

No. 703,230.

Patented June 24, 1902.

G. H. BOYD.

WRENCH,

(Application filed Oct. 29, 1901.)

(No Model.)

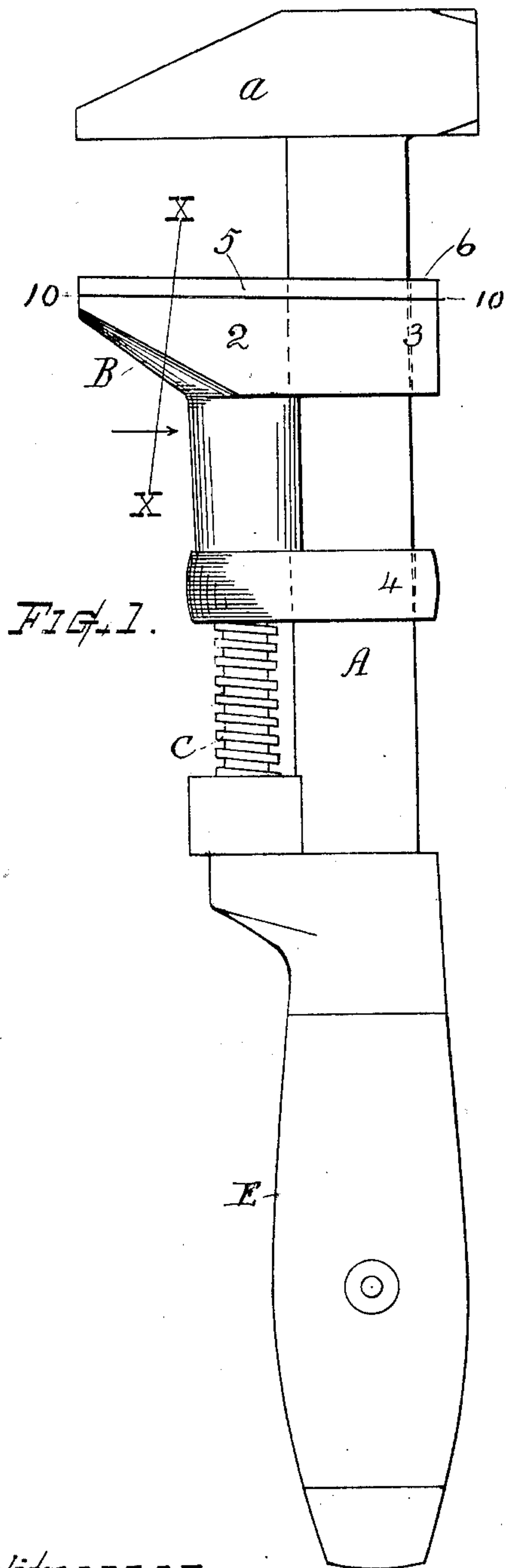


FIG. 1.

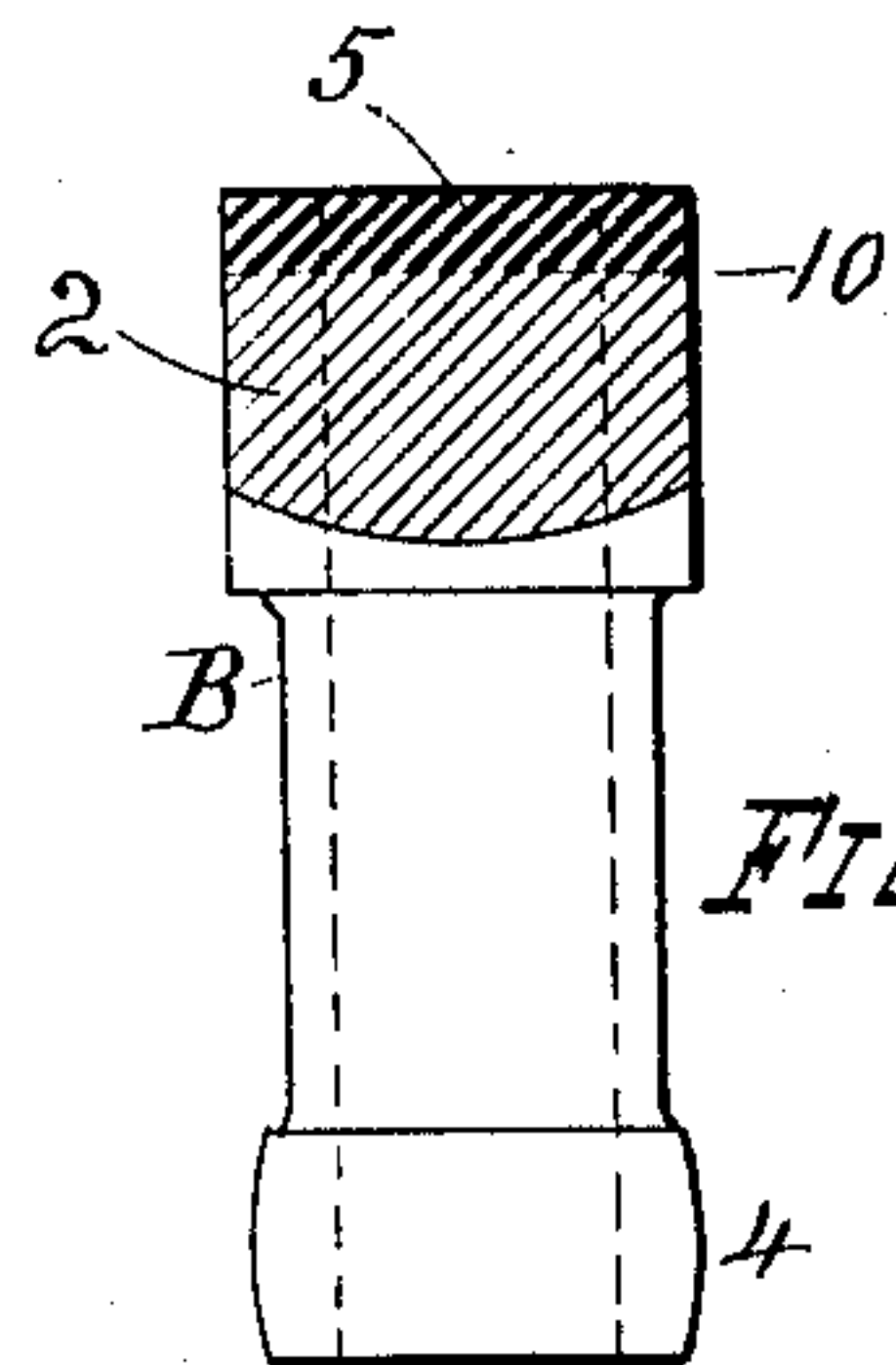


FIG. 2.

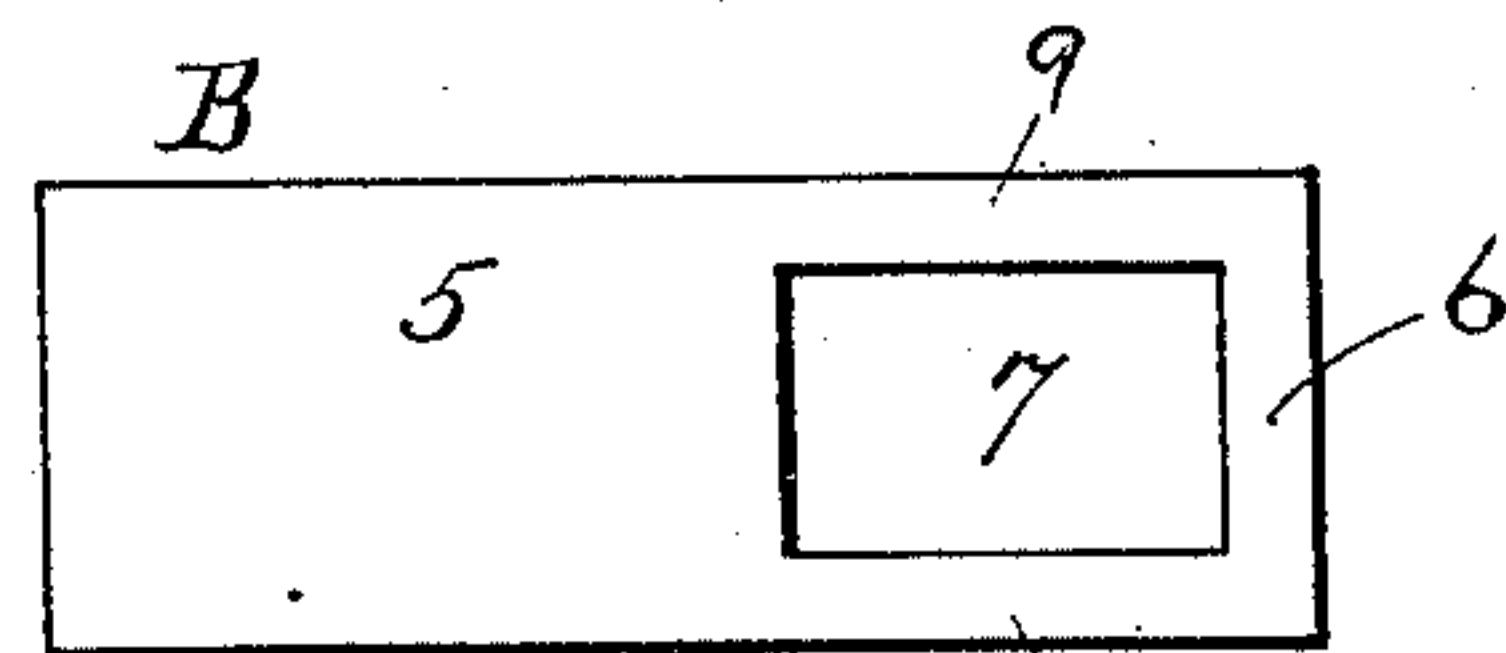


FIG. 3.

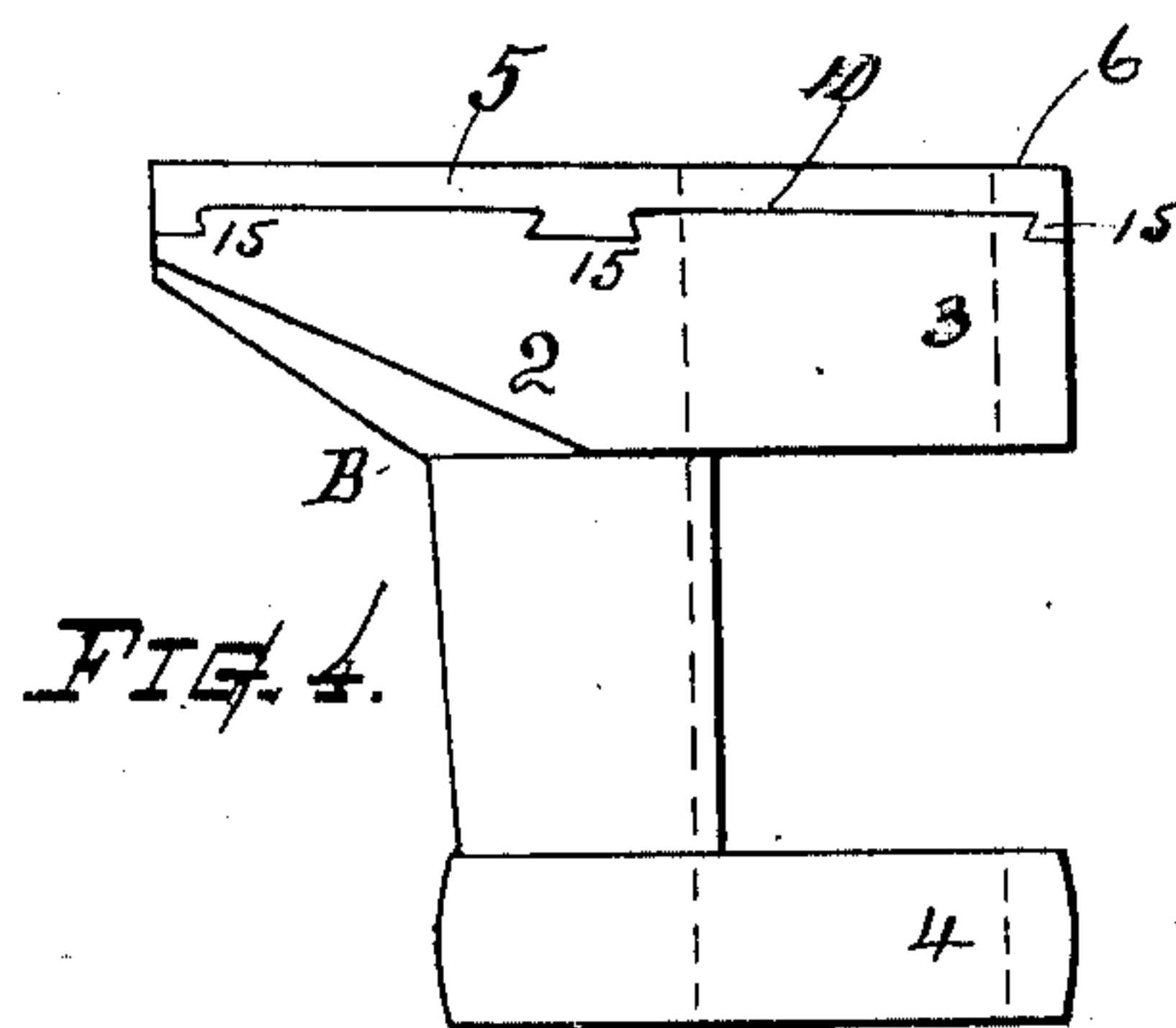


FIG. 4.

Witnesses—

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# UNITED STATES PATENT OFFICE.

GEORGE H. BOYD, OF WORCESTER, MASSACHUSETTS.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 703,230, dated June 24, 1902.

Application filed October 29, 1901. Serial No. 80,425. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE H. BOYD, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Wrenches, of which the following, together with the accompanying drawings, is a specification sufficiently full, clear, and exact to enable persons skilled in the art to which this invention appertains to make and use the same.

My present invention relates to the construction of the sliding jaw of a "Coes" or similar screw-wrench, the objects being to enhance the strength and efficiency of the wrench and to provide in a wrench of the class illustrated a movable jaw having an integrally-attached hard-metal or steel wear-resisting plate covering the face of the jaw and extending around the bar-opening for reinforcing the jaw-supporting strap, as more fully hereinafter explained. I attain these objects by the construction illustrated in the drawings, wherein—

Figure 1 represents a side view of a wrench with a sliding jaw embodying my improvement. Fig. 2 is a vertical section at line X X. Fig. 3 is a plan view of the top of the jaw; and Fig. 4 a side view of the jaw, showing a modification.

The nature of my invention consists in applying to the upper part of the jaw-body and its supporting-strap in a sliding or movable wrench-jaw, which is commonly made of cast malleable iron, a plate or reinforce facing of hard steel or equivalent material arranged for covering the jaw-face and extending around the bar-space opening, and then permanently or solidly uniting such facing-plate to the body metal by brazing or welding the adjacent surfaces integrally together, so that the steel jaw-facing constitutes a permanent reinforce for preventing rupture of the upper-jaw-supporting strap at the angles of the opening.

In the drawings, A indicates the wrench-bar, having the usual fixed jaw *a*, and B indicates the improved sliding jaw, composed of the body portion 2, which is preferably made of cast malleable iron, together with the integral supporting and guiding straps 3 and 4 and the hard-steel plate 5, fitting upon the top end of the body and extending

over the strap 3 along the sides 9 and across the back, as at 6, completely around the opening 7, through which the bar A passes. The plate 5 and body 2 are permanently integrated or affixed to each other by brazing or welding together their adjacent surfaces on the line of contact 10, thereby forming an inseparable solid wear-resisting face and a strengthening-reinforce that is unitary with and prevents the strap 3 from breaking at the corners and from stretching and causing increased looseness upon the bar. The preferred form is a flat plate 5 of uniform thickness that can be cut from plate-steel; but if in any instance desired the plate and jaw can be provided with interengaging lugs and notches or dovetails 15 in the surfaces, which are brazed or welded together, as indicated in Fig. 4.

The bar A, rosette-screw C, and wrench-handle E may be of usual form or of any suitable construction. The outer edges of the plate 5 are best ground off flush with the sides of the strap and body of the jaw, giving a flush smooth finish.

I am aware that different varieties of wrenches have heretofore been provided with detachable steel jaw-faces, and it will be understood that I do not claim steel jaw-faces in general or irrespective of the construction defined.

What I claim, and desire to secure by Letters Patent, is—

In a wrench of the character described, in combination with the wrench-bar having the fixed jaw and handle arranged thereon, and the jaw-adjusting screw; the slidable jaw comprising a body portion and guiding-straps made of malleable iron, and provided with a steel or hard-metal reinforce-plate covering the top face and the jaw-supporting strap surrounding said wrench-bar, said reinforce-plate being permanently united to the jaw body and strap, around the bar-space opening, by an integral union of the adjacent surfaces, substantially as and for the purposes set forth.

Witness my hand this 25th day of October, 1901.

GEORGE H. BOYD.

Witnesses:

CHAS. H. BURLEIGH,  
CHARLES S. BACON.