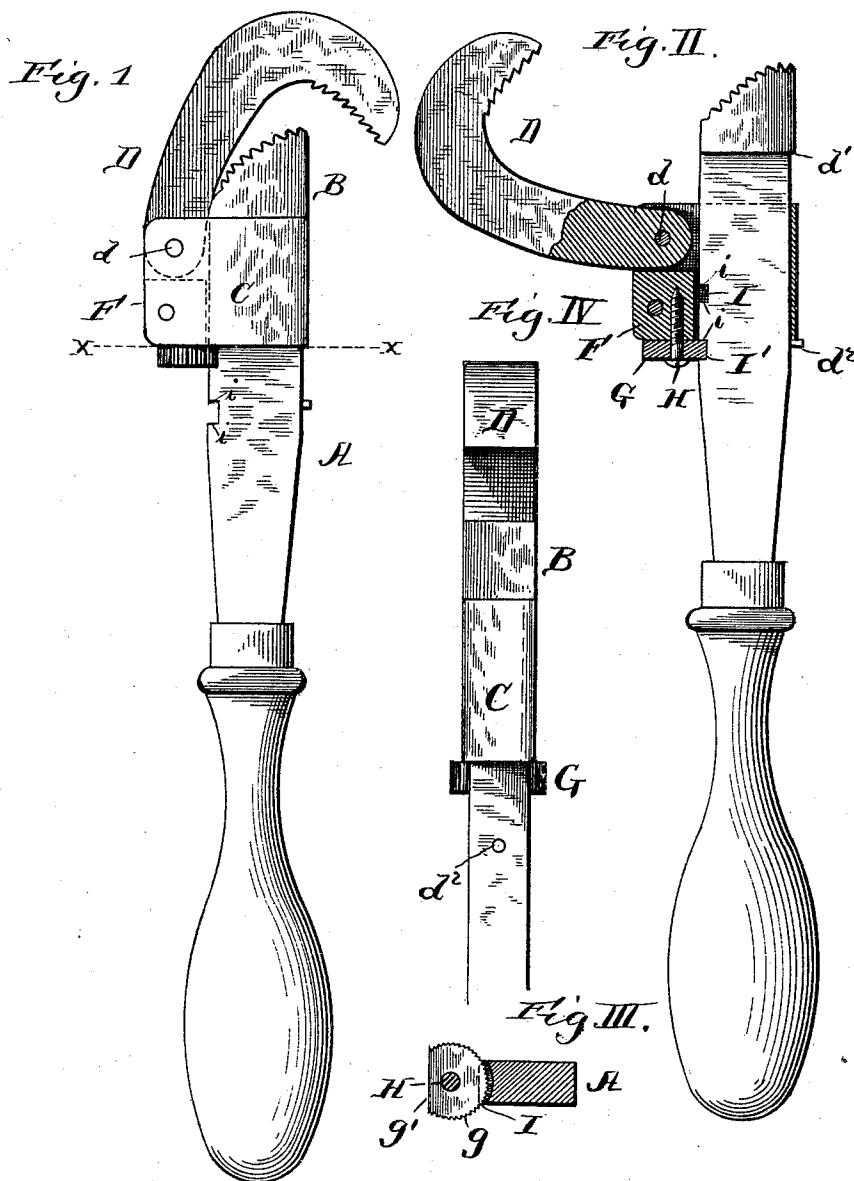


(No Model.)

E. COOK.  
PIPE WRENCH.

No. 461,894.

Patented Oct. 27, 1891.



Witnesses:  
*J. B. McGinnis*  
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# UNITED STATES PATENT OFFICE.

EVERETT COOK, OF AUBURN, MAINE.

## PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 461,894, dated October 27, 1891.

Application filed February 28, 1891. Serial No. 383,209. (No model.)

*To all whom it may concern:*

Be it known that I, EVERETT COOK, a citizen of the United States, residing at Auburn, in the county of Androscoggin and State of Maine, have invented certain new and useful Improvements in Pipe-Wrenches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in that class of pipe-wrenches having a pivoted adjustable jaw for which Letters Patent of the United States No. 420,039 were granted to me January 28, 1890; and the object of the present invention is to provide improved means for positively locking the movable jaw of a wrench to hold it firmly in position at all times as against vertical displacement, and also permit the pivoted jaws to swing freely back and forth, whereby the movable pivoted jaw may be adjusted vertically and secured in such position that it can readily adjust itself to pipes or rods of different diameters.

With these ends in view my invention consists of a rigid jaw made integral with the shank of the wrench, a saddle arranged to slide on the shank, a movable jaw pivoted in the rear end of the saddle, and a detent or locking-plate pivoted independently of the movable jaw and on a block secured in the saddle beneath the pivot of the movable jaw, said locking device being arranged to enter suitable grooves in the shank of the rigid jaw to lock the movable jaw. The detent has one side curved concentric with its pivotal point and the other side thereof is cut away to align with the pivot-block of the saddle, so that the pivoted jaw and saddle-piece can be easily moved up and down on the shank and secured in place by simply turning the detent, so that the curved edge will enter one of the grooves in the shank.

To enable others to more clearly understand my invention, I have illustrated the same in the accompanying drawings, in which—

Figure I is a side elevation of my improved pipe-wrench. Fig. II is a side elevation showing the saddle-piece partly broken away. Fig. III is a transverse sectional view on *xx* of Fig. I and having locking-plate in position in one of the grooves in the shank. Fig. IV

is a front elevation of my improved wrench without the handle.

Referring to the drawings, in which like letters of reference denote corresponding parts in all the figures, A designates the shank of my improved wrench, and B is the rigid jaw, which is made in the usual manner, with its working face serrated or toothed, the shank A being recessed on the front and sides to form a guide for the saddle C. The saddle C is struck up from a flat piece of metal, bent to fit snugly in the shank A, and its rear edges project somewhat in rear of the shank to receive the movable jaw D, which is pivoted therein at *d*. The saddle C is arranged to slide vertically on the shank, and its upward movement is limited by the shoulder *d'* and its downward movement may be limited by a corresponding shoulder *d''* or a pin or other projection *e* on the shank. These shoulders or projections limit the vertical movement of the saddle-piece and serve to partially regulate the space or opening of the jaws of the wrench. Pivoted in the upper part of the saddle in rear of the shank, on a suitable pin *d*, is the movable jaw D, which is arranged to operate easily and effectively and has its end bent and serrated, substantially as shown. This movable jaw is raised or lowered by sliding the saddle on the shank, and it is so arranged and proportioned that it will work clear of the rigid jaw when at its lowest point. Secured in the lower portion of the saddle, in rear of the shank and beneath the pivotal point of the movable jaw, is a small pivot-block F, which is secured rigidly between the sides of the saddle and arranged to slide with the saddle on the shank. Pivotaly secured on the lower side of this fixed pivot-block is a detent or locking-plate G, which is arranged to turn easily and freely on its vertical pivot-pin H. This detent has one of its sides *g* curved concentric with its pivot and the other side *g'* thereof is cut away to align with the vertical straight edge of the pivot-block F, so that when the straight edge *g'* is turned toward the shank the saddle-piece and movable jaw may slide up and down freely. In order to lock the saddle and the movable jaw against vertical displacement, I provide suitable grooves *I I'* in the rear face of the shank, spaced at proper dis-

tances from the other, and these grooves are curved inward, so that the middle portion of each groove penetrates the shank much deeper than the ends of the grooves, the upper and lower sides *i i* of the grooves being parallel. The lowest of these grooves is arranged just below the lower edge of the saddle when the latter is at its lowest position and the upper groove is arranged beneath the bottom edge of the saddle-piece when at its highest position, and thus the detent or locking-plate *G* may be readily turned so that its curved side *g* will enter one of the grooves and lock the saddle and pivoted jaw.

15 The operation of the detent is very simple. When it is desired to increase the space or opening between the jaws of the wrench, the saddle-piece is raised and the detent given a half-turn, so as to cause the curved side *g* to enter and fit snugly in one of the grooves and hold the wrench fast. When it is desired to decrease the side of the opening between the jaws, the detent is turned until the straight side *g'* is brought to face the shank and align with the vertical edge of the pivot-block, and then the saddle is lowered and the detent locked, as before. I have found this construction and arrangement of parts to answer all practical purposes of my invention; but I would have it understood that I do not confine myself to the exact form and proportion of parts shown and described, but reserve the right to make such changes as fall within the scope of my invention.

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

1. A wrench consisting of a shank provided with a stationary jaw, the inwardly-curved transverse grooves, a movable jaw connected

with the stationary jaw, and a pivoted detent arranged to engage with the inwardly-curved transverse groove to lock the movable jaw, substantially as described.

2. In a wrench, the combination of a shank provided with inwardly-curved transverse grooves and a rigid jaw, a saddle fitted on the shank, a movable jaw pivoted in the saddle, and a detent or locking-plate independently pivoted in the saddle-piece and arranged to fit in the inwardly-curved transverse grooves to lock the wrench, substantially as described.

3. In a wrench, the combination of a shank having a rigid jaw and transverse grooves, a saddle embracing the shank and adapted to slide vertically in a recessed portion thereof, a movable jaw pivoted in the projecting free ends of the saddle-piece, and a detent or locking-piece independently pivoted in the saddle and having one of its sides arranged to fit into the grooves to lock the wrench, substantially as described.

4. In a wrench, the shank provided with transverse grooves and rigid jaw, a saddle embracing the shank and movable vertically thereon, a movable jaw pivoted in the saddle, a pivot-block fixed in the saddle, and a detent or locking-plate pivoted in the fixed block and having one side curved concentric with its pivot and its other side cut away to align with the pivot-block, said detent being arranged to enter the transverse grooves in the shank, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

EVERETT COOK.

Witnesses:  
GEO. H. BROWN,  
H. C. DAY.