

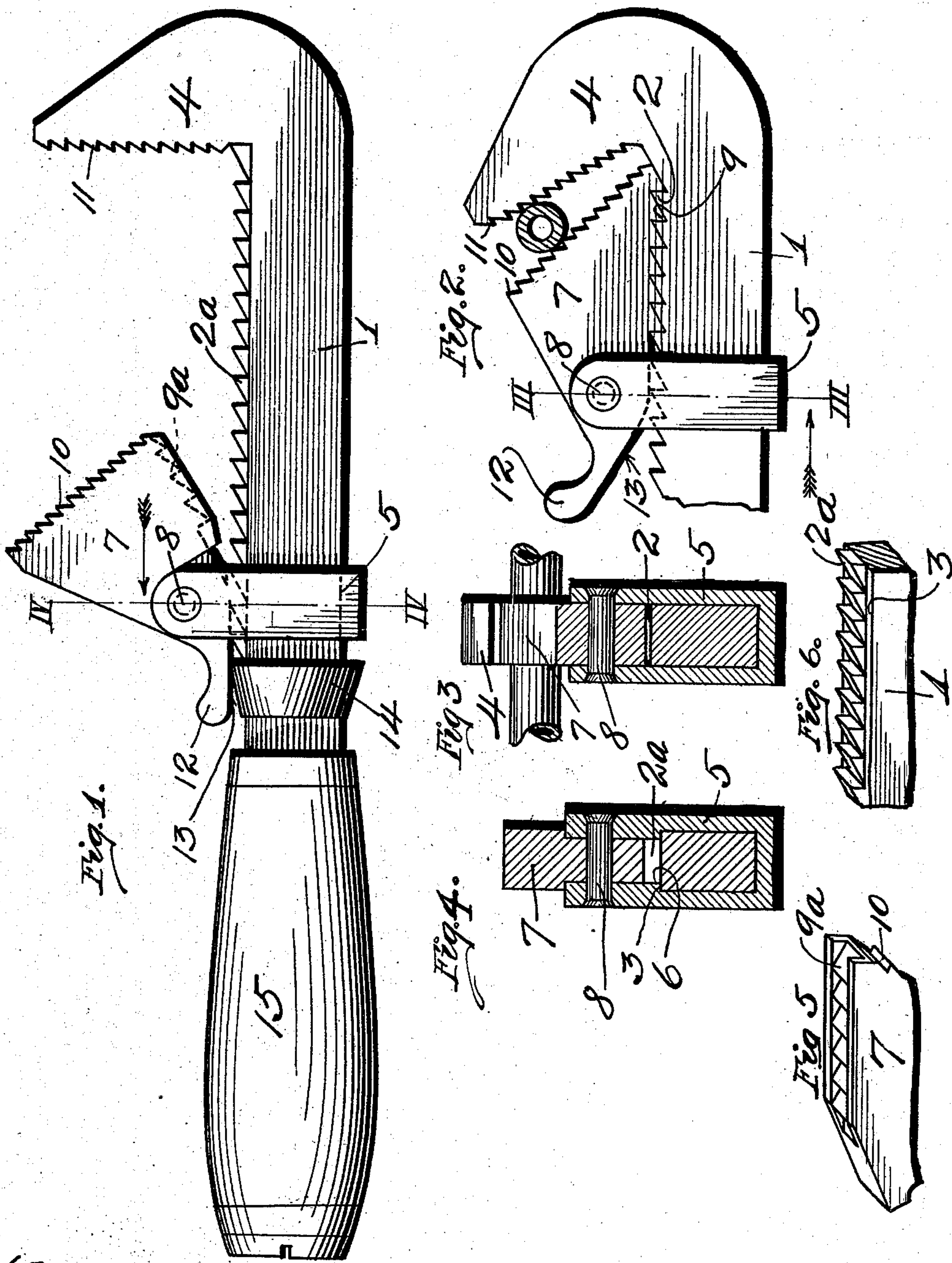
No. 714,768.

Patented Dec. 2, 1902.

J. L. YOUNG.  
WRENCH.

(Application filed Apr. 28, 1902.)

(No Model.)



Witnesses.  
J. M. Hinkley  
W. L. Weatherford

Inventor.  
James L. Young  
by J. F. Weatherford  
att'y.



# UNITED STATES PATENT OFFICE.

JAMES L. YOUNG, OF MEMPHIS, TENNESSEE.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 714,768, dated December 2, 1902.

Application filed April 28, 1902. Serial No. 105,055. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES L. YOUNG, a citizen of the United States, residing at Memphis, Shelby county, State of Tennessee, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

My invention relates to certain new and useful improvements in wrenches, and more especially to a pipe-wrench.

The objects of my invention are to provide a wrench which is simple in action, which may be quickly and easily adjusted, which will hold positively when in use, and which is durable. I accomplish these objects as will be more fully hereinafter set forth in the drawings, specification, and claims.

In the drawings, Figure 1 is a side elevation of my wrench complete with the movable jaw open. Fig. 2 is a side elevation showing a slight modification of my wrench and showing the jaws set at a slight angle. Fig. 3 is a section on the line III III of Fig. 2 looking in the direction of the arrow. Fig. 4 is a section on the line IV IV of Fig. 1 looking in the direction of the arrow. Fig. 5 is a mechanical perspective of the lower side of the movable jaw inverted, showing shrouded teeth. Fig. 6 is a mechanical perspective of a portion of one form of the wrench-bar.

Referring now to the drawings, in which like numerals indicate the same or like parts in all the views, 1 is the wrench-bar, having teeth 2 cut on its upper surface and extending clear across the bar, as shown in Figs. 2 and 3, being, as shown at 2<sup>a</sup> in Figs. 1, 4, and 6, shorter than the width of the bar and leaving a shoulder 3 along each edge.

4 is the fixed jaw of the wrench, which jaw is preferably set at right angles, as shown in Fig. 1, but may be inclined, as shown in Fig. 2, if desired.

5 is a movable yoke which embraces the bar 1, and in the case where the shorter teeth 1<sup>a</sup> are used has a shoulder 6, which rests on the shoulders 3 of the bar 1. In this yoke 5 the movable jaw 7 is pivoted on a rivet 8, which serves the double purpose of pivoting the jaw and holding the ends of the yoke 5 together. The lower edge of the movable jaw 7 has teeth 9 or 9<sup>a</sup>, which correspond with the teeth 2 or 2<sup>a</sup>, respectively, and the front or working

edge is cut with teeth 10, having their points upward. 11 represents corresponding teeth on the fixed jaw 4, with their points downward. The movable jaw 7 has a thumb-piece 12 extending from its back end by which the jaw is moved forward or back. The under surface 13 of the thumb-piece is formed first as a part of a circle having its center at the center of the pin 8 and touching the tops of the teeth 2 and thence extends backward in such a direction that when it rests flat on the tops of the said teeth 2 all the teeth 9 of the said jaw 7 are clear of the teeth 2 on the bar. I have made the angle in this case about thirty degrees from the line of the teeth 9; but this of course must be varied as the said teeth 9 are closer to or farther away from the center pin 8. This surface 13 is the support for the moving jaw when it is to be moved over the teeth 2. 14 is a stop for the movable jaw 7, and 15 the usual wrench-handle. In use the thumb is placed on the thumb-piece 12 and same is depressed until the teeth 9 of the jaw 7 clear the teeth 2 of the bar 1. The jaw is then either pushed forward or pulled back, as the case may be, until the desired position is reached, when it is dropped to place. It will be seen that this lower surface 13 of the thumb-piece 12 forms a support for the jaw 7 to enable it to slide on the top of the teeth 2, and thus dispenses with any other form of support. It also forms a stop in opening the movable jaw 7, so that same may be operated quickly and without any attention being paid to where or how it is placed.

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

1. In a wrench, the combination with the wrench-bar having teeth on its upper surface and the fixed jaw, of a movable yoke, a jaw pivoted in said yoke having teeth on its under surface to engage the teeth on the wrench-bar, and a thumb-piece extending backward from said pivoted jaw and having its under surface at an angle with the line of the teeth on said jaw, substantially as shown and described.

2. In a wrench, the combination with the wrench-bar, teeth on the upper surface of said bar and a fixed jaw, of a movable yoke, a jaw pivoted in said yoke, teeth on the under sur-

face of said jaw to engage the teeth on the wrench-bar, and a thumb-piece extending backward from said pivoted jaw and having its under surface formed concentric with the  
5 pivot of said jaw and touching the tops of the teeth on said wrench-bar and thence extending backward at an angle with the line of the teeth of said movable jaw, substantially as shown and described.

10 3. In a wrench, the combination with the wrench-bar, teeth on the upper surface of said bar and a fixed jaw, of a movable yoke, a jaw pivoted in said yoke, teeth on the under surface of said jaw to engage the teeth on the

wrench-bar, and a thumb-piece extending 15 backward from said pivoted jaw and having its under surface formed concentric with the pivot of said jaw, and thence extending backward at an angle with the line of the teeth of said movable jaw, substantially as shown 20 and described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES L. YOUNG.

Witnesses:

GEO. E. NEUHARDT,  
J. G. REASONOVER.