

(No Model.)

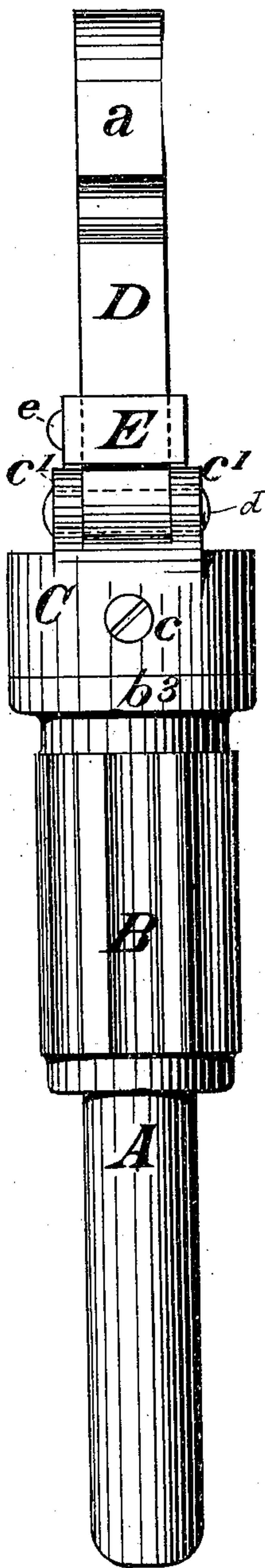
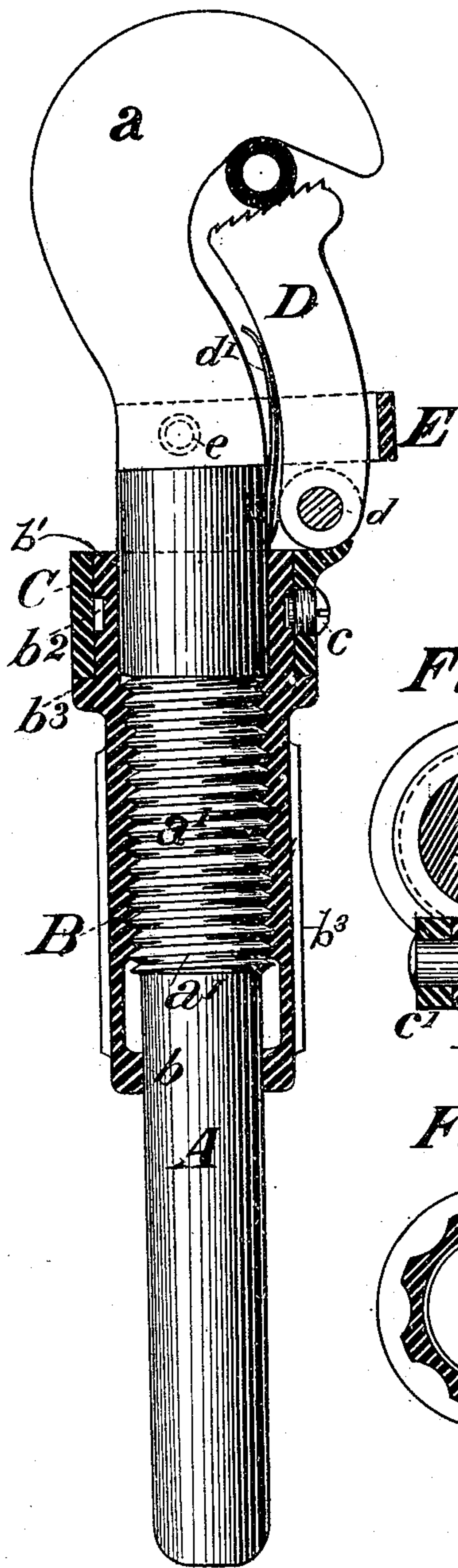
J. EVERDING.  
Pipe Wrench.

No. 231,023.

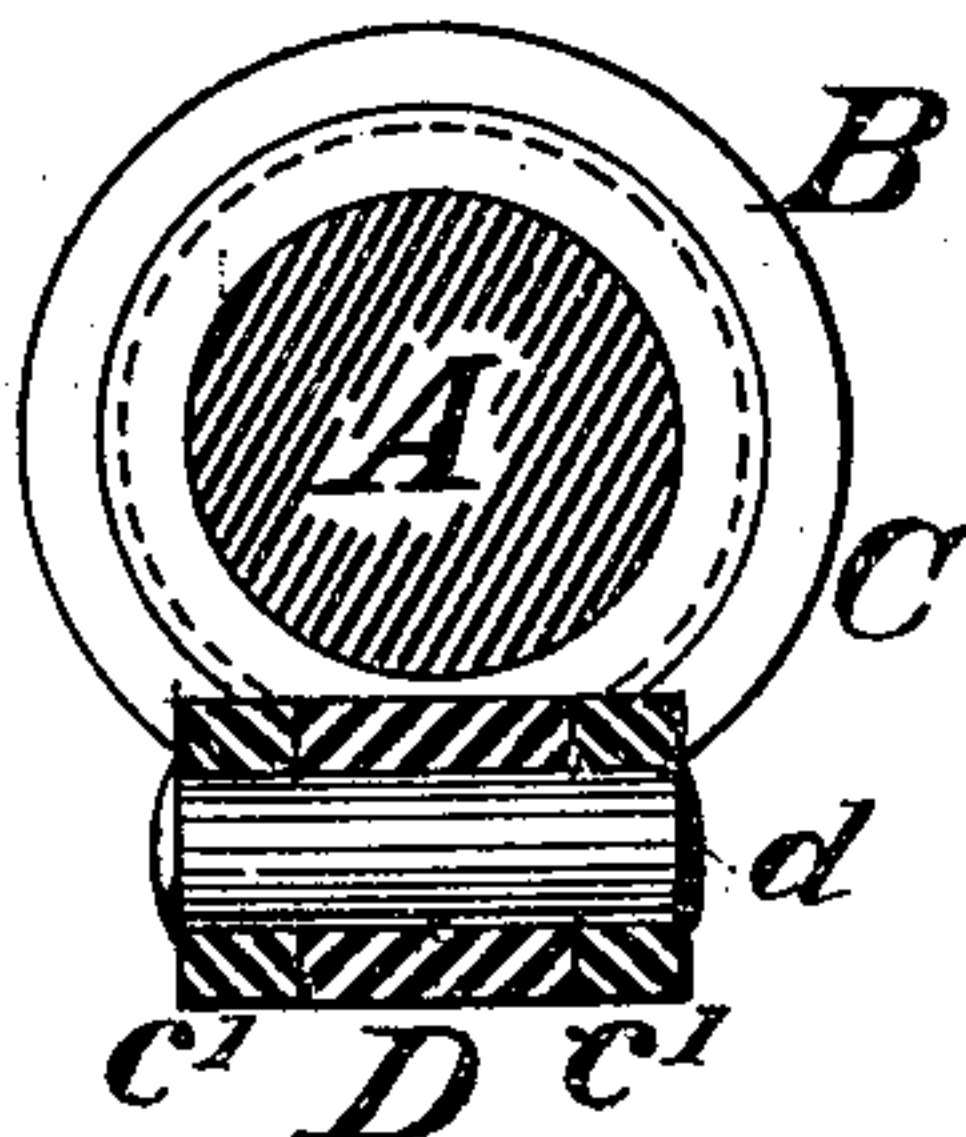
Patented Aug. 10, 1880.

*Fig. 1*

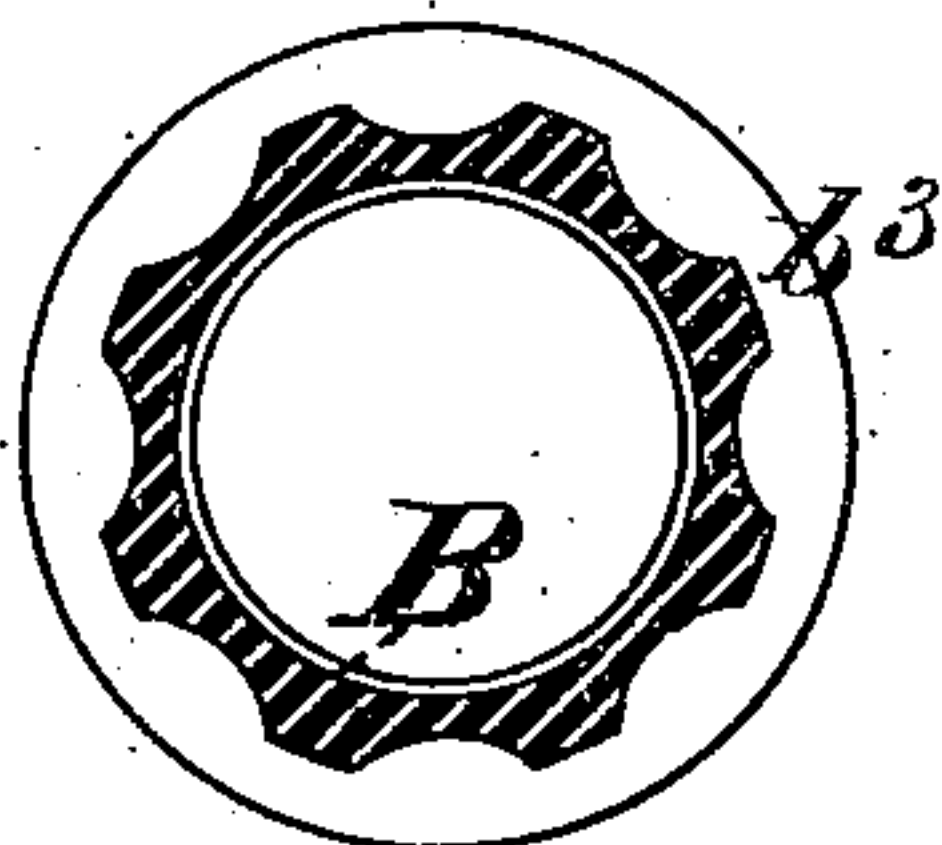
*Fig. 2*



*Fig. 3*



*Fig. 4*



*Witnesses:*

*Wm H. Myers*  
*D. A. Partidge*

*Inventor:*

*John Everding*  
*By Collier & Bell,*  
*attys.*



# UNITED STATES PATENT OFFICE.

JOHN EVERDING, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO ABRAHAM S. JENKS, OF SAME PLACE.

## PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 231,023, dated August 10, 1880.

Application filed June 21, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN EVERDING, of the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Pipe-Wrenches, of which improvements the following is a specification.

The object of my invention is to provide a pipe-wrench embodying the qualities of simplicity and cheapness in construction and strength, durability, and efficiency in operation, to which end my improvements consist in the combination of a threaded stock or body having a fixed jaw upon the end nearest the thread, a sleeve-nut engaging the thread of the stock, a ferrule fitting freely and having its entire bearing upon the nut and held in position longitudinally thereon by a pin or set-screw and a movable jaw or pawl pivoted to the ferrule.

My improvements further consist in the combination of a wrench-body, a toothed jaw or pawl pivoted to a ferrule, which has its entire bearing upon a nut movable longitudinally upon the wrench-body, and a strap or guide secured to the wrench-body below its fixed jaw, said strap admitting of the longitudinal traverse of the movable jaw, as well as providing for a limited transverse motion thereof, so that the same space may be maintained between the end of the pawl and the body of the wrench in different positions of the pawl, the outline of the latter being made to correspond substantially with that of the adjacent face of the wrench-body.

The improvements claimed are hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a sectional elevation of a pipe-wrench embodying my invention; Fig. 2, a side view, in elevation, of the same, taken at right angles to Fig. 1; Fig. 3, a transverse section at the center of the pivot of the movable jaw or pawl, and Fig. 4 a similar section through the nut.

To carry out my invention I provide a stout cylindrical metallic stock or body, A, flattened at and toward one of its ends, on which is formed a fixed jaw, *a*, having an angular recess of suitable form to receive a pipe. A screw-thread, *a'*, is cut upon the stock A, ad-

jacent to the flattened end which carries the fixed jaw.

A long sleeve-nut, B, is fitted upon the stock, its thread, which extends the major portion of its length, engaging that of the stock. The inner diameter of nut B for the remainder of its length is greater than the diameter of the thread *a'*, except at one end, where it is reduced to form a guide or collar, *b*, fitting easily around the cylindrical portion of the stock. A portion of the outer surface of the nut B, at the end next which its thread is formed, is turned off to form a cylindrical bearing, *b'*, with a circumferential groove, *b<sup>2</sup>*, near its center, the bearing *b'* terminating at a collar, *b<sup>3</sup>*, below which the external surface of the nut is milled or corrugated to enable it to be readily grasped and turned.

A ferrule, C, the bore of which is such as to admit easily the bearing *b'* of the nut, is fitted over said bearing, resting upon the collar *b<sup>3</sup>* and being maintained in longitudinal position upon the bearing by a pin or set-screw, *c*, which enters the groove *b<sup>2</sup>*, while the nut B is free to turn within it.

A jaw or pawl, D, the thickness of which is about equal to that of the flattened portion of the stock A, and which is widened toward its free end, upon which a series of teeth or serrations is formed, is pivoted, by a pin or bolt, *d*, to lugs *c'*, formed upon the outer end of the ferrule C, its serrated edge and the angular recess of the fixed jaw *a* forming the faces between which the pipe to be turned is grasped.

A strap or guide, E, is secured to the body of the wrench, immediately above the cylindrical part, by a screw, *e*, which strap prevents the jaw D from turning with the nut B and also from falling outward from the body, space being allowed in the strap to permit a limited transverse motion of the jaw D within the strap E.

The outer edge of the jaw D is curved to correspond with the outline of the adjacent face of the wrench-body, so that the same space or opening will be maintained between the end of the toothed jaw and the body of the wrench in any position required for a desired diameter of pipe.

A spring, *d'*, may be applied to press the jaw



D away from the body of the wrench, except when the wrench is in use, in which case the spring is forced back by the operation of tightening the wrench upon the pipe.

5 The operation of the wrench is obvious upon inspection, the rotation of the nut on the thread of the stock traversing the ferrule and the pivoted jaw toward or from the fixed jaw as required.

10 The wrench contains but few parts, can be easily made and at comparatively small cost, and presents no points of liability to breakage or derangement when in use.

15 I am aware that pipe-wrenches having a fixed jaw and a movable jaw operated by a nut, and a connected clasp or slider, have been heretofore known, and do not, therefore, broadly claim such combination.

20 I claim as my invention and desire to secure by Letters Patent—

1. The combination, in a pipe-wrench, of a stock having a continuous thread and a fixed jaw upon one of its ends, a sleeve-nut engaging the thread of the stock and having a cylin-

25 drical bearing formed on one of its ends, a ferrule fitting freely around, having its entire bearing on and held in position longitudinally upon said cylindrical bearing by a pin or set-screw, and a movable jaw pivoted to said ferrule, these members being combined for joint 30 operation, substantially as set forth.

2. The combination, in a pipe-wrench, of a stock or body having a fixed jaw upon one end, a toothed jaw or pawl pivoted to a ferrule, which is movable toward and from the fixed 35 jaw by a nut fitted to a continuous thread upon the stock, said ferrule having its entire bearing upon a cylindrical bearing on the nut, and a strap or guide secured to or forming part of the stock between the fixed jaw and the thread, 40 these members being combined for joint operation to prevent the turning and regulate the transverse movement of the movable jaw, substantially as set forth.

JNO. EVERDING.

Witnesses:

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D. T. JENKS.