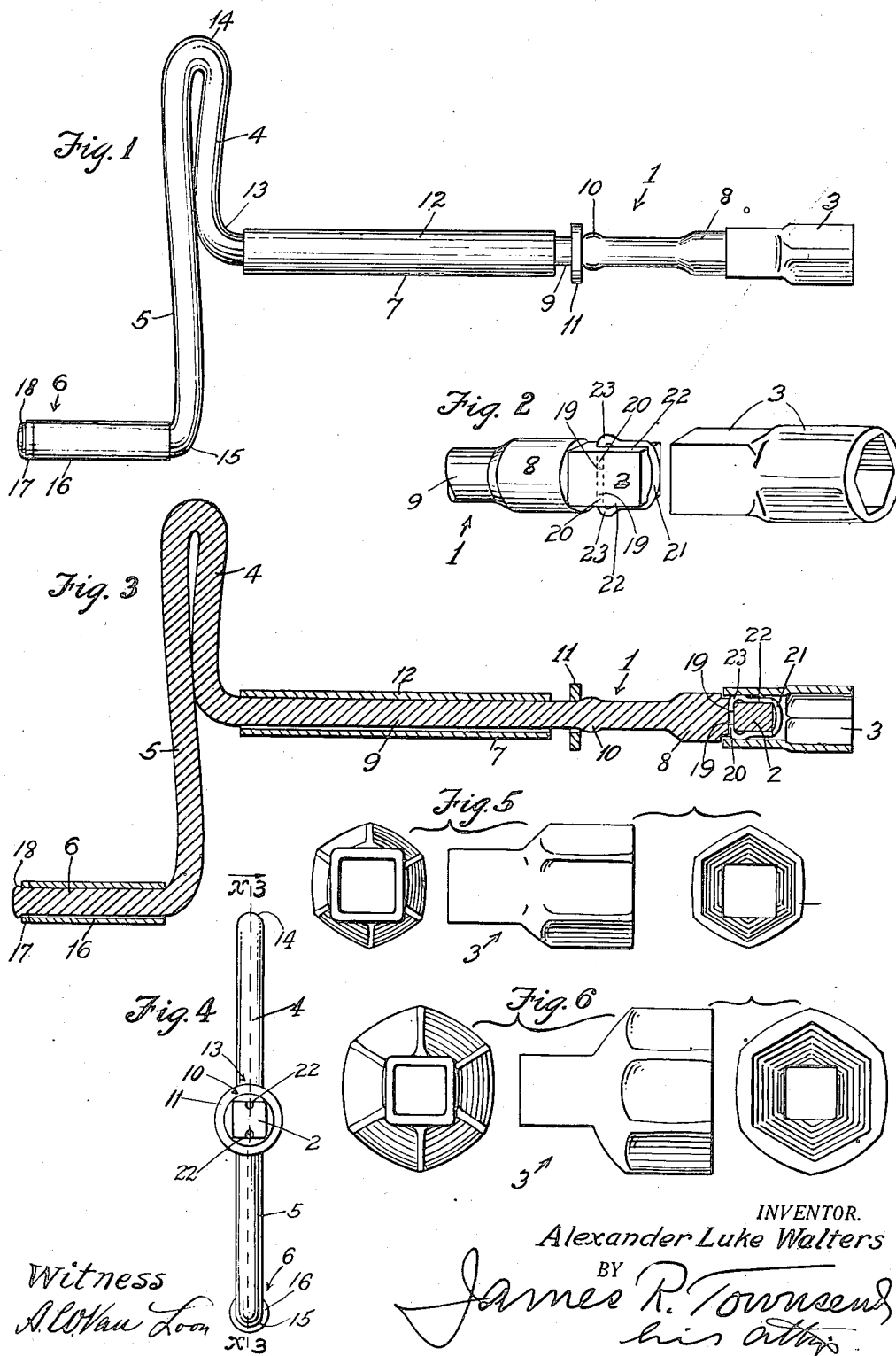


A. L. WALTERS.  
SPEED WRENCH HANDLE.  
APPLICATION FILED APR. 22, 1920.

1,433,163.

Patented Oct. 24, 1922.



Witness  
A. L. Walters

INVENTOR.  
Alexander Luke Walters  
BY  
James R. Townsend  
his atty.

## UNITED STATES PATENT OFFICE.

ALEXANDER LUKE WALTERS, OF LOS ANGELES, CALIFORNIA, ASSIGNOR OF ONE-HALF  
TO JAMES B. HAYES, OF LOS ANGELES, CALIFORNIA.

## SPEED-WRENCH HANDLE.

Application filed April 22, 1920. Serial No. 375,888.

*To all whom it may concern:*

Be it known that I, ALEXANDER LUKE WALTERS, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Speed-Wrench Handle, of which the following is a specification.

This invention relates to handles for using detachable wrench sockets.

An object of the invention is to provide a cheap, simple powerful wrench handle.

An object of the invention is to provide a wrench that may be conveniently operated on nuts in places difficult of access.

A further object is to provide a wrench that may be used with great power in starting the nut and with great speed in spinning off the nut.

An object is to provide a wrench that may be conveniently operated with either one or both hands, and that is adapted to turn nuts and bolts that are difficult to move as well as those that are normally set.

An object is to provide a socket wrench handle of simple construction that is adapted to interchangeably hold different size wrench sockets.

The invention is broadly new, basic and pioneer in that I have provided a combined T and crank wrench handle whereby the wrench may be rapidly turned as by a crank alone when comparatively little force is required; or with crank in one hand assisted by the other hand in counter balancing position; or as a T wrench with the hands on opposite sides of the axis of the wrench.

Other objects, advantages and features of invention may appear from the accompanying drawing, the subjoined detail description and the appended claims.

The accompanying drawing illustrates the invention.

Figure 1 is a side elevation of the wrench handle with a wrench socket in place.

Figure 2 is a fragmental perspective view with wrench socket removed.

Fig. 3 is an axial section on line  $x^x$ , Fig. 4.

Fig. 4 is an end elevation of the wrench from the right of Fig. 1, omitting the socket and the spring.

Fig. 5 shows in side and end elevations a detached wrench socket to which the handle is applicable.

Fig. 6 is a view analogous to Fig. 5 showing a still larger wrench socket to which the same handle is applicable.

The wrench handle is shown as constructed mainly of a rod of suitable diameter and length made of suitable material, such as strong steel, and comprises a stem 1 provided at one end with a socket seat 2 to receive the interchangeable sockets 3 and is bent at the other end into three limbs 4, 5 and 6 which constitute the T-head and crank for turning the shank. The limbs 4 and 5 form a loop on one side of and at right angles to the axis of the shank and stem. The limb 5 forms a T-head to the handle at right angles to said axis, and limb 6 extends parallel to said axis and at right angles to the limb 5 this to form the crank-handle.

In practice to construct the handle, the rod, while straight, is swaged to the required form including the squared end or socket seat 2, the shank 8, the stem 9 and the stop 10. Up to this stage the rod is straight and a washer 11 and the tubular sleeve 12 to form the grip 7 are slipped onto the rod. The washer is allowed to abut against the stop 10, and the sleeve against the washer. Then the rod is bent at 13, 14 and 15 to form the limbs 4, 5 and 6, constituting the T-head formed by the limbs 4, 5, and the crank formed by the limb 6, and part of the limb 5. Then a sleeve 16 is applied to the handle limb 6, a washer 17 is applied to the end of the rod which is then riveted as at 18 to retain the washer and the grip-sleeve 16.

The squared end or head 2 which forms the socket seat 2 is provided with sockets 19 to receive the inwardly extending tips 20 of a U-shaped spring 21 which embraces the squared end or head 2. Said squared head is also provided with grooves 22 into which the lateral limbs of the spring may be seated. The spring has outward bends 23 near its ends adapted to engage the socket 3 to hold it in place on the head of the handle.

In practice the member shown as formed of the loop 4, 5 forms a counterbalance arranged opposite to the handle 6.

In practical use the appropriate sockets will be mounted on the socket seat or head 2 and will then be applied to the nut or other object to be turned. The operator may grasp the wrench handle on both sides

of the stem, thus to use all his force in starting the nut; and when the nut has been started he may use the crank-handle and turn it rapidly, thus spinning the nut off of the bolt.

Reverse movement restores the nut to place.

I claim.

1. In a wrench, a T-shaped rod having a crank handle at one end of the T and integral therewith; the other end of said rod formed with a seat to receive a wrench socket, and a sleeve around the middle section of the rod; said sleeve serving as a hand grip and also a journal bearing for the revolving rod.

2. In a wrench, a rod having one end bent to provide revolving leverage means and also cranking means; a tubular handle on the intermediate portion of said rod to form a grip and journal bearing for the rod; and the other end of said rod being formed into a seat to receive a wrench socket; and resilient means embracing said seat for holding said socket in place on the seat.

3. A wrench, comprising a rod bent to form a T-handle and crank at one end, and provided at the other end with a socket seat having recesses; and a spring bent to embrace the socket seat and to enter said recesses for the purpose of securing a detachable socket on said socket seat.

4. In a wrench, a rod bent to form a handle at one end, and provided at the other end with a socket seat having recesses; and a spring bent to embrace the socket seat and to

enter said recesses for the purpose of securing a detachable socket on said socket seat.

5. A wrench handle comprising a straight stem having at one end a seat adapted to receive a detachable socket, a sleeve on said stem; the other end of said stem being bent to form a T-head having a crank at one end; a sleeve on said crank, and resilient means embracing said seat to retain said socket thereon.

6. A wrench comprising a rod provided at one end with a socket seat having sockets transverse of said rod and grooves extending to the outer end of said seat, and a U-shaped spring adapted to be inserted in said grooves and having inwardly extending tips adapted to enter said recesses, said spring having outward bends, adjacent said inwardly extending tips, adapted to hold a detachable socket on said socket seat.

7. A wrench comprising a rod provided at one end with a socket seat having recesses transverse of said rod and grooves extending from said recesses to the outer end of said seat, and a U-shaped spring adapted to be inserted in said grooves and having inwardly extending tips adapted to enter said recesses, said spring having outward bends adapted to hold a detachable socket on said socket seat.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 15th day of April, 1920.

ALEXANDER LUKE WALTERS.

Witness:

JAMES R. TOWNSEND.