

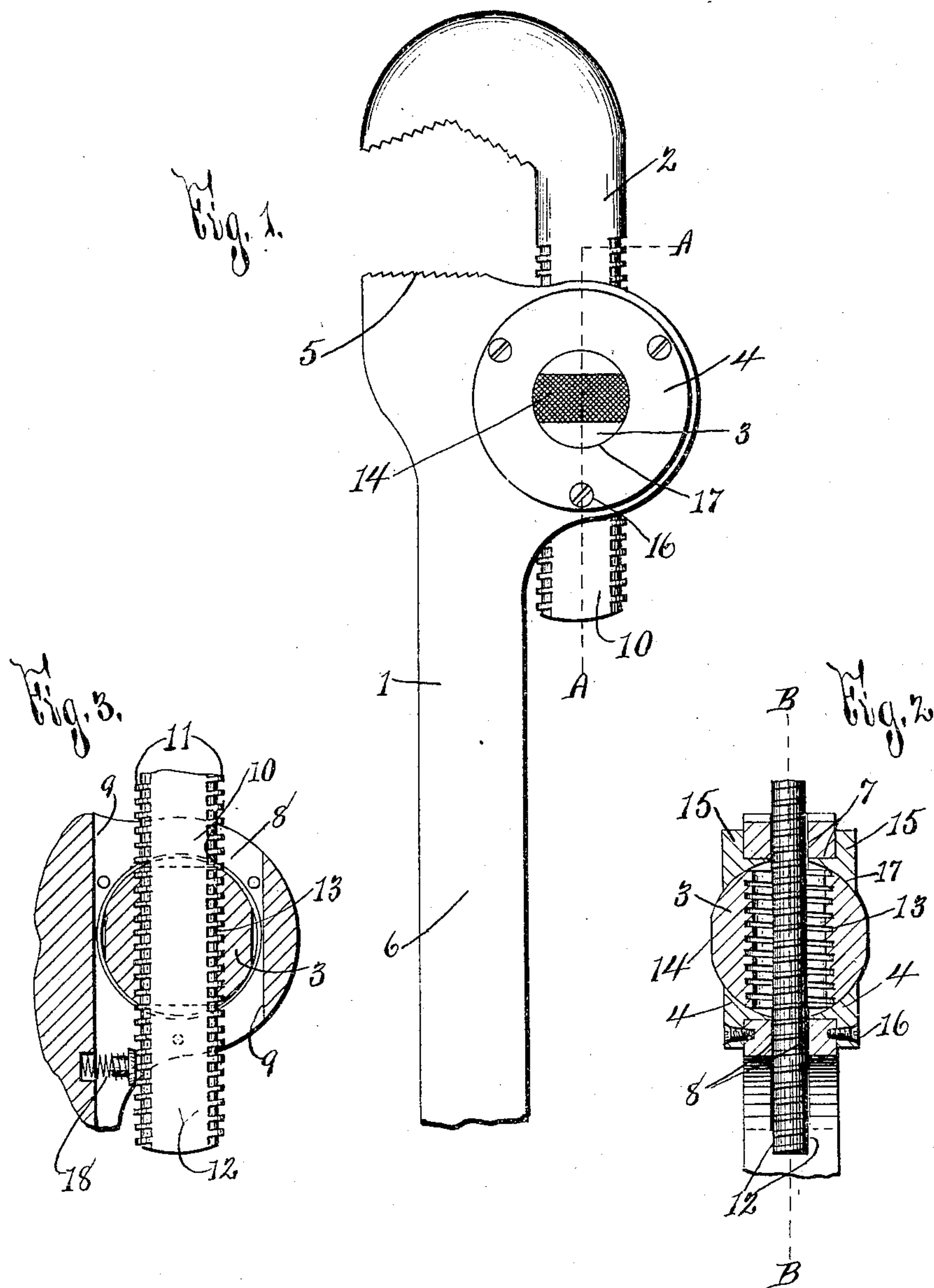
No. 792,560.

PATENTED JUNE 13, 1905.

W. H. F. TENNY.

WRENCH.

APPLICATION FILED SEPT. 24, 1903.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## WRENCH.

SPECIFICATION forming part of Letters Patent No. 792,560, dated June 13, 1905.

Application filed September 24, 1903. Serial No. 174,454.

*To all whom it may concern:*

Be it known that I, WILLIAM H. F. TENNY, of Syracuse, in the county of Onondaga and State of New York, have invented a certain new and useful Wrench, of which the following is a specification.

My invention relates to wrenches having a pivoted jaw, and has for its object the production of a pivotal bearing for the jaw which is particularly strong and durable and can be easily replaced when worn or broken; and it consists in the combinations and constructions of the parts of a wrench, as hereinafter fully set forth and claimed.

In describing my invention reference is had to the accompanying drawings, in which like characters refer to corresponding parts in all the views.

Figure 1 is a side elevation of my wrench. Fig. 2 is a sectional view taken on line A A, Fig. 1. Fig. 3 is a sectional view taken on line B B, Fig. 2.

This wrench comprises a main body 1, a pivoted jaw 2, an adjusting member 3, and bearing cups or sections 4.

The main body 1 is of any desirable form, size, and construction, and is here shown as provided with a fixed jaw 5 and a handle 6 and as formed with a socket 7, extending substantially lengthwise of the main body 1 through upper and lower surfaces thereof and extending transversely through opposite side faces of the main body. Opposite inner surfaces 8 of the socket 7 are substantially flat and parallel and are separated a less distance than the surfaces or sides 9 of the socket arranged at substantially right angles with said surfaces 8.

As seen in the drawings, the jaw 2 is formed with a shank 10, extending substantially lengthwise of the main body 1 in the socket 7 and formed with opposite threaded surfaces 11, separated a less distance than the opposing surfaces 9 of the socket 7 and with substantially flat sides 12, arranged parallel with and in close proximity to the surfaces 8 of the socket 7 and separated a less distance than the surfaces 11.

The adjusting member 3 moves the jaw 2 to

the desired position and also forms a pivot for the jaw 2. Said adjusting member is arranged in the socket 7, is formed substantially ball-shaped, and is provided with a threaded passage 13 for receiving the shank 10, a substantially convex bearing-surface, and a flattened peripheral engaging surface 14.

The bearing cups or sections 4 are removably fixed in the socket 7 on opposite sides of the adjusting member 3 and, as here illustrated, are formed with concave surfaces for engaging opposite portions of the convex surface of the adjusting member and with peripheral shoulders lapped upon opposite side faces of the main body 1 and secured in position by screws 16, passed through said shoulders and into the main body 1. Said bearing cups or sections are also formed with central openings 17 for exposing the surface 14 of the adjusting member 3, so that said member may be readily rotated on the shank 10 for adjusting the jaw 2. Bearing cups or sections constructed as described furnish a large engaging surface, contact with a maximum surface of opposite sides of the adjusting member, and are easily and cheaply replaced when worn or broken.

In the preferable construction of my wrench a spring 18 is suitably secured to the main body 1 within the socket 7 and acts on the shank 10 for moving the upper end of the jaw 2 forwardly on the adjusting member as a pivot, and thereby tending to hold the working face of jaw 2 in engagement with the article clamped by the wrench.

The construction and operation of my wrench will now be readily understood upon reference to the foregoing description and the accompanying drawings, and it will be apparent to those skilled in the art that more or less change may be made in the component parts thereof without departing from the spirit of my invention.

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

1. In a wrench, a main body formed with a socket, a movable jaw, an adjusting member secured to the jaw and arranged in the socket,



said adjusting member forming a pivot for the jaw and having a convex bearing-surface, and bearing-cups removably fixed at opposite sides of the socket and having concave surfaces engaging opposite portions of said convex surface, substantially as and for the purpose described.

2. In a wrench, a main body formed with a socket, a movable jaw, a spherical adjusting member secured to the jaw and arranged in the socket, said adjusting member forming a pivot for the jaw, and bearing-cups removably fixed on opposite sides of the socket and engaged with the adjusting member, substantially as and for the purpose described.

3. In a wrench, a main body formed with a socket, a movable jaw, a spherical adjusting member secured to the jaw and arranged in the socket, said adjusting member forming a pivot for the jaw, and bearing-cups removably fixed on opposite sides of the socket and engaged with the adjusting member, said bearing-cups having central openings for permitting engagement of the adjusting member, substantially as and for the purpose specified.

4. In a wrench, a main body formed with a socket, a movable jaw, a substantially ball-shaped adjusting member secured to the jaw and arranged in the socket, said adjusting member forming a pivot for the jaw, bearing-cups at opposite sides of the socket for engaging opposite surfaces of the adjusting member, one of said cups having a peripheral shoulder lapped upon a side face of the main body, and screws passed through the shoulder into the main body, substantially as and for the purpose specified.

5. In a wrench, a main body formed with a socket, a movable jaw, a substantially ball-shaped adjusting member secured to the jaw and arranged in the socket, said adjusting member forming a pivot for the jaw, bearing-cups at opposite sides of the socket for engaging opposite surfaces of the adjusting member, said cups having peripheral shoulders lapped upon opposite side faces of the main body, and screws passed through the shoulders into said side faces, substantially as and for the purpose described.

6. In a wrench, a main body provided with a jaw and with a socket extending substantially lengthwise of the main body through upper and lower surfaces thereof, and also ex-

tending transversely through opposite sides of the main body, a movable jaw provided with a shank arranged lengthwise of the main body in the socket and formed with threads, a substantially ball-shaped adjusting member forming a pivot for the movable jaw and having a threaded passage for receiving the shank of the movable jaw, said member being revoluble on the shank for adjusting the movable jaw, bearing-cups for the adjusting member at opposite ends of the transverse portions of the socket, and formed with central openings for permitting engagement of the adjusting member, substantially as and for the purpose set forth.

7. In a wrench, a main body provided with a jaw and with a socket extending substantially lengthwise of the main body through upper and lower surfaces thereof and also extending transversely through opposite side faces of the main body, said socket being formed with inner substantially parallel surfaces, a movable jaw provided with a shank arranged lengthwise of the main body in the socket and formed with opposite threaded surfaces separated a less distance than opposing inner surfaces of the socket and with substantially flat sides separated a less distance than said threaded surfaces and arranged at substantially right angles therewith, and substantially parallel with and in close proximity to said inner substantially parallel surfaces of the socket and a substantially ball-shaped adjusting member forming a pivot for the movable jaw, and having a threaded passage for receiving the shank of the removable jaw, said member being revoluble on the shank for adjusting the movable jaw bearing-cups for the adjusting member at opposite sides of the socket formed with central openings for permitting engagement of the adjusting member, and a spring between the main body and the shank of the movable jaw, substantially as and for the purpose described.

In testimony whereof I have hereunto signed my name, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 4th day of April, 1903.

WILLIAM H. F. TENNY.

Witnesses:

D. LAVINE,  
F. G. BODELL.