

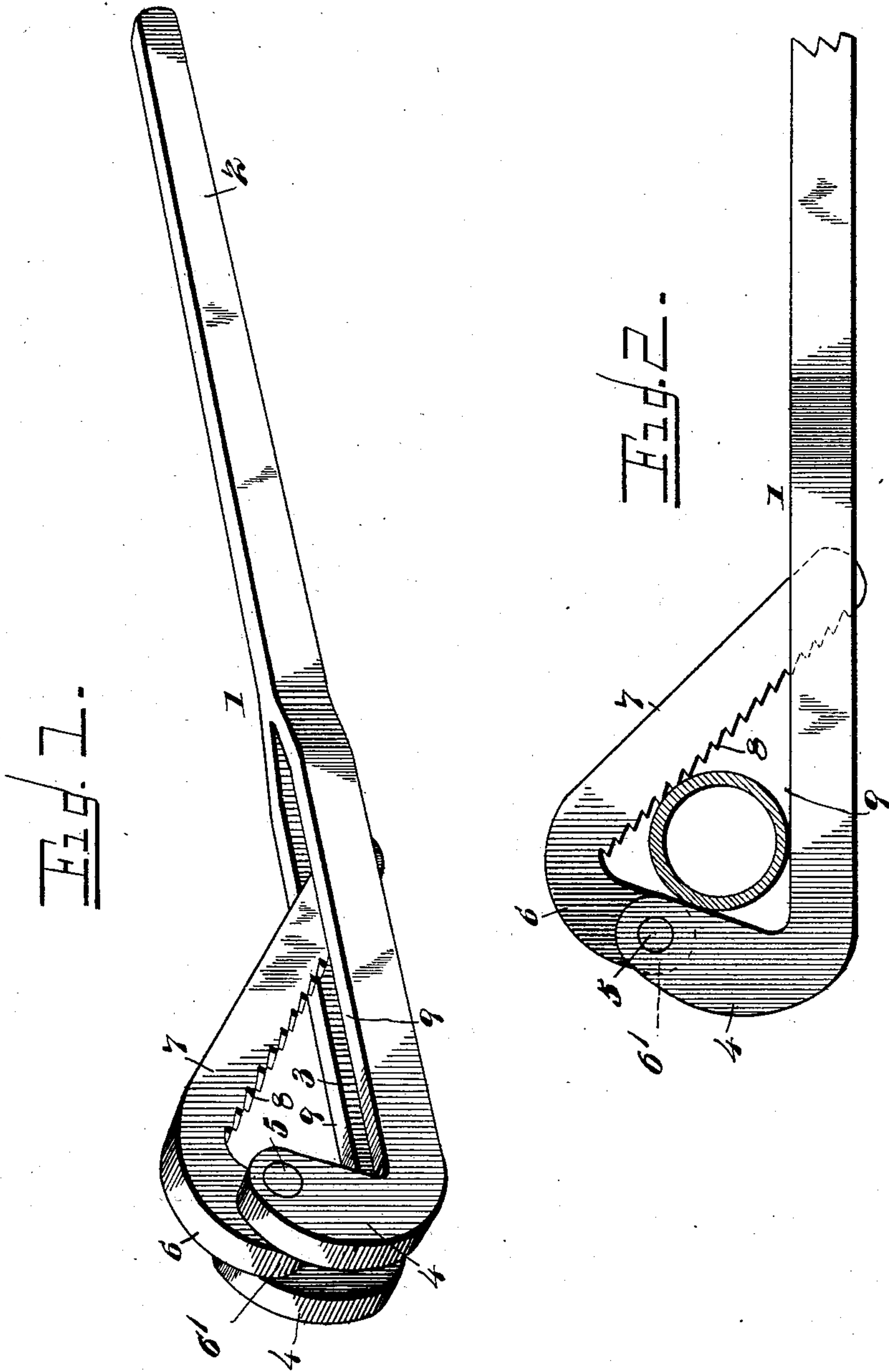
No. 608,293.

Patented Aug. 2, 1898.

O. LANNON.
PIPE WRENCH.

(Application filed Nov. 16, 1896.)

(No Model.)



Inventor

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Witnesses

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OWEN LANNON, OF LEE, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO
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PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 608,293, dated August 2, 1898.

Application filed November 16, 1896. Serial No. 612,359. (No model.)

To all whom it may concern:

Be it known that I, OWEN LANNON, a citizen of the United States, residing at Lee, in the county of Berkshire and State of Massachusetts, have invented a new and useful Pipe-Wrench, of which the following is a specification.

This invention relates to improvements in pipe-wrenches of that class wherein a pivoted jaw is used in connection with a shank or handle-bar; and the object that I have in view is to provide an improved construction by which the gripping-faces of the implement are caused to have a better action and more firm and solid gripping engagement with the pipe and at the same time relieve the pivotal bolt from twisting or sidewise strain.

Prior to my invention it has been proposed to construct a pipe-wrench with an angular bend and to pivot a jaw to said angular bend by applying the jaw laterally to one face of the bend and passing a bolt through the bend and the jaw; but such an implement has the movable jaw arranged in a plane at one side of the handle-bar or shank, and hence is not well adapted for engagement with a pipe, and the pivotal bolt is exposed to a twisting strain when considerable force is applied against the handle-bar to manipulate the implement in turning a pipe. Also heretofore it has been proposed to construct pipe-wrenches in which the movable jaws were bent into acute angles, against two of whose faces the pipe pressed in operation; but in such constructions the implement was limited in its application to pipes of a size not larger than the opening within the movable jaw.

To the accomplishment of these ends my invention consists in a wrench having a handle-bar forked or bifurcated for a part of its length and with said forked or bifurcated end bent at an angle thereto to form rigid jaws at the end of the handle-bar, said forked part of the handle-bar forming duplicate bearing-surfaces for the work and said jaws also forming duplicate work-bearing surfaces at an angle to the bearing-surfaces just mentioned and in alinement with the corresponding faces on the forked part of the handle-bar, combined with a movable jaw having an angular arm fitted in the space between the

offstanding rigid jaws of the handle-bar and a straight body serrated on its inner edge and occupying a central relation to the forked handle-bar, and a pivotal bolt passing through the rigid offstanding jaws and the angular arm of the movable jaw, as will be hereinafter fully described and claimed.

I have illustrated my improved wrench in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a perspective view of a pipe-wrench constructed in accordance with the invention. Fig. 2 is a side view showing the wrench applied to a pipe.

Like numerals of reference denote corresponding parts in both figures of the drawings.

In the practical embodiment of my improved wrench I construct the handle-bar 1 in a novel manner to provide duplicate work-bearing surfaces 9 9 and the duplicate rigid jaws 4 4, which provide work-bearing surfaces in alinement with said surfaces 9 9 of the handle-bar. These duplicate surfaces on the handle-bar are produced by bifurcating or splitting, as at 3, the handle-bar longitudinally for a portion of its length from one end inwardly, and then bending the forked end of the handle-bar at acute angles to produce the jaws 4 4. These jaws and the split or forked length of the handle-bar occupy positions parallel to each other, and said jaws and the forked parts of the implement are arranged in duplicate and disposed on opposite sides of the longitudinal axis of the handle-bar. As shown, the rigid jaws 4 4 are inclined at acute angles, so as to stand off from the handle-bar a suitable distance and to present their working surfaces adjacent to the bearing or working edges 9 of the handle-bar. The angular duplicate jaws 4 have alined apertures formed therein near their free outer ends to receive the pivotal bolt 5, which spans the space between said jaws, and on this pivotal bolt is fitted the arm 6 at the outer end of the movable jaw 7, the free end of which is adapted to be confined in the slot or slit portion 3 formed by the bifurcation or forking of the handle-bar. This jaw 7 consists of a single straight bar or thickness of metal which is bent at an angle at one end to provide the

offstanding arm 6, and the inner edge of the straight portion of this movable jaw is toothed or serrated at 8 on its inner edge, the teeth inclining toward the pivotal bolt 5. The angular arm of the movable jaw is rounded on its extremity, as at 6', and fitted between the apertured ends of the parallel duplicate rigid jaws 4, and said arm 6 of the movable jaw has a transverse aperture which receives the pivotal bolt 5 to have the movable jaw attached pivotally to the offstanding rigid jaws 4.

From this description it will be seen that the movable jaw occupies a central relation to the rigid jaws and the duplicate bearing-faces 9 of the handle-bar, and when in normal position the forked shank, the rigid jaws, and the angular movable jaw form a triangular opening or space in the implement, as represented by Fig. 2, thus providing three several and distinct bearings for the pipe. In this connection it is to be observed that one side of the triangular opening is formed by the duplicate rigid bearing edges 9 of the handle-bar. Another side of the triangular opening is formed by the duplicate inner edges of the rigid jaws 4 4, and the remaining side of said opening is formed by the inner serrated edge 8 of the movable jaw 7. By arranging the work-bearing surfaces of the shank and the rigid jaws in duplicate and by pivoting the movable jaw in central relation to the rigid jaws and to the handle-bar the improved wrench is provided with a number of peculiarly-disposed gripping-faces, which enable the implement to firmly grip the work on three sides thereof, two being fixed or rigid and the remaining one being movable. The improved implement has its movable jaw supported adjustably at one end by a pivotal bolt, which is held against lateral movement by duplicate rigid jaws in order to reduce to a minimum the twisting strain on the movable jaw, and the other free end of the movable jaw is fitted loosely in the forked part of the handle-bar, so that its free end is confined against lateral strain by said handle-bar. Hence in use upon a

pipe of any size within certain limits two points on the exterior of said pipe bear against the smooth fixed bearing-surface (which fact is not changed by the presence of a large pipe because of the rounded end 6' of the arm 6) and the remaining point of contact is against the serrated face 8 of the movable jaw 7. It will thus be seen that I have provided an improved construction of the wrench in which the movable jaw is pivoted above and in central relation to and between rigid jaws and has its other end confined, when in operative position, between a forked part of the shank, thus holding the centrally-disposed jaw against sidewise or twisting strain to reduce such strain on the pivot-bolt to a minimum.

The implement is designed for service on pipes of different diameters within certain limits; but the parts present the duplicate smooth faces of the handle-bar and rigid jaws to the work under all conditions of service.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

In a pipe-wrench, the combination with the handle-bar 1 whose forward portion is bifurcated longitudinally at 3 and upturned in rigid jaws 4, the upper edge of the bifurcation and inner edges of said jaws forming two smooth bearing-surfaces standing at an acute angle to each other and in duplicate; of a movable jaw 7 whose outer end is downturned into an arm 6 with rounded extremity 6' pivoted between the upper ends of said rigid jaws, whose straight body is serrated at 8 on its inner edge adjacent said bearing-surfaces, and whose inner end is adapted to pass loosely through said bifurcation, as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

OWEN LANNON.

Witnesses:

FRANK S. TILLOTSON,
ALEX. W. FAXON.