No. 851,068. PATENTED APR. 23, 1907.

W. H. COWELL.

SOCKET PIECE FOR WRENCHES.

APPLICATION FILED FEB. 14, 1907.

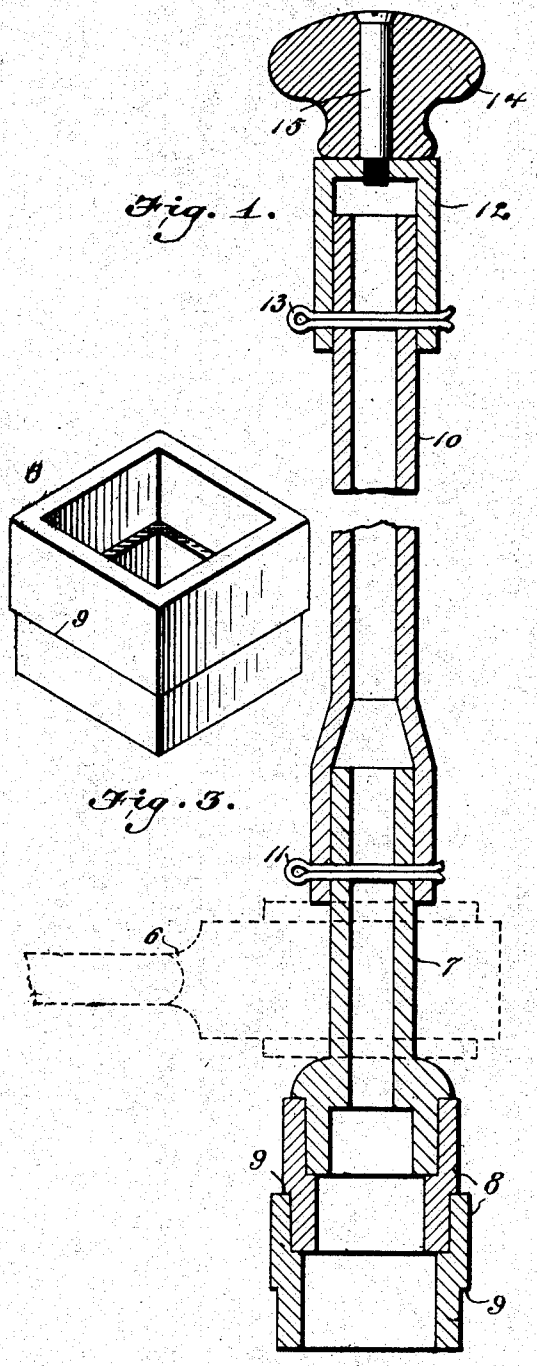



Fig. 1.

Fig. 3.

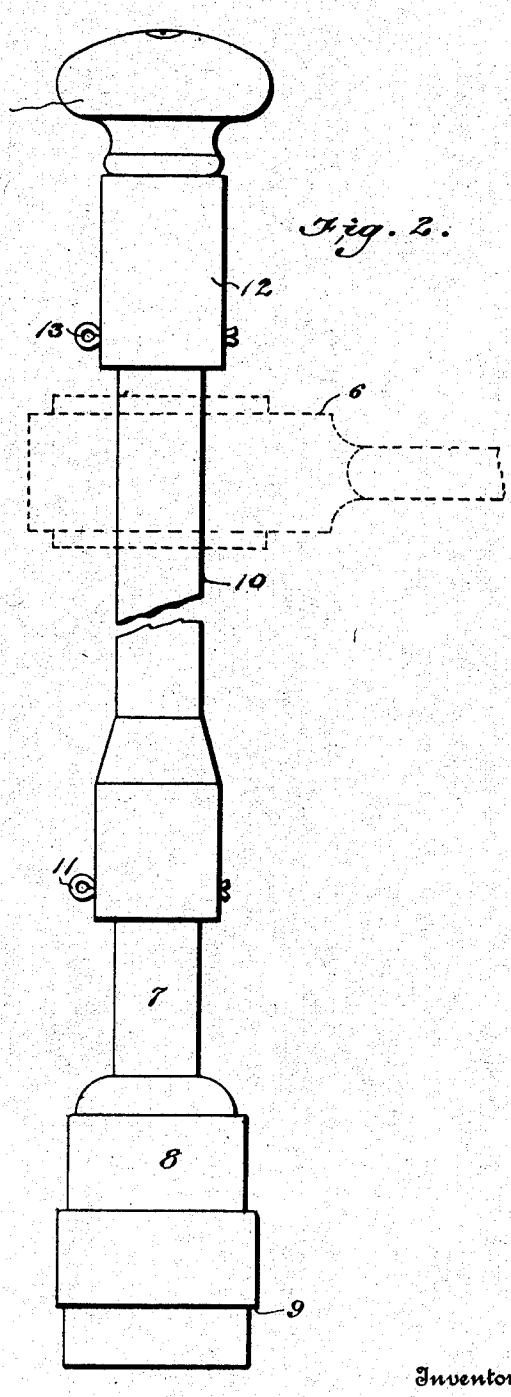



Fig. 2.

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# UNITED STATES PATENT OFFICE.

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## SOCKET-PIECE FOR WRENCHES.

No. 851,068. Specification of Letters Patent. Patented April 23, 1907.

Application filed February 14, 1907. Serial No. 357,376.

*To all whom it may concern:*

Be it known that I, WILLIAM H. COWELL, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Socket-Pieces for Wrenches, of which the following is a specification.

This invention relates to socket pieces for wrenches, and is particularly adapted for use in connection with ratchet wrenches, the heads of which are ordinarily not adjustable to fit nuts of different sizes.

The present invention provides an adjustable socket piece which may be applied to the wrench and used to operate on nuts of various sizes.

A further feature of the invention is that an extension piece is provided which can be used either as a handle or to enable the socket to be applied to a nut which cannot be reached by the wrench.

The construction and use of the device will be better apparent from the following description and the accompanying drawings, in which Figure 1 is a side elevation, partly in section, of the device, with the extension arranged as a handle to hold the socket on the nut or otherwise manipulate the same. Fig. 2 is a similar view of the parts arranged to extend the socket from the head of the wrench. Fig. 3 is a perspective view of one of the sockets.

Referring specifically to the drawings, 6 indicates the head of a wrench, such as the rotatable head of a ratchet wrench of any desired construction, said head having an opening therethrough which receives the shank 7 of the socket piece, which is completed by a series of sockets 8, which fit one over the other, gradually increasing in size to accommodate successively larger nuts. These sockets are separable, so that they can be put on or taken off to accommodate the size of the nut to be turned. Each socket consists of a stepped frame or casing which may be rectangular in shape or otherwise, the casing being stepped or offset at or about the middle, as indicated at 9, so that on one end it will fit over the adjacent smaller socket and on the other end it will fit within the adjacent larger socket. The fit is made close enough so that the parts will hold together by friction, but by special effort can be slipped on or off, as desired. The shank 7 may be hollow or it may be made solid.

To provide a convenient means for handling the wrench, and placing and holding the socket piece on nuts, I attach a tubular extension 10 to the rear end of the shank 7, by means of registering holes and a cotter 11, the extension piece 10 having a socket in the front end to receive the end of the shank. The body of the extension piece 10 is the same diameter as the shank 7, and at the rear end the extension piece is provided with a handle consisting of a socket 12 fitting thereover and fastened by a pin 13, and having a knob 14 at the end, rotatable on a pin 15. The rotatable knob is provided to prevent the extension or handle turning in the hand.

In the construction shown in Fig. 1 the socket piece may be controlled and manipulated by the handle, and the wrench used merely to turn the same. If desired, in order to reach a nut in an inconvenient or out of the way place, the wrench can be removed from the shank of the socket piece and placed upon the body of the extension piece, as indicated in Fig. 2. This change may be effected by removing the pins 11 and 13 and separating the parts in an obvious manner. With this arrangement, then, the socket piece can be made to reach nuts in recesses, or in the inner parts of the machine, with the handle and the wrench at the outside. If desired, the extension 10 can be removed, and the handle or knob 14 applied directly to the shank 7, as the socket 12 will fit said shank.

I claim—

1. A socket piece for wrenches, comprising a shank, and a series of sockets mounted thereon, of progressively larger sizes, said sockets being respectively of a size at the rear end to fit upon the next smaller socket, and of a size at the front end to be received by the rear end of the next larger socket.

2. A socket piece for wrenches, having a shank, a detachable extension having a socket in one end fitting the end of the shank, and a detachable handle piece having a turning knob and a socket, said sockets being of the same size as the shank and the extension so as to fit either.

In testimony whereof I affix my signature, in presence of two witnesses.

WILLIAM H. COWELL.

Witnesses:

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