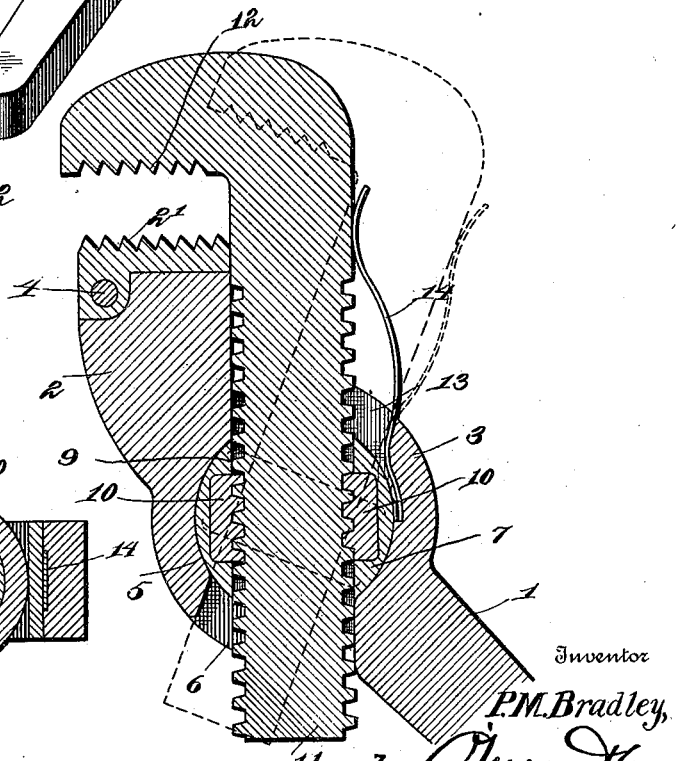

Fig. 3.

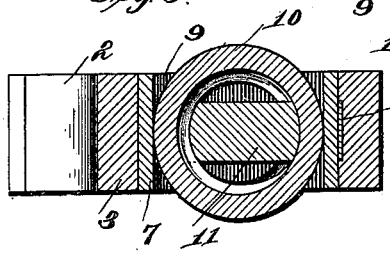

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Fig. 4.

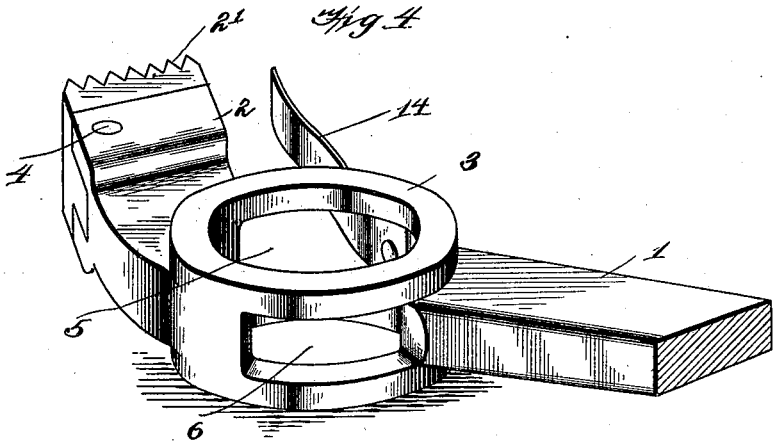
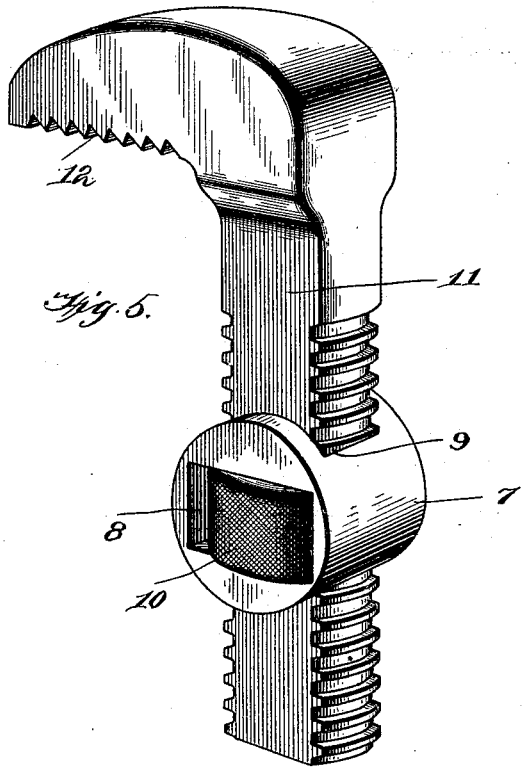


Fig. 5.



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UNITED STATES PATENT OFFICE.

PORTE M. BRADLEY, OF CRIPPLE CREEK, COLORADO.

PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 647,937, dated April 24, 1900.

Application filed January 20, 1900. Serial No. 2,193. (No model.)

To all whom it may concern:

Be it known that I, PORTE M. BRADLEY, a citizen of the United States, residing at Cripple Creek, in the county of Teller and State of Colorado, have invented a new and useful Improvement in Pipe-Wrenches, of which the following is a specification.

My invention relates to wrenches, and has for its object to provide a wrench which will be simple, cheap, and efficient; and it consists in the approved construction and novel combination of parts, as will be hereinafter more particularly set forth.

In the accompanying drawings, in which the same reference-numerals indicate corresponding parts in each of the views in which they occur, Figure 1 is a perspective view of my improved wrench. Fig. 2 is a longitudinal sectional view of the same, one of the jaws being shown in two positions. Fig. 3 is a transverse sectional view, and Figs. 4 and 5 are enlarged perspective views, of the jaws separated.

Referring more particularly to the drawings, 1 indicates the handle, which may be of any length and size, one end of which is formed into a jaw 2 and is provided with an enlargement 3 adjacent thereto. The jaw is provided with the usual corrugated surface 2', which may be formed from steel and attachably secured to the jaw by means of a rivet 4, if desired. The enlargement 3 is preferably circular and is perforated transversely, as shown at 5, and radially, as shown at 6. Rotatably seated in the transverse opening 5 is a cylindrical block 7, which is also perforated transversely, as shown at 8, and radially, as shown at 9.

Seated in the transverse perforation 8 is an adjusting-nut 10, which is in the form of an internally-screw-threaded sleeve, through which passes the movable jaw 11, the head of which is preferably provided with corrugations 12, and the shank is screw-threaded to correspond with the screw-threads of the cylinder 10.

Seated in the recesses 13 in the opening 5 and projecting through one end of the opening 6 is a spring 14, the free end of which engages with the back of the movable jaw and normally holds it in its closed position, as shown in Fig. 2.

In constructing my wrench the head may be arranged at any suitable angle relatively to the handle, preferably from forty-five degrees to sixty degrees, and the different parts are formed integrally, although the cylindrical block 7 may be formed of two shorter cylindrical blocks riveted together and each having its inner ends milled out, so as to partially encircle the adjusting-nut.

In using my wrench the parts are assembled as shown in the drawings, and the adjusting-nut is rotated until the movable jaw has been properly adjusted relatively to the stationary jaw to engage with the object to be operated upon. The movable jaw may then be moved or swung away from the stationary jaw a sufficient distance to permit of the wrench being readily engaged with the object and the jaw released, and the spring will force it into operative engagement with the object. Force is then applied to the handle of the wrench in a direction opposite to the movement of the movable jaw, which will cause the movable jaw to engage more firmly with the object being operated upon and will also cause the head of the handle between the enlargement and the jaw portion to act as a fulcrum or support for the shank of the movable jaw, and thereby add to the strength of the wrench.

It will be understood, of course, that by forming or providing the jaws with the usual curved or angular clamping portions the wrench can be used as a pipe-wrench in the ordinary manner.

Although I have shown my invention embodied in a wrench which I have found very convenient and effective, still I do not wish to be limited to the exact construction herein shown, but reserve to myself the right to make such changes and alterations therein as will come within the scope of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

In a wrench, the combination, with a handle, one end of which is provided with a jaw at an angle thereto, and is provided with a circular enlargement adjacent to the said jaw, said enlargement being perforated transversely and radially, a cylindrical block in the transverse perforation, said block being

perforated transversely and radially, an interiorly-screw-threaded sleeve in said transverse perforation, a movable jaw, the shank of which is screw-threaded and passed through the radial perforations in the handle and in the block and through the sleeve, and a spring secured at one end within the transverse perforation of the handle and having its free end projecting through one end of the radial perforation in position to engage with the movable jaw and hold it in its normal operative position, substantially as described.

PORTE M. BRADLEY.

Witnesses:
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