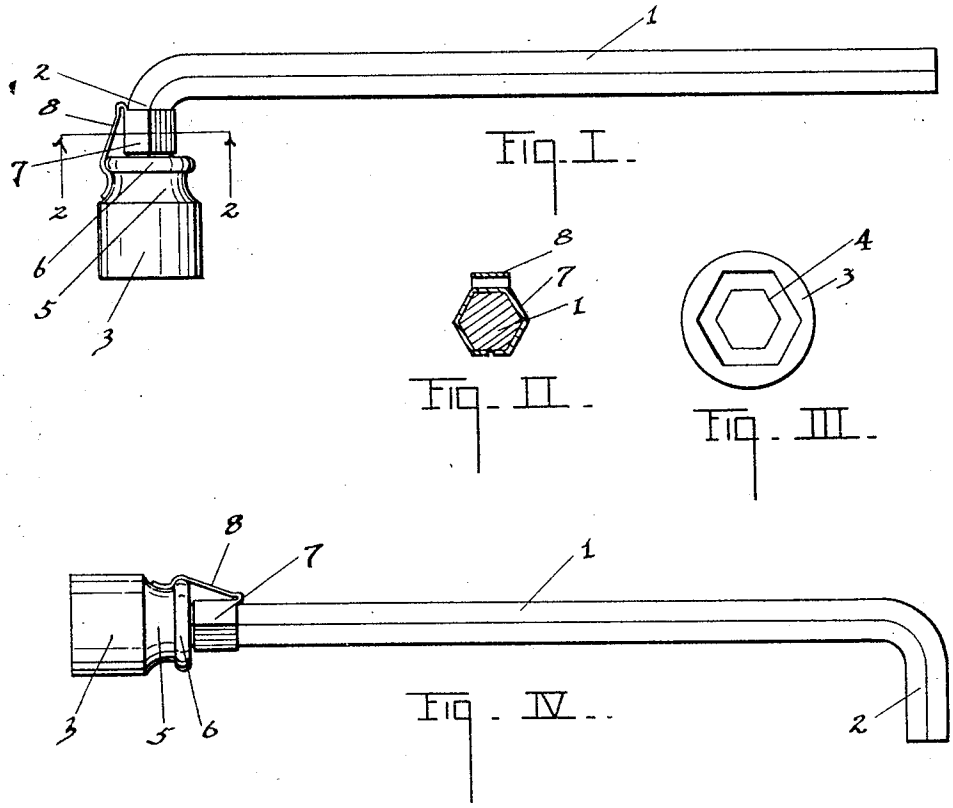
D. F. GRAHAM.

SOCKET WRENCH.

APPLICATION FILED MAY 8, 1919.

1,328,428. Patented Jan. 20, 1920.



Inventor

DAVID F. GRAHAM.

Witnesses

M. Louise Thurston

Kenn Gilman

By C. Ruppell Earl

Attorney

UNITED STATES PATENT OFFICE.

DAVID F. GRAHAM, OF COUDERSPORT, PENNSYLVANIA, ASSIGNOR TO THE GRAHAM ROLLER BEARING COMPANY, OF COUDERSPORT, PENNSYLVANIA.

SOCKET-WRENCH.

1,328,428. Specification of Letters Patent. Patented Jan. 20, 1920.

Application filed May 8, 1919. Serial No. 295,572.

To all whom it may concern:

Be it known that I, DAVID F. GRAHAM, a citizen of the United States, residing at Coudersport, county of Potter, State of Pennsylvania, have invented certain new and useful Improvements in Socket-Wrenches, of which the following is a specification.

This invention relates to improvements in socket wrenches.

The main object of this invention is to provide an improved socket wrench having a bar-like handle of uniform cross section in which the socket may be engaged with either end of the handle and effectively retained thereon.

Further objects, and objects relating to structural details, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification. The invention is clearly defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is clearly illustrated in the accompanying drawing, forming a part of this specification, in which:

Figure I is a side view of a socket wrench embodying the features of my invention with the socket engaged with the short arm of the angled handle.

Fig. II is a cross section on a line corresponding to line 2—2 of Fig. I.

Fig. III is an end view of the socket member.

Fig. IV is a side view with the socket member engaged with the long arm of the handle.

In the drawing similar reference characters refer to similar parts throughout the several views.

Referring to the drawing, the handle 1 is in the form of a bar angled to provide a short arm 2 and a long arm. This handle is of uniform cross section from end to end. The socket member 3 has an opening 4 therein adapted to receive either end of the handle. The socket member is provided with a neck 5 at its inner end terminating in a flange or collar 6.

To retain the socket member on the handle I provide a retaining clip 7 having a spring finger 8 adapted to engage over this collar 6 when the socket is slipped onto the handle. The body of the clip in the embodiment illustrated is a spring, so that it frictionally engages or clutches the handle and retains its adjusted position thereon. The clip 7 may be changed from end to end of the handle so that the socket member is effectively retained when arranged on either end thereof.

By this simple means the socket is retained so that the wrench may be manipulated conveniently for various kinds of work.

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

1. In a socket wrench, the combination with an angled handle having ends of uniform cross section, a socket member removably engageable with either end of said handle and having a neck portion at its inner end terminating in an annular flange, and a retaining clip removably engageable with either end of said handle and having a friction grip thereon, said clip having a spring finger adapted to engage said flange when the socket is engaged with the handle.

2. In a socket wrench, the combination with a handle, a socket member removably engageable with either end of said handle, and a retaining clip removably engageable with either end of said handle above the socket and having a friction grip thereon, said clip having a spring finger adapted to engage said socket when it is engaged with the handle.

3. In a socket wrench, the combination with a handle, a socket member adapted to be sleeved upon said handle and having a collar at its inner end, and a removable retaining clip frictionally engaging said handle above the socket member and having a spring engaging said collar.

4. In a socket wrench, the combination with a handle, of a socket member engageable with either end of said handle, a socket retaining clip removably engageable with either end of said handle and provided with a spring socket engaging member.

5. In a socket wrench, the combination with a handle, of a socket member engageable with said handle, a removable socket retaining clip having sliding engagement with said handle above the socket member and provided with a spring socket engaging member.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

DAVID F. GRAHAM. [L. S.]

Witnesses:

ARTHUR B. MANN.

F. A. FRENCH.