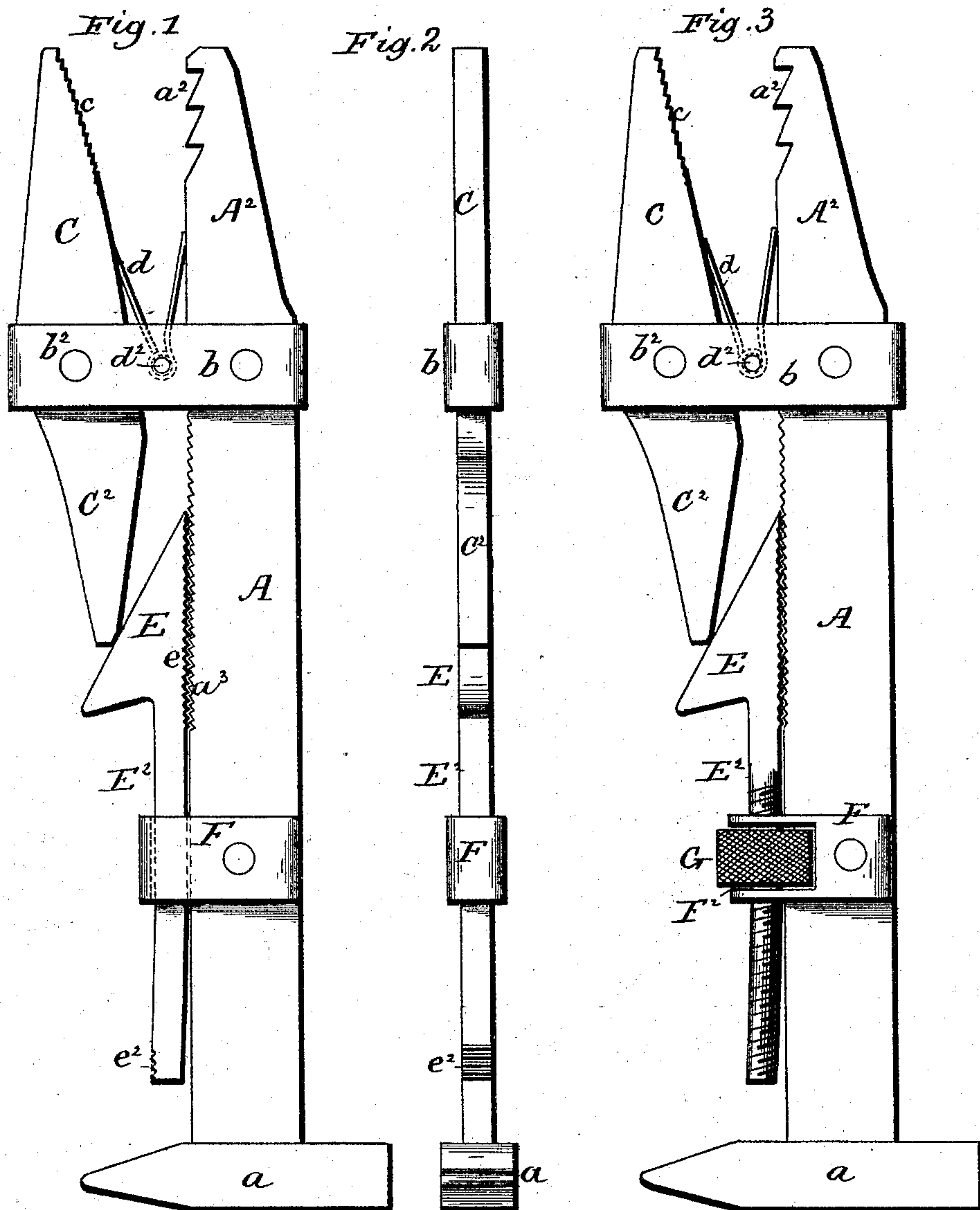


(No Model.)

S. B. RITTENHOUSE.  
PIPE WRENCH.

No. 492,435.

Patented Feb. 28, 1893.



Witnesses:

*A. B. Degger*  
*R. A. Hoyer.*

Inventor:

*Silas B. Rittenhouse,*  
*by E. E. Masson*  
*attly.*

# UNITED STATES PATENT OFFICE.

SILAS B. RITTENHOUSE, OF LIBERTY MILLS, INDIANA.

## PIPE-WRENCH.

SPECIFICATION forming part of Letters Patent No. 492,435, dated February 28, 1893.

Application filed July 6, 1892. Serial No. 439,094. (No model.)

*To all whom it may concern:*

Be it known that I, SILAS B. RITTENHOUSE, a citizen of the United States, residing at Liberty Mills, in the county of Wabash, State of Indiana, have invented certain new and useful Improvements in Pipe-Wrenches, of which the following is a specification, reference being had therein to the accompanying drawings.

The objects of my improvement are to produce a pipe wrench of simple and inexpensive construction and adapted to be quickly operated to grasp pipes of any size. I attain these objects by the construction illustrated in the accompanying drawings, in which:—

Figure 1 is a front view of a pipe wrench constructed in accordance with my invention. Fig. 2 is a side view of the same. Fig. 3 is a front view showing a modification of the same.

In said drawings A, represents the handle that constitutes also, at one end thereof the jaw A<sup>2</sup> of the wrench that is provided with ratchet teeth a<sup>2</sup>. The opposite end of the handle is provided with a hammer head a to increase the uses for which the wrench may be employed.

To the handle A adjacent to its jaw end is secured a flat looped strap b that projects a sufficient distance in front of the jaw A<sup>2</sup> to receive a jaw C that is pivoted to said strap at b<sup>2</sup>. The upper end of the jaw C has serrations c and is kept normally away from the jaw A<sup>2</sup> by means of a wire spring d that has its middle portion coiled upon a pin d<sup>2</sup> passing through the strap b, one of the ends of the spring bearing against the jaw C and the other end against the jaw A<sup>2</sup>.

To bring the jaw C toward the jaw A<sup>2</sup> to grasp a pipe or rod of small diameter, the jaw C has a stem C<sup>2</sup> extended under the strap b; and between said stem and the handle A, there is placed a wedge E, provided with a tail E<sup>2</sup> that is retained connected with the handle A, by means of a strap F secured to said handle. One side of the wedge E is parallel with the side of the handle and is provided with fine ratchet teeth e to interlock with similarly fine ratchet teeth a<sup>3</sup> on said side of the handle. The opposite side of the wedge forms an acute angle with the teeth-provided side and is intended to force the stem C<sup>2</sup> of the jaw C away from the handle, and consequently its upper part or jaw C to-

ward the jaw A<sup>2</sup>, when the operator pushes the wedge endwise toward the strap b. The teeth e of said wedge come then into engagement with the teeth a<sup>3</sup> and prevent the jaws C and A<sup>2</sup> from opening wider apart when forced into engagement with a pipe or rod. But to facilitate the release of the wedge under a simple pressure of the tail end of the wedge toward the handle A, said tail is slightly curved outwardly away from said handle, and has its lower portion serrated at e<sup>2</sup> to increase its frictional contact with the hand of the operator. Said side pressure will permit the wedge to be easily moved backward by the operator's thumb while handling the wrench.

In the modification shown in Fig. 3 the wedge is arranged to be moved not so directly, and consequently by slower means, but said means permit a slightly closer adjustment of the opening between the jaws. In said figure the tail of the wedge is made cylindrical and although it is slightly bent to one side to facilitate the disconnection of the teeth e from the teeth a<sup>3</sup>, it is screw threaded and is made to pass through a hand-nut G that is received somewhat loosely in a slot F<sup>2</sup> formed in the side of the strap F and in the side of the handle.

Having now fully described my invention, I claim—

1. In combination with a handle having serrations and a jaw formed thereon and a strap b rigidly secured thereto, the jaw C pivoted to said strap, a secondary strap F rigidly attached to the handle, a wedge provided with serrations on one side and a tail guided through the strap F and alongside of the handle substantially as described.

2. In combination with a handle having a jaw formed thereon and a strap b rigidly secured thereto, the jaw C pivoted to said strap, a spring pivoted to said strap b and having its ends between and bearing against the two jaws, and a wedge having one end of its sides parallel with the handle and the other side diverging therefrom with a tail guided alongside of the handle substantially as described.

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

SILAS B. RITTENHOUSE.

Witnesses:

JOHN F. EICHHOLTZ,  
JACOB HARTER.