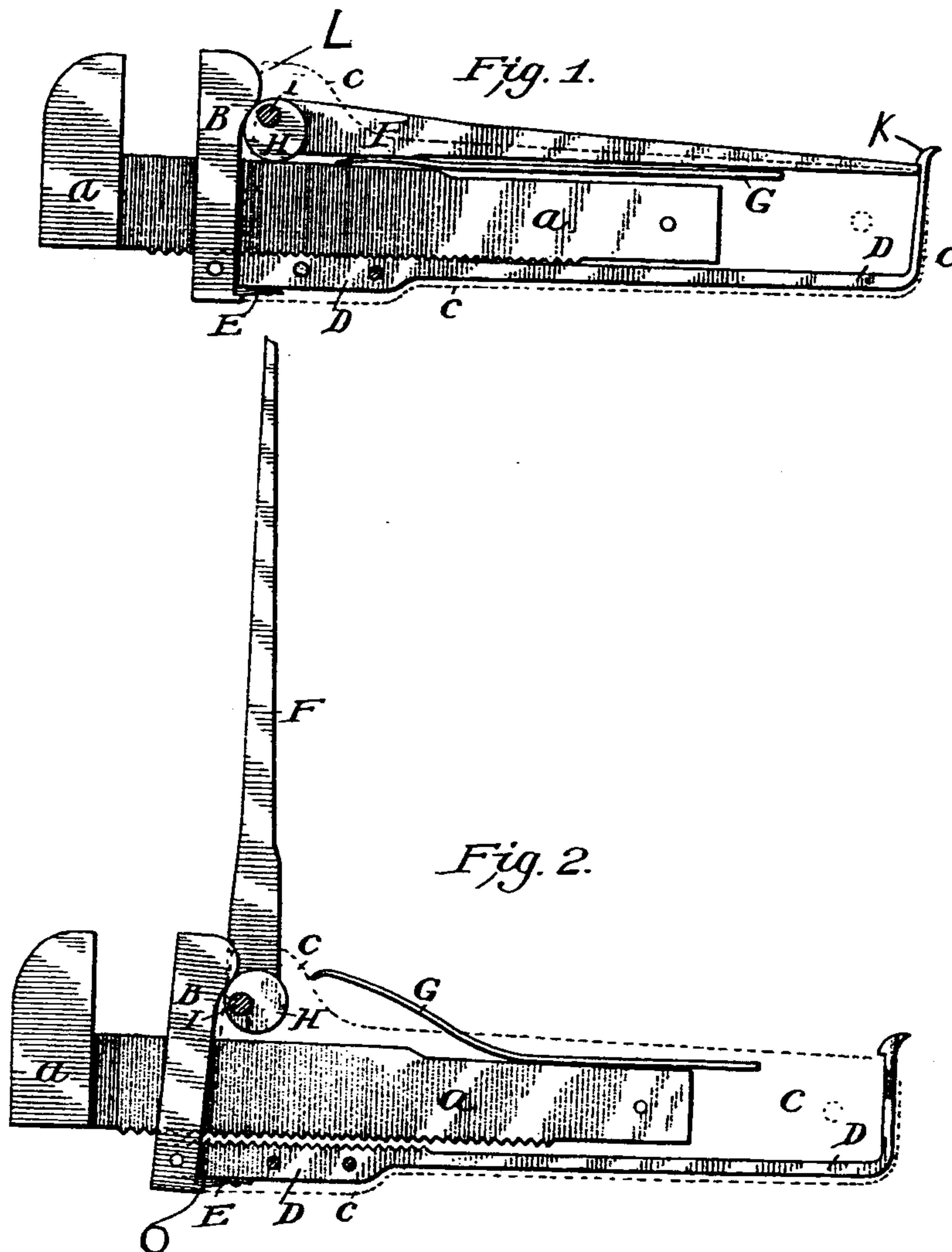


(No Model.)

E. L. KEITH.
LOCK JAW WRENCH.

No. 567,945.

Patented Sept. 15, 1896.



Witnesses.
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ELMER L. KEITH, OF MOUNT VERNON, IOWA.

LOCK-JAW WRENCH.

SPECIFICATION forming part of Letters Patent No. 567,945, dated September 15, 1896.

Application filed October 14, 1895. Serial No. 565,690. (No model.)

To all whom it may concern:

Be it known that I, ELMER L. KEITH, a citizen of the United States, residing at Mount Vernon, in the county of Linn, State of Iowa, have invented a new and useful Wrench, of which the following is a specification.

My invention relates to improvements in wrenches in which a toothed or notched bar carrying the head of the wrench operates in a hollow handle in conjunction with an oscillating rear jaw controlled by a cam-lever; and the objects of my invention are, first, to provide instantaneous adjustment; second, a firm grip on the nut or object to be operated upon, and, third, to lock the wrench to the nut when it is desirable to do so. I attain these objects by the mechanism illustrated by the accompanying drawings, in which—

Figure 1 is a side elevation showing the wrench closed as it appears when grasping an object, and Fig. 2 is a side elevation showing the wrench open ready to be adjusted to the object.

Similar letters refer to similar parts throughout both the views.

The plates C C constitute the framework of the structure and form the sides of a hollow box or handle in which the working parts operate. Between the upper edges and near the front end of this handle is pivoted a cam-lever F, which when closed forces and holds the sliding bar A in engagement with the notched spring or back D and also forces the jaw B forward upon the nut or object and holds them in position by the engagement of the tail end of the lever with the upturned and hooked end K of the back D. When the lever is released, it is thrown open by the spring G, and being eccentrically hung on its pivot when it begins to open the circular head recedes from the jaw B and raises from the bar A, thus allowing the jaw B to recede from the nut and the bar A to disengage from its counterpart D and slide into or out of the handle for proper adjustment. The bar A, carrying the head or outer jaw of wrench, is made in one piece similar to other wrenches and is provided with V-shaped notches on its lower edge, which engage with corresponding notches in the back D and serve to hold the head firmly in place when operating on the nut, and being loosely fitted through jaw B

and between plates C C slides easily in or out by its own weight, thus making it easily and quickly adjustable to any-sized nut or object for which it is intended.

The jaw B is made with a mortise through to allow the easy play of the bar A, and has an elliptical lug L on the upper end projecting from its rear side and coöperating with lever F and a projecting lug O on the lower end projecting to the rear and coöperating with spring E.

The back D is riveted in between the lower edge of plates C C and turns up at its rear end and forms a hook K to hold the lever down when closed, its front end being grooved to conform to the notches or teeth in bar A and serving to hold bar A, as before described.

I am aware that there are wrenches in use having notched bars, sliding jaws, cam-levers, &c., but I am not aware that they have all been successfully combined in one wrench to make a perfect and valuable tool.

Therefore what I claim as my invention, and desire to secure by Letters Patent, is—

1. In a wrench the combination of the hollow handle consisting of two side plates C C and the back D, having serrations on its upper edge and the hook K, of the jaw B, secured to said handle, the sliding jaw A and its shank a, said shank being serrated on its lower edge, the cam-lever F pivoted between said side plates and adapted to oscillate jaw B, and force the serrations of the bar A, into engagement with the serrations of the back D, and to engage with its outer end with the hook K, and spring E tending to swing the jaw B rearwardly, substantially as described.

2. In a wrench the combination of the oscillating jaw B having mortise therethrough and elliptically-shaped lug L, projecting rearwardly from its top end and a rearwardly-projecting lip or lug O, at its lower end, with the fixed jaw having its shank passing through said mortise, the hollow handle receiving said shank and having the back D, to which is secured the oscillating jaw, the lever F, secured to said handle and adapted to engage the elliptically-shaped lug on the oscillating jaw B, and to force the shank a into engagement with the piece D, and spring E

acting on said lug on the lower end of jaw B, substantially as described.

3. In a wrench the combination of a hollow handle having the lever F pivoted in its upper front end, the spring G, riveted or held in place near its upper edge and the back D, riveted in its lower edge and provided with an upwardly-turned and hooked end K, of the swinging jaw B, pivoted to the handle and provided with the lugs L, and O, the jaw A, having the shank *a*, provided with V-shaped teeth on its lower edge and passing through jaw B, and into the hollow handle, the lever F pivoted in the handle and hav-

ing a cam-head adapted to engage lug L, and swinging jaw B, and move shank *a* into engagement with back D, the rear end of said lever being adapted to engage with the hook K, when the jaws are in use, and to be raised by spring G, when released from said hook, and the spring E, secured to hollow handle and engaging lug O, to swing the jaw B rearwardly, substantially as described.

ELMER L. KEITH.

Witnesses:

JOHN E. KYLE,
MINARD LOZIER.