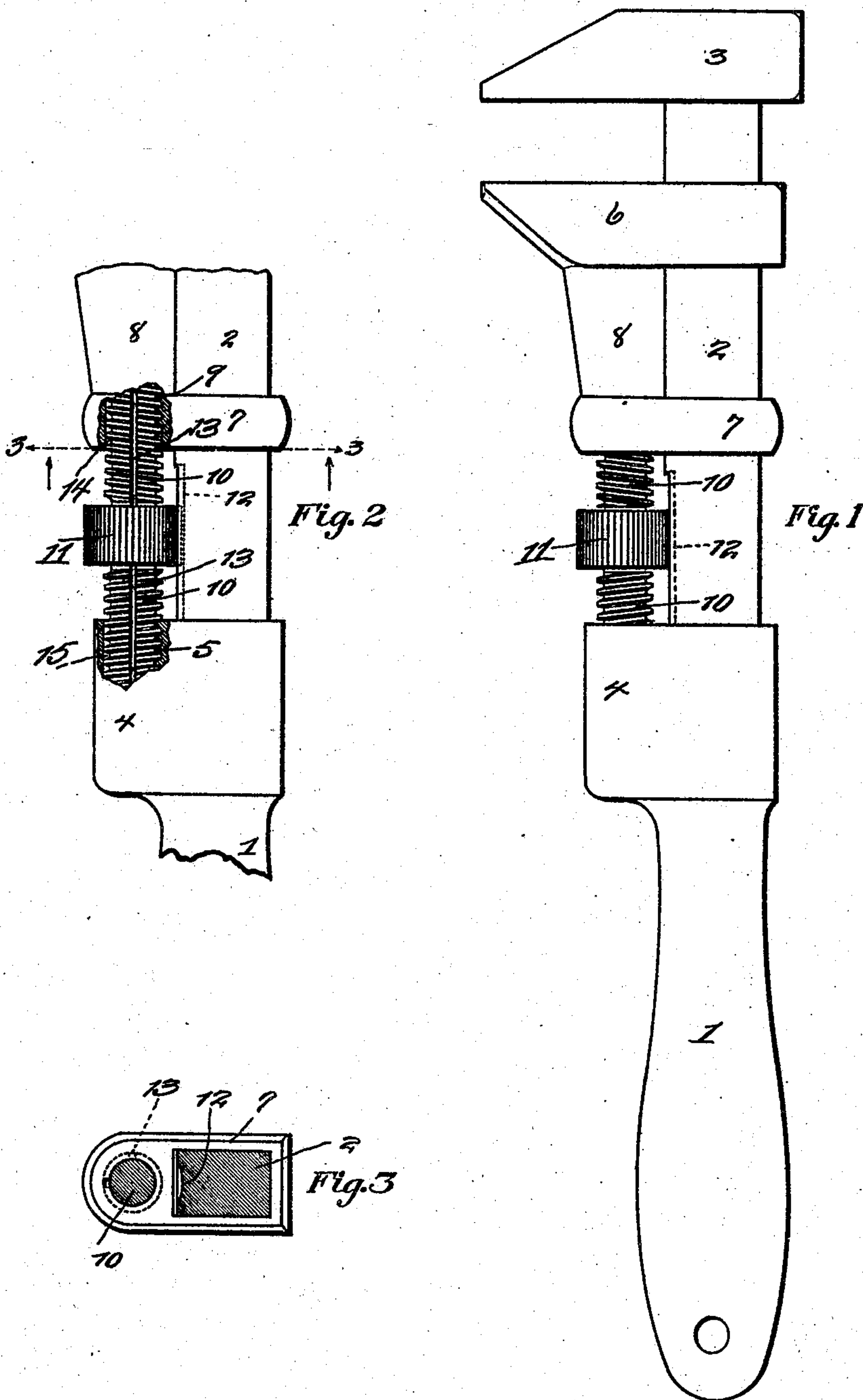


No. 848,058.

PATENTED MAR. 26, 1907.

J. H. SHEPHERD.  
WRENCH.

APPLICATION FILED MAY 25, 1906.



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

JAMES H. SHEPHERD, OF IDAHO SPRINGS, COLORADO.

## WRENCH.

No. 848,058.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed May 25, 1906. Serial No. 318,713.

*To all whom it may concern:*

Be it known that I, JAMES H. SHEPHERD, a citizen of the United States of America, and a resident of Idaho Springs, in the county of Clear Creek and State of Colorado, have invented certain new and useful Improvements in Wrenches, of which the following is a specification.

This invention relates to certain new and useful improvements in wrenches of that class employing a right and left hand thread for manipulation of the movable jaw; and the present invention has for its objects, among others, to provide an improved, simple, and yet strong and efficient wrench in which the parts are few in number and those compactly arranged. The handle carries the shank of the fixed jaw, and upon which the movable jaw slides, and this handle is provided with a portion or extension having a screw-threaded socket in which works one portion of a right-and-left-hand screw, the other portion working in a threaded cocket in an extension of the movable jaw. The screw is provided with a nut or the like, by which it may be turned. The shank of the fixed jaw is provided with a recess to permit of turning of this nut, while the screw is provided with an interruption or groove, so as to readily free itself from dirt if any should get into the screw.

Other objects and advantages of the invention will hereinafter appear, and the novel features thereof will be specifically defined by the appended claim.

The invention is clearly illustrated in the accompanying drawings, which, with the numerals of reference marked thereon, form a part of this specification, and in which—

Figure 1 is an elevation of my improved wrench. Fig. 2 is an elevational detail with portions broken away. Fig. 3 is a cross-section on the line 3 3 of Fig. 2.

Like numerals of reference indicate like parts throughout the several views.

Referring now to the drawings, 1 designates the handle carrying the shank 2, terminating at its outer end in the fixed jaw 3.

4 is an extension on the shank 2 at the handle end thereof, and this lateral portion or extension is formed with a screw-threaded socket 5, in which is received one portion or end of the right-and-left screw.

The movable jaw 6 has the guide portion 7, which embraces the shank 2, and this

guide portion extends laterally beyond the said shank and is connected with the movable jaw by the portion 8, and in this said portion 8 and in the extension of the said guide is a screw-threaded socket 9, in which is received the other end or portion of the right-and-left screw, as will be clearly seen from Fig. 2.

10 is the screw. It is formed right and left, the one portion to engage in the socket 5, which is of course correspondingly threaded, and the other to engage in the socket 9, which is correspondingly threaded. Between the right and left threads of this screw the screw is provided with suitable means for turning it, in this instance being a nut or disk portion 11, the periphery of which is preferably milled, as shown, and in order that this disk may turn freely without binding against the shank 2, and yet to insure that the parts shall be as compactly arranged as possible, the face of the shank adjacent the screw is provided with a longitudinal rounded groove or recess 12, as seen best in Fig. 3.

In order that the screws or the threads above and below the nut or disk may automatically clear or free themselves from any dirt or foreign substance that might lodge therein, I form the same with an interruption, as seen in Figs. 2 and 3 at 13, which may be in the nature of a small groove extending lengthwise of the screw or otherwise.

Turning of the screw either to the right or left gives rapid, or rather increased, motion to the movable jaw. The screw holds the movable jaw in its adjusted positions securely, as will be readily understood. The shoulders at the ends of the recess 12 serve to limit the movement of the disk in its back and forth movements.

The automatic freeing of the screw from dirt may be provided for either by the groove in the screw, as above mentioned, or by means of interruption of the threads in the extensions 8 and 4, as seen at 14 and 15, or both of said provisions may be present, as may be found most expedient.

Modifications in detail may be resorted to without departing from the spirit of the invention or sacrificing any of its advantages.

What I claim as new is—

In a wrench, a handle having a shank and a fixed jaw, a movable jaw, lateral extensions on said handle and movable jaw having sockets with their threads interrupted in the di-

rection of the length of the sockets, and a  
right-and-left screw engaged in the said  
sockets and provided with grooves extending  
lengthwise of the screws for coöperation with  
5 the interruption of the threads of the  
sockets whereby the threads automatically  
free themselves from dirt.

Signed by me at Denver, Colorado, this  
22d day of May, 1906.

JAMES H. SHEPHERD.

Witnesses:

L. BLACKMORE,  
E. HEDENSKOG.