

(No Model.)

R. McDONALD.
ADJUSTABLE SOCKET WRENCH.

No. 567,405.

Patented Sept. 8, 1896.

Fig. 1.

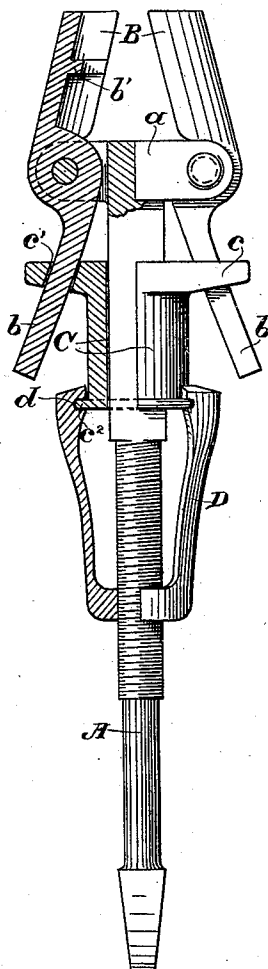
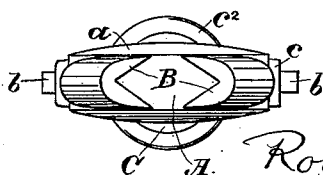


Fig. 2.



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UNITED STATES PATENT OFFICE.

ROBERT McDONALD, OF MAGALIA, CALIFORNIA, ASSIGNOR OF ONE-HALF
TO S. P. LOW AND G. R. HENDRIX, OF SAME PLACE.

ADJUSTABLE SOCKET-WRENCH.

SPECIFICATION forming part of Letters Patent No. 567,405, dated September 8, 1896.

Application filed July 9, 1896. Serial No. 598,549. (No model.)

To all whom it may concern:

Be it known that I, ROBERT McDONALD, a citizen of the United States, residing at Magalia, county of Butte, State of California, have invented an Improvement in Adjustable Socket-Wrenches; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to wrenches; and it consists in the novel mechanism for adjusting the jaws thereof which I shall hereinafter fully describe.

The object of my invention is to provide a simple and effective means for readily and accurately adjusting the jaws of a wrench to vary the space between them to suit different sizes of nuts.

Referring to the accompanying drawings, Figure 1 is a view of my wrench, one-half being in section. Fig. 2 is a top view of same.

A represents the stock of the wrench, and said stock may be of any suitable character adapted for a handle of any kind, or it may be, as here shown, in the form of a bit-stock adapted for use with a brace. The stock is provided at its lower end with a cross-foot *a*, in the ends of which are pivoted the opposing jaws *B* of the socket type. These jaws have rearwardly-projecting extensions *b* in divergent planes. Upon the stock is fitted and adapted to slide a sleeve *C*, having a cross-foot *c*, provided with holes *c'*, through which the rear extensions *b* of the jaws pass and play freely. The sleeve *C* is adapted to be moved back and forth upon the stock by means of a clutch-nut *D*, threaded upon said stock and having its forward end engaging by means of a groove *d* a flange *c''* of the sleeve *C*.

The operation of the device is as follows: By turning down the nut *D* to its forward limit it will cause the sleeve *C* to slide toward the foot of the stock, and will thereby force the extensions *b* of the jaws to their extreme limit of divergence, whereby the jaws themselves are caused to approach each other to their closest limit, in which position they will take the smallest nut for which they are adapted. Now by turning back the clutch-nut the sleeve will be drawn back, and its cross-foot will draw toward each other the extensions *b* of the jaws, which will have the

effect of separating the jaws themselves and enlarging the space between them to take larger nuts, according to the position of the sleeve. Thus the jaws are adjustable to fit any size of nut desired. The jaws may also be used to grasp other things than nuts, as, for example, a boring or other bit. If it be found desirable, a small lug *b'* may be placed within the face of one or both jaws, which will serve as a limiting-stop to the fitting of the jaws over the nut, preventing the wrench from going too far down upon the nut or the latter from extending too far in between the jaws.

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

1. A wrench, comprising a stock having pivoted to one end thereof opposing jaws provided with divergent extensions behind their pivotal centers, a sleeve adapted to slide upon the stock and engaging said extensions whereby the latter are moved to or from each other to cause the jaws to separate or approach, and a clutch-nut threaded on the stock and engaging the sleeve for adjusting it on the stock.

2. A wrench, comprising a stock having pivoted to one end thereof opposing jaws provided with divergent extensions behind their pivotal centers, a sleeve adapted to slide upon the stock and engaging said extensions whereby the latter are moved to or from each other to cause the jaws to separate or approach, and a clutch-nut threaded on the stock and engaging the sleeve to adjust it, said nut having a grooved end engaging a flange on the sleeve.

3. A wrench, comprising a stock having a cross-foot, opposing jaws pivoted in opposite ends of said foot, and having rearwardly-projecting divergent extensions, a sleeve slidable upon the stock and having a cross-foot with holes engaging said extensions whereby the jaws are separated and caused to approach and means on the stock for sliding said sleeve.

4. A wrench comprising a stock having a cross-foot, opposing jaws pivoted in opposite ends of said foot and having rearwardly-projecting divergent extensions, a sleeve slid-

able upon the stock and having a cross-foot
with holes engaging said extensions whereby
the jaws are separated and caused to ap-
proach, and means for sliding said sleeve on
5 the stock, consisting of a clutch-nut threaded
on the stock and engaging said sleeve.

5. A wrench, consisting of a stock, opposing
socket-jaws pivoted thereto and having rear-
wardly-projecting divergent extensions, a
10 sleeve slidable on the stock and engaging

said extensions to swing the jaws, a clutch-
nut on the stock engaging the sleeve to ad-
just it, and a limiting-stop in the socket-jaw.
In witness whereof I have hereunto set my
hand.

ROBERT McDONALD.

Witnesses:

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