Nov. 27, 1923. 1,475,755

C. A. DIES

ADJUSTABLE WRENCH

Filed Aug. 19, 1922

FIG. 1.

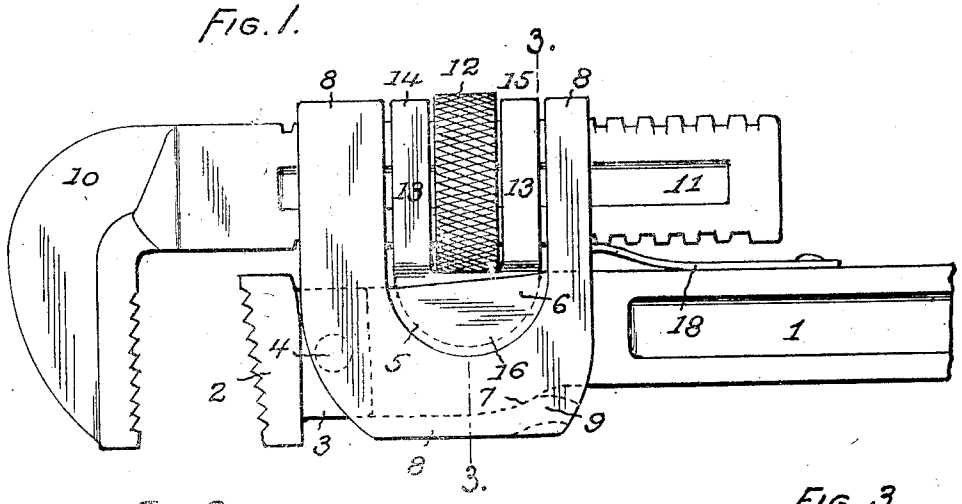


FIG. 2.

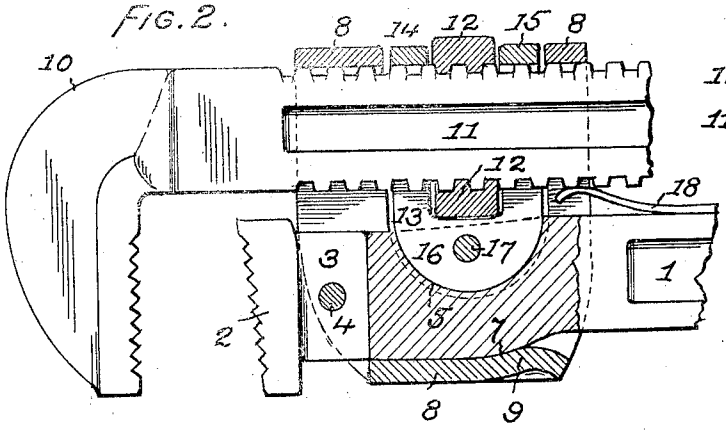


FIG. 3.

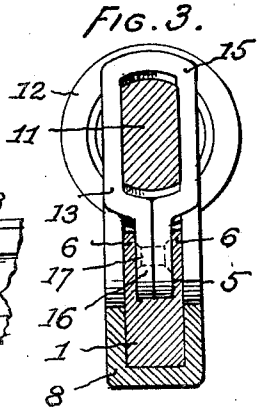


FIG. 4.

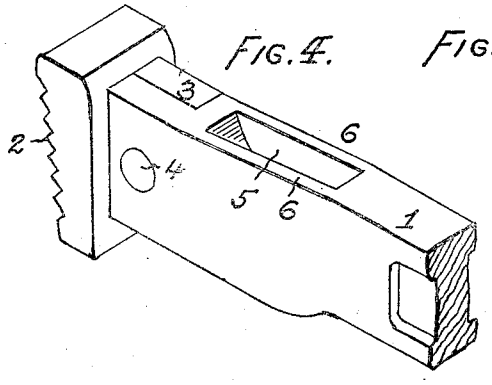
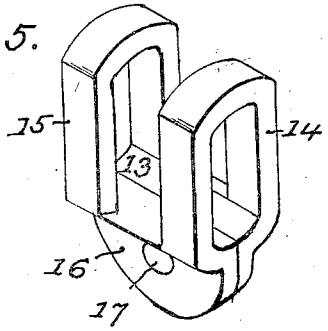


FIG. 5.



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UNITED STATES PATENT OFFICE.

CHARLES A. DIES, OF CHICAGO, ILLINOIS.

ADJUSTABLE WRENCH.

Application filed August 19, 1922. Serial No. 582,960.

To all whom it may concern:

Be it known that I, CHARLES A. DIES, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Adjustable Wrenches, of which the following is a specification.

This invention relates to that class of adjustable wrenches in which the respective jaw members are connected together so as to be capable of limited rocking movement between the same, in attaining the proper initial holding grip upon the pipe or article operated on, and the present improvement has for its object:

To provide a structural formation and assembly of the rocking yoke in which the operating sleeve nut of the adjustable member of the wrench is confined, and with which the pivotal connection to the companion handle member of the wrench is effected in a strong and durable manner, all as will hereinafter more fully appear.

In the accompanying drawing,

Figure 1 is a side elevation of an adjustable pipe wrench embodying the present invention;

Fig. 2 is a detail longitudinal sectional elevation;

Fig. 3 is a transverse section on line 3—3, Fig. 1;

Fig. 4 is a perspective view of the forward portion of the handle member of the wrench; and

Fig. 5 is a similar view of the rocking yoke.

Like reference numerals indicate like parts in the different views.

Referring to drawing, 1 designates the handle or stationary member of the wrench carrying at its forward end a holding jaw 2, provided on its rear end a lug 3 fitting a side recess in the handle member 1 and secured in place by a screw or rivet 4. In the present improvement the handle member 1 is formed with a semi-circular recess 5, in adjacent relation to the jaw 2, and preferably formed with longitudinal side walls 6, and with a curved under surface 7, concentric with the recess 5, as shown.

8 designates a housing or sleeve of a flattened tubular form, preferably shaped from a section of seamless steel tubing, and having its middle upper portion cut away transversely to provide space for the adjusting sleeve nut and the confining rocker yoke hereinafter described. In the preferred construction the bottom wall of the housing 8 has a rear curved portion 9, to provide a rocking bearing or abutment for the aforesaid curved under surface 7, of the handle member 1.

10 designates the adjustable member of the wrench comprising the usual holding head or jaw and screw-threaded shank 11 of a non-circular form and arranged in approximately right angle relation to said head or jaw and carrying the usual operating sleeve nut 12.

13 designates the rocker yoke, preferably formed from a plate metal blank of the proper form, bent and shaped to provide a main member having forward and rearward flattened loop portions 14 and 15 adapted for sliding assembly with the non-circular wrench shank 11, said loop portions having longitudinal spaced relation providing a receiving space for the sleeve nut 12, aforesaid. In the present improvement the loop portions 14 and 15 merge into integral under portions 16, of a semi-circular form, secured together by a rivet 17. In the present construction, the semi-circular under portions 16 are adapted to fit the aforesaid semi-circular recess 5 of the handle member 1, and have limited rocking movement therein.

18 designates a spring interposed between the handle member 1, and the shank 11 aforesaid and adapted to swing said shank and the associate rocker yoke 13 and sleeve nut 12, in a direction away from said handle member 1, and normally maintain the holding jaws 2 and 10 in a closer relation that requires a pressure of the thumb of the user upon the rear end of the shank 11 to effect an initial and limited opening movement of the jaws in engaging the wrench with the pipe or other article to be operated. The spring 18 and its described functions are usual in various detail forms in wrenches of the present type.

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

1. In a wrench of the type described, the combination of a handle member having a holding jaw at one end and a semi-circular recess in its upper face adjacent to said jaw. an adjustable member having a holding jaw and a screw threaded shank, a

sleeve nut engaging said screw threaded shank, a skeleton housing of a flattened tubular form embracing the handle member and screw threaded shank aforesaid, and a rocker yoke of a flat tubular shape formed with forward and rearward extensions in spaced relation adapted to encircle said screw threaded shank and provide a receiving space for said sleeve nut, said rocker yoke having an underside of a semi-circular form for rocking engagement in the semi-circular recess of the handle member.

2. In a wrench of the type described, the combination of a handle member having a holding jaw at one end and formed with a semi-circular recess in its upper face in adjacent relation to said jaw and with a curved under surface concentric with said recess, an adjustable member having a holding jaw and a screw threaded shank, a sleeve nut engaging said screw threaded shank, a skeleton housing of a flattened tubular form embracing the handle member and screw threaded shank aforesaid and formed with a curved bottom wall for bearing contact with the curved under surface of the handle member, and a rocker yoke embracing said screw threaded shank and having forward and rearward portions in spaced relation to provide a receiving space for the aforesaid sleeve nut, said rocker yoke having a depending portion of a semi-circular form for rocking engagement in the semi-circular recess of the handle member.

3. In a wrench of the type described, the combination of a handle member having a holding jaw at one end and formed with a curved recess in its upper face and in adjacent relation to said jaw, an adjustable member having a holding jaw and a screw threaded shank, a sleeve nut engaging said screw threaded shank, a skeleton housing of a flattened tubular form embracing the handle member and screw threaded shank aforesaid and a rocker yoke embracing said screw threaded shank and having forward and rearward portions in spaced relation to provide a receiving space for the aforesaid sleeve nut, said rocker yoke having a depending portion adapted for rocking engagement in the recess of the handle member, the recess being provided with side walls.

4. In a wrench of the type described, the combination of a handle member having a holding jaw at one end and formed with a semi-circular recess in its upper face and in adjacent relation to said jaw, an adjustable member having a holding jaw and a screw threaded shank, a sleeve nut engaging said screw threaded shank, a skeleton housing of a flattened tubular form embracing the handle member and screw threaded shank aforesaid, and a rocker yoke embracing said screw threaded shank and having forward and rearward portions in spaced relation to provide a receiving space for the aforesaid sleeve nut, said rocker yoke having a depending portion of a semi-circular form for rocking engagement in the semi-circular recess of the handle member, the said recess being provided with side walls.

5. In a wrench of the type described, the combination of a handle member having a holding jaw at one end and formed with a semi-circular recess in its upper face in adjacent relation to said jaw and with a curved under surface concentric with said recess, an adjustable member having a holding jaw and a screw threaded shank, a sleeve nut engaging said screw threaded shank, a skeleton housing of a flattened tubular form embracing the handle member and screw threaded shank aforesaid and formed with a curved bottom wall for bearing contact with the curved under face of the handle member, and a rocker yoke embracing said screw threaded shank and having forward and rearward portions in spaced relation to provide a receiving space for the aforesaid sleeve nut, said rocker yoke having a depending portion of a semi-circular form for rocking engagement in the semi-circular recess of the handle member, the said recess being provided with side walls.

Signed at Chicago, Illinois, this 15th day of August 1922.

CHARLES A. DIES.