

May 26, 1925.

L. B. NEEL

1,539,136

WRENCH

Filed Feb. 9, 1924

Fig. 1.

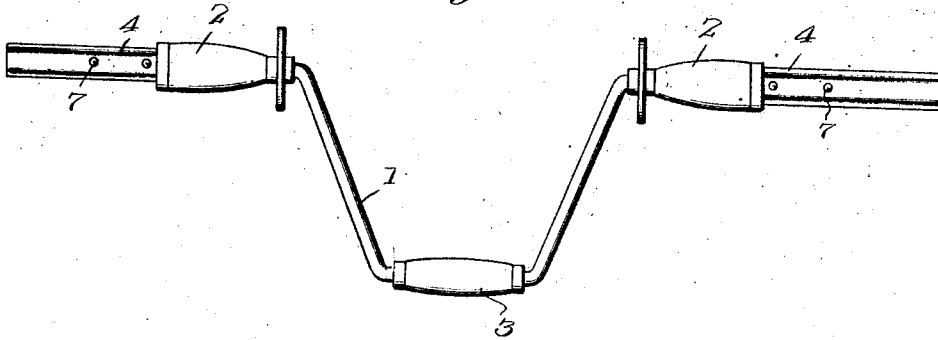


Fig. 2.

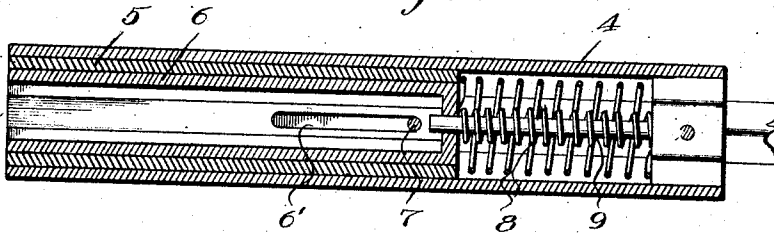


Fig. 3.

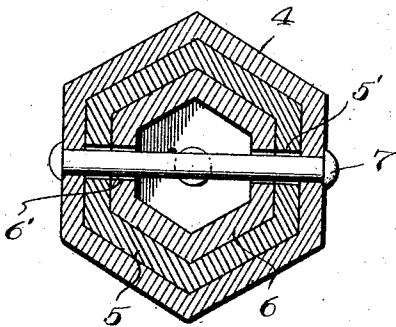
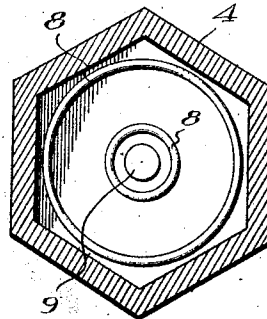


Fig. 4.



Inventor

Louis B. Neel

By *Victor J. Evans*

Attorney

UNITED STATES PATENT OFFICE.

LOUIS BEARD NEEL, OF PORT ARTHUR, TEXAS.

WRENCH.

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To all whom it may concern:

Be it known that I, LOUIS B. NEEL, a citizen of the United States, residing at Port Arthur, in the county of Jefferson and State of Texas, have invented new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates to a wrench, the general object of the invention being to provide a wrench which will automatically adjust itself to take different sizes of nuts or bolts by simply pressing the head of the wrench against the nut or object to be engaged by the wrench.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claim.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is an elevation of the improved wrench.

Figure 2 is a longitudinal sectional view through the engaging part of the wrench.

Figures 3 and 4 are detail views of such parts.

In these views, 1 indicates a brace which has a handle part 2 at each end thereof and a handle part 3 at its center. A socket 4 is attached to the end of each handle part 2, this socket having a bore formed to receive a nut, bolt, or other object to be engaged by the wrench. Other sockets 5 and 6 are nested in the first socket and these sockets are connected together by the transverse pin 7 which passes through slots 5' and 6' in the sockets 5 and 6 and has its ends engaging holes in the sockets 4 so that the inner sockets are slidably connected with the outer sockets. Springs 8 in the outer socket tend to force the inner sockets outwardly until the inner ends of the slots therein engage the pin, these parts being so formed that in this position the outer ends of all the sockets will be in the same plane. The inner spring

surrounds a longitudinally arranged pin 9 which passes through a hole formed in the inner end of the socket 5 and which is suitably connected with the inner end of the outer socket as shown in Figure 2 of the drawings.

From the foregoing it will be seen that when the socket members are pressed against a nut or other object, if said object is of greater dimensions than the inner socket, it will press said socket inwardly and thus be engaged by the middle socket. If it is larger than the middle socket it will press both sockets inwardly so that it will be engaged by the outer socket. Thus the wrench is self-adjusting. By having sockets at each end of the brace and those at one end of different dimensions than those at the other, a device is provided which can be used for a great number of different sizes of objects and it will of course be understood that any desired number of sockets can be nested together.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

What I claim is:—

A wrench of the character described comprising an outer socket, a number of sockets nested therein, the inner sockets having slots therein, a transverse pin carried by the outer socket and passing through the slots for securing all of the sockets for operative association, a longitudinally disposed pin having one end secured and its free end passing through an opening formed in the innermost socket, a coil spring surrounding the longitudinally disposed pin for engagement with the innermost socket, and a second coil spring surrounding the spring first mentioned and cooperating therewith to urge the outer ends of the inner sockets in alignment with the outer end of the outer socket.

In testimony whereof I affix my signature.

LOUIS BEARD NEEL.