

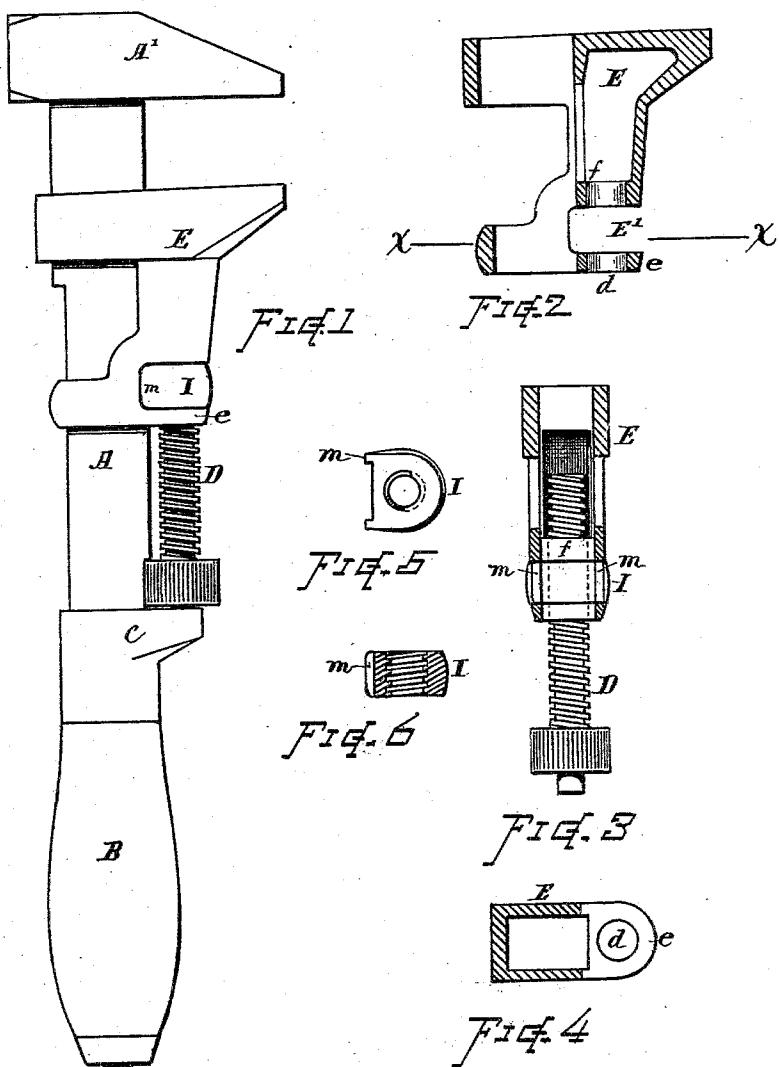
(No Model.)

J. H. & F. L. COES.

WRENCH.

No. 301,680.

Patented July 8, 1884.



WITNESSES.

John H. Coes
Geo. W. Rice ^{2d}

INVENTORS.

John H. Coes
Frederic L. Coes
By Chas. St. Burleigh
Attorney

UNITED STATES PATENT OFFICE.

JOHN H. COES AND FREDERIC L. COES, OF WORCESTER, MASSACHUSETTS.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 301,680, dated July 8, 1884.

Application filed April 7, 1884. (No model.)

To all whom it may concern:

Be it known that we, JOHN H. COES and FREDERIC L. COES, citizens of the United States, residing at Worcester, in the county 5 of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Wrenches; and we declare the following to be a description of our said invention sufficiently full, clear, and exact to enable others skilled in the art to which it 10 pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This improvement relates to that class of 15 wrenches known as the "Coes wrench," the object of the present invention being to attain a close and perfect-fitting thread upon the screw, while giving ample looseness for the movable jaw in its movement upon the 20 bar; also, to render the construction of the parts such that the wrench can be manufactured with ease and facility.

Our invention consists in providing the 25 movable jaw with a recess extending inward from the front, and inserting in said recess a threaded nut for engaging the rosette-screw, as hereinafter described.

In the drawings, Figure 1 is a side view of 30 a wrench embracing our invention. Fig. 2 is a vertical section of the movable jaw, looking toward the side. Fig. 3 is a vertical section of the jaw, looking toward the front, the screw and nut being shown therewith. Fig. 4 is a section of the jaw at line $x-x$, Fig. 2. Fig. 5 is a plan view of the nut, and Fig. 6 is a section of the nut for engaging the jaw and rosette-screw.

In referring to parts, A denotes the bar, having a head or stationary jaw, A'. B is the handle, C the ferrule or step, and D the rosette-screw, all of which may be of the usual form employed in the Coes wrench.

E denotes the movable jaw, which is made in the form indicated, with a recess, E', extending in from the front side through the cylindrical portion of said jaw and near the lower part thereof, but leaving an arm of metal, e, below the recess of sufficient size and strength to work the jaw downward on the screw D. 45 The opening d in this arm of metal is bored out to fit the outer diameter of the screw D, so as to move loosely thereon for guiding the

jaw, and the metal of the jaw above the recess at f is also bored out in similar manner, as shown in Fig. 2.

Within the recess E' is loosely fitted a nut, I, of the form shown, which has a screw-thread that engages the thread of the rosette-screw D with a good working fit, and so as to have a sure hold thereon said nut I is furnished with lips m m, that extend past the angles of the bar A and prevent the nut from revolving out of position. The front of the nut may be finished to conform to the front of the jaw E. The nut may be case-hardened. 55 The recess E' can be readily milled out in the jaw-casting by a rotating cutting-tool, so as to make the proper fit for the nut I. The screw D, working in the nut I, effects the movement of the jaw E both up and down on the bar A 60 without the necessity of screw-threads in the jaw-casting, the arm e drawing the jaw down when the screw D is turned in, and when said screw is turned outward the nut I is forced against the shoulder at the top of the recess 65 E' for moving the jaw upward. Said shoulder also sustains the backward strain of the jaw against the nut I when the wrench is in use. This construction makes a very strong 70 and serviceable wrench, and there is no liability of the jaw becoming worn and slipping on the threads of the screw. 75

What we claim as of our invention, and desire to secure by Letters Patent, is—

1. The combination, with the bar and rosette-screw in a Coes wrench, of the jaw provided with the recess extending inward from the front of said jaw, the arm of metal below said recess bored out to receive said screw, and the threaded nut arranged within said recess and engaging the rosette-screw, substantially as set forth. 80 85

2. The nut I, provided with lips m m, in combination with the recessed jaw E, screw D, and bar A, substantially as and for the 90 purpose set forth.

Witness our hands this 4th day of April, A. D. 1884.

JOHN H. COES.
FRED. L. COES.

Witnesses:

CHAS. H. BURLEIGH,
S. R. BARTON.