

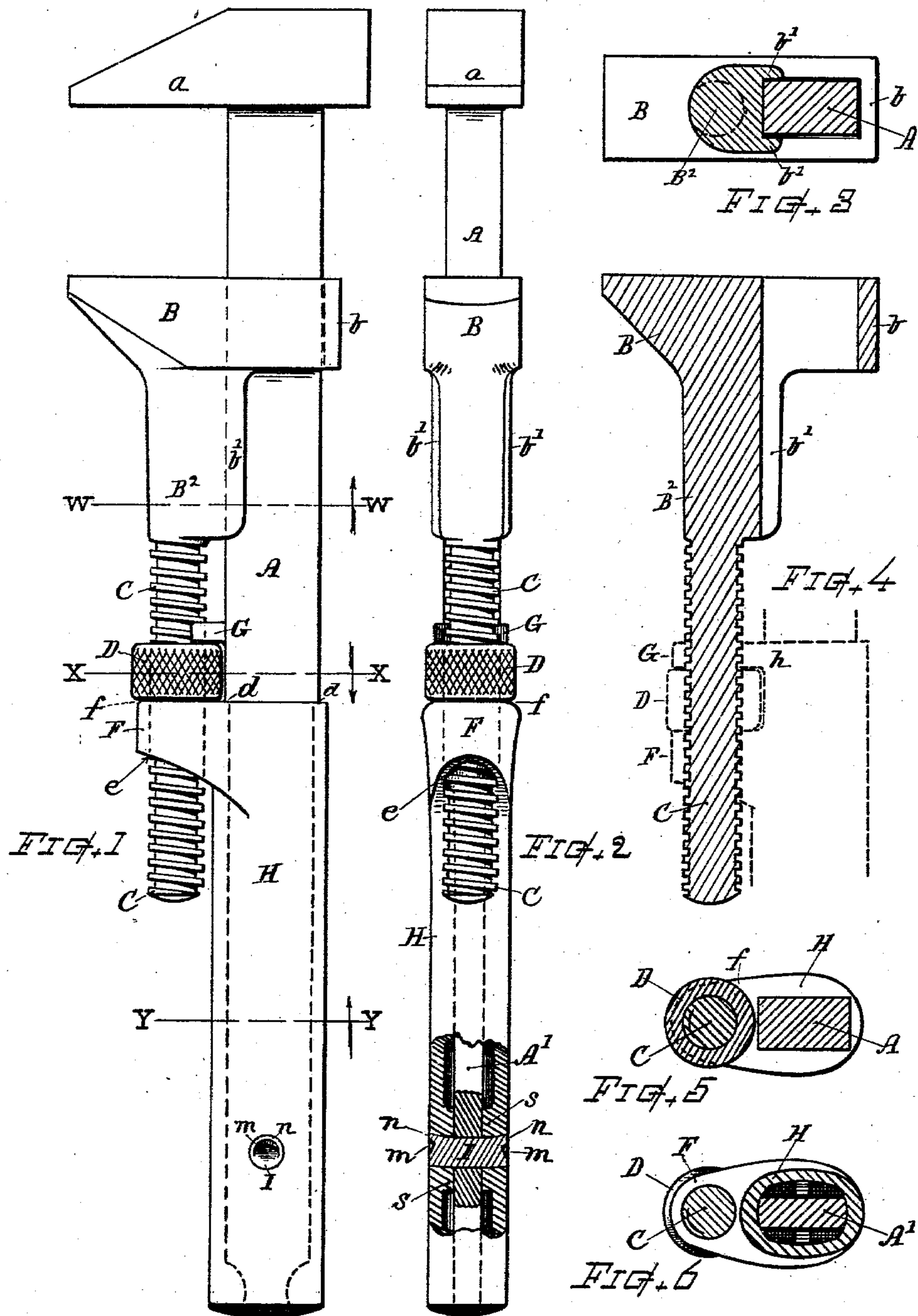
No. 720,785.

PATENTED FEB. 17, 1903.

L. COES.  
WRENCH.

APPLICATION FILED APR. 18, 1902.

NO MODEL.



*Witnesses.*

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# UNITED STATES PATENT OFFICE.

LORING COES, OF WORCESTER, MASSACHUSETTS.

## WRENCH.

SPECIFICATION forming part of Letters Patent No. 720,785, dated February 17, 1903.

Application filed April 18, 1902. Serial No. 103,562. (No model.)

*To all whom it may concern:*

Be it known that I, LORING COES, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in Wrenches, of which the following, together with the accompanying drawings, is a specification sufficiently full, clear, and exact to enable persons skilled in the art to which this invention appertains to make and use the same.

The object of my present invention is to provide a screw-wrench of efficient capacity and economic construction; and my invention consists in a wrench embodying in its structure the combined features and improvements particularly explained in the following detailed description and defined in the summary and as illustrated in the accompanying drawings, wherein—

Figure 1 represents a side view of my improved wrench; Fig. 2, a front view of the same, a portion of the handle being shown in section. Fig. 3 is a transverse section at line W W in Fig. 1. Fig. 4 is a longitudinal section of the movable jaw and its integral screw extension. Fig. 5 is a transverse section at line X X, and Fig. 6 a transverse section at line Y Y, on Fig. 1. The sections are assumed as looking in the direction of the arrow on their respective lines.

Referring to the several parts of the wrench as shown on the drawings, the letter A indicates the wrench-bar, which may be of well-known form, as heretofore employed in a "Coes" wrench, and comprising a plain rectangular bar portion having formed upon one end the head or fixed jaw *a* and at its other end a reduced or flattened portion forming a bar-shank A', with bearing edges (see dotted line, Fig. 1) and positioning-shoulders *d* for receiving and supporting a metal handle-frame or complete handle-piece.

B indicates the movable jaw, which, as a feature of my invention, is constructed as shown. It has a strap *b* and opposite side lips *b'*, that embrace the wrench-bar, while the under body B<sup>2</sup> of the jaw is adapted for seating against the front edge of the bar A, and said jaw-body is provided at its lower end with an integral screw-threaded extension C in alinement, coincident with, and

continuing the rounded front outline of the body portion and longitudinally parallel with the wrench-bar and adapted as a support and screw for adjusting said movable jaw and upholding it against the strains when in action.

The handle H is preferably made as an all-metal piece internally fitted for rigid support upon the bar-shank A' and provided at its collar portion with a projecting step F, having a metal-surrounded opening or circular hole *e* therethrough, that serves as a guide for the screw C forward of the main body of the handle, and with a seating-surface *f* upon the top of said step perpendicular to the axis of said opening *e*. An annular internally-threaded and externally-checked rosette or nut D is rotatively arranged upon the screw C, which latter when the parts are assembled extends through the guide-opening *e*, and the rosette is supported against the seating-surface *f* upon the step F, the periphery of said rosette standing entirely forward of and clearing the plane at the front face of the rectangular portion of the wrench-bar. A suitable retaining member or abutment G is provided for overhanging engagement with the rosette or nut D, and thereby confining said rosette in adjacent relation to its seating-surface, while permitting its free rotative movement about the threaded extension C for adjusting the jaw B. The abutment G may be formed or carried on the bar A, or the metal of the handle may be extended for overhanging the rosette, as indicated by the dotted lines at *h* on Fig. 4, a forwardly-projecting portion of the handle forming the abutment G and wholly surrounding the screw.

As a means for securing the all-metal handle-piece H to the bar-shank and rendering it firmly seated against the positioning-shoulders *d* there is arranged in the present instance a transversely-disposed cylindrical pin I, which is inserted in an opening through the handle and bar-shank, and after assembling the ends of said pin are indented, as at *m*, in a crescent form and in a manner to throw the metal of the pin at *n* toward the top end of the handle, and thereby crowding the handle up the shank and tightening the top end of the handle-piece firmly against the shoulders *d*. The handle-piece is made with opposite internal bosses *s*, which match



against the bar-shank and give solid metal about the pin-opening.

I claim and desire to secure by Letters Patent—

5 1. A wrench constructed as hereinbefore described, comprising the rectangular wrench-bar provided with the fixed jaw, and having the laterally-reduced bar-shank with front and rear handle-supporting edges and posi-  
10 tioning-shoulders, the metal handle-piece or frame rigidly fitting upon the bar-shank along its front and rear edges and against said positioning-shoulders, said handle-piece being provided at its upper end with an integral forward projection having a hole therethrough  
15 parallel with the bar-shank, the movable jaw having a strap and lipped downwardly-extended body portion sliding on said wrench-bar, and an integral screw-threaded extension in continuing alinement with the rounded  
20 front of the body and passing through said handle projection, a rosette arranged on said screw-threaded extension with its periphery forward of the front plane of the bar, and a  
25 retaining member fixed in the front edge of the bar and projecting over the rosette, all substantially as and for the purposes set forth.

30 2. In a wrench, in combination with the wrench-bar having handle-positioning shoulders, and a handle-supporting bar-shank, an all-metal handle-piece mounted on said bar-shank, and a fastening-pin inserted trans-

versely through said handle-piece and bar-shank, and having its ends indented and upwardly deflected for forcing said handle-piece against the positioning-shoulders, substantially as set forth. 35

3. In a wrench, the combination as described, of the wrench-bar carrying the fixed jaw and the laterally-reduced bar-shank having handle-supporting edges approximately the full length of said shank, the movable jaw slidably embracing said wrench-bar and having an under body seating parallel against  
40 the front of said bar, and a screw-threaded extension continuous with said under body, the rotatable rosette-nut arranged thereon forward of the front plane of the bar, the oval tubular handle-piece internally fitting  
45 the edges of the reduced bar-shank, and provided with a projecting collar-guides surrounding and carrying said screw-threaded extension outside the handle, and forming an end seat for the rosette, a projecting detent upon  
50 the front face of the wrench-bar engaging over the edge of the rosette, and means securing said handle-piece rigidly to the bar-shank, substantially as set forth. 55

Witness my hand this 15th day of April, 60 1902.

LORING COES.

Witnesses:

CHAS. H. BURLEIGH,  
CHARLES S. BACON.