

Patented Sept. 21, 1880.



WITNESSES  
Fred G. Dietrich  
Joseph T. Power



# UNITED STATES PATENT OFFICE.

DUNCAN WEIR, OF MARSHALL, TEXAS.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 232,581, dated September 21, 1880.

Application filed July 2, 1880. (Model.)

*To all whom it may concern:*

Be it known that I, DUNCAN WEIR, of Marshall, in the county of Harrison and State of Texas, have invented certain new and useful  
5 Improvements in Wrenches; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it ap-  
10 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, in which—

Figure 1 is a side view of my improved wrench, partly broken away to expose the act-  
15 uating end of the lever on the sliding jaw. Fig. 2 is a longitudinal section. Fig. 3 is a transverse section, on an enlarged scale, through line *xx*, Fig. 2. Fig. 4 is a front view, and Fig. 5 is a cross-section through line *yy*,  
20 Fig. 1.

Similar letters of reference indicate corresponding parts in all the figures.

This invention contemplates improvements in wrenches especially adapted for manipulat-  
25 ing pipe-joints, though applicable, also, for use in manipulating nuts, &c.; and it consists in the detailed construction and combination of operating parts, as hereinafter more fully de-  
30 scribed, and particularly pointed out in the claim.

In the accompanying drawings, A marks a vertically-movable jaw, with a screw-threaded shank, *a*, inserted through two perforated studs or arms, *a'*, upon the rear side of a slotted box  
35 or casting, B, and through a milled nut or burr, C, with its thread engaging the thread of the jaw-shank. The rotation of this nut effects the vertical adjustment of the jaw, so as to bring it in contact with the surface of  
40 the pipe or other surface or nut to be operated or turned. This jaw extends out at a right angle to its shank, as shown.

A' is the sliding jaw, with an inclined face, and forming, with the face of the jaw A, a

wedge-shaped space between them, as seen 45 in Fig. 1, while it is grooved and formed on each side with a web or flange, *b*, coinciding, respectively, with flanges and grooves in the upper recessed end of the box or casting B, for the jaw to slide therein. The under side 50 of this jaw is cogged, or provided with teeth *c*, to permit of its engagement with and its operation by the handle or lever D, pivoted in the plate or casting B at *f*, and with its upper end provided with corresponding cogs or 55 teeth *d*. Each of the jaws A A' is provided with a serrated or roughened face, to enable them to firmly grasp the pipe or other surface.

By grasping the lever and adjusting the jaw A by its nut to one side of the pipe or other 60 surface to be grasped, the jaw A' being adjusted to the opposite side of the pipe or surface, and then moving the lever outwardly, which will move the sliding jaw A' inwardly, 65 the jaws will firmly gripe the pipe or nut, while by removing pressure from the handle or lever the jaws will immediately release their hold.

Having thus fully described my invention, I claim and desire to secure by Letters Pat- 70 ent of the United States—

The wrench composed of the handle D, having cogs *d* at its upper end, grooved and slotted box B, having perforated studs *a' a'*, adjust- 75 able jaw A, having threaded shank *a* and burr or nut C, and wedge-shaped sliding jaw A', having side flanges, *b b*, and cogs or teeth *c*, all constructed and combined substantially as and for the purpose herein shown and speci- 80 fied.

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

DUNCAN WEIR.

Witnesses:

F. N. NORMAN,  
J. V. BEER.