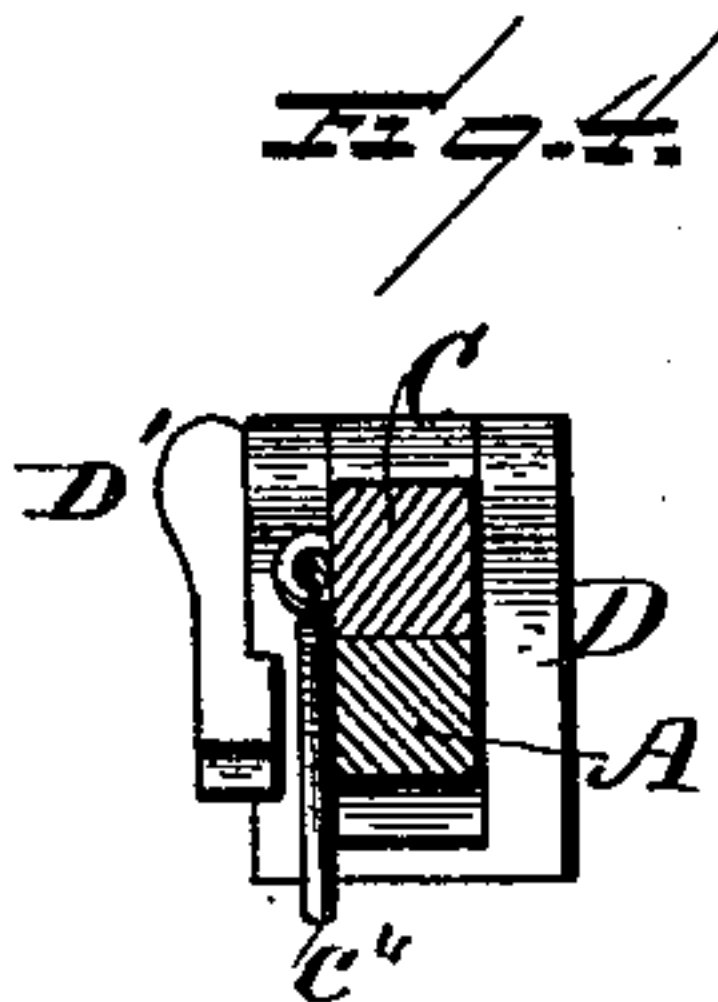
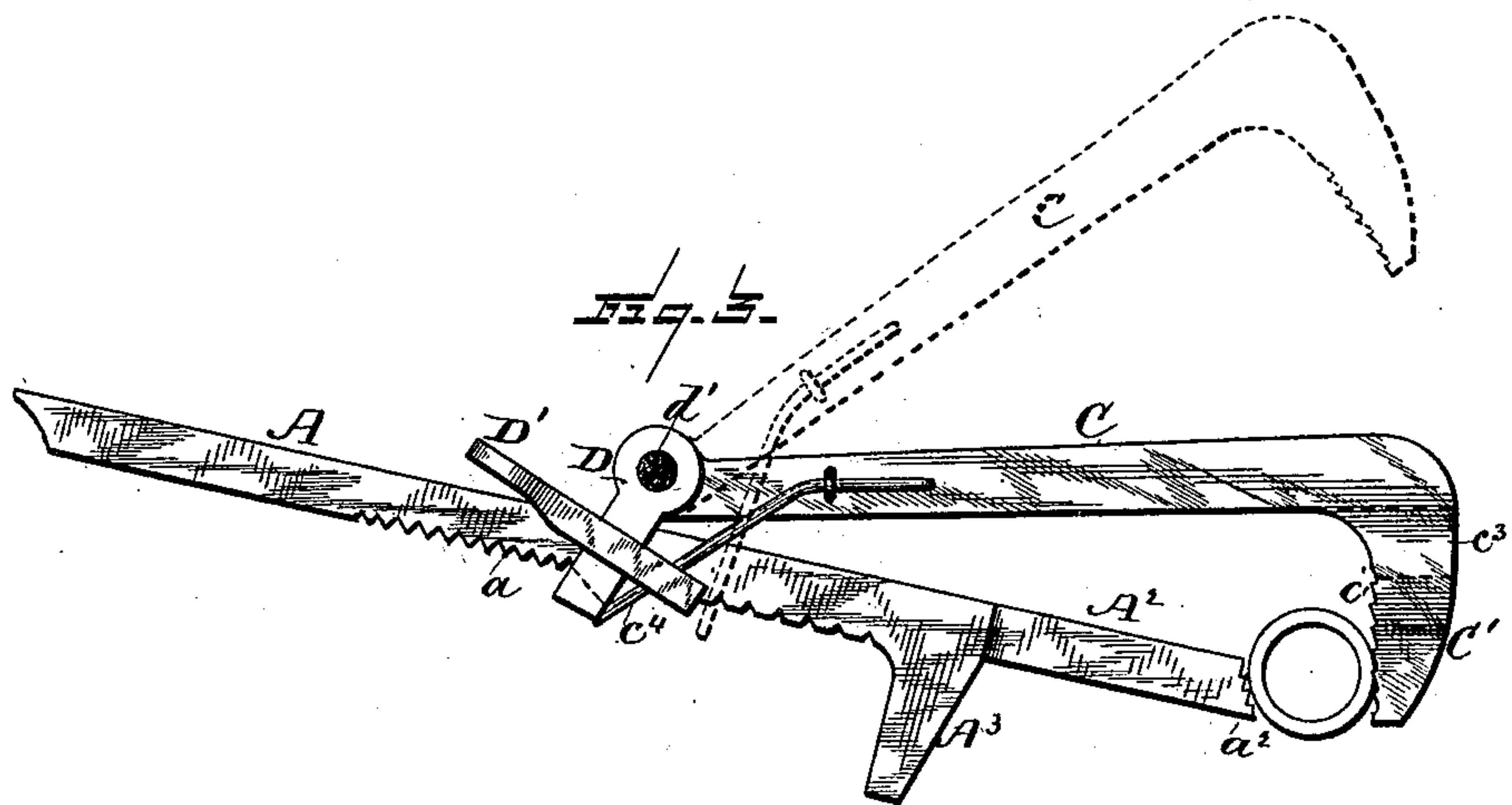
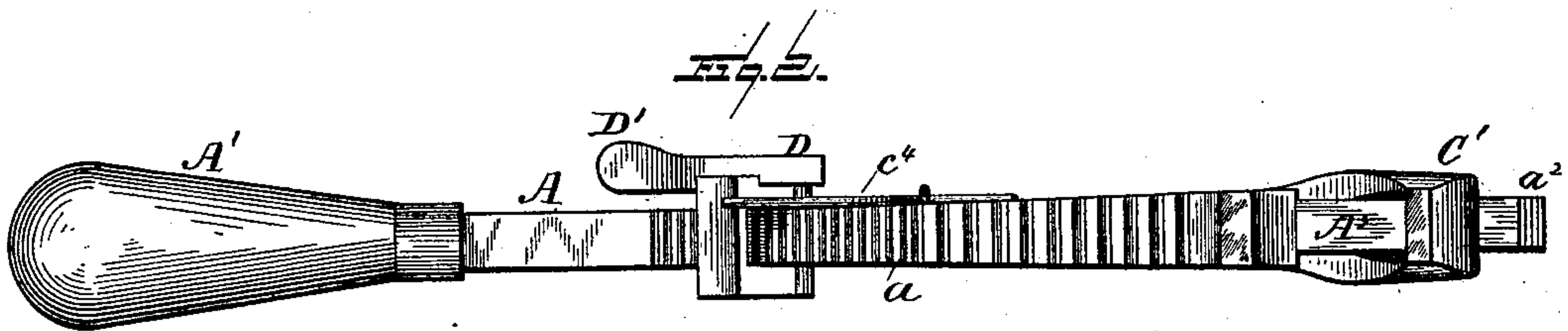
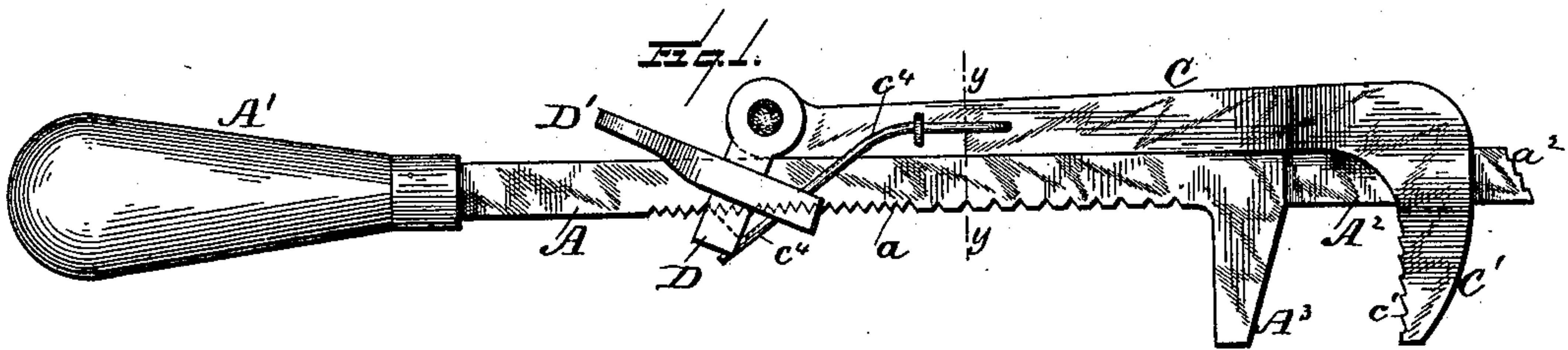


(No Model.)

A. A. COON.
WRENCH.

No. 366,648.

Patented July 19, 1887.



Witnesses:

E. Murdeman,
J. J. Masson

Inventor:

Albert A. Coon
by E.E. Masson
att'y.

UNITED STATES PATENT OFFICE.

ALBERT A. COON, OF HUTSONVILLE, ILLINOIS.

WRENCH.

SPECIFICATION forming part of Letters Patent No. 366,648, dated July 19, 1887.

Application filed April 16, 1887. Serial No. 235,029. (No model.)

To all whom it may concern:

Be it known that I, ALBERT A. COON, a citizen of the United States, residing at Hutsonville, in the county of Crawford, State of Illinois, have invented certain new and useful Improvements in Wrenches, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates especially to an improvement upon the patent granted to me, No. 352,518, dated November 16, 1886, wherein is described a wrench consisting of a lever provided with notches along one side, a hinged jaw and clevis, with a thumb-lever pivoted to the hinged jaw and provided with a notch to engage with the clevis and lock, the same into engagement with the notches of the lever-bar.

The present improvement consists, essentially, in combining the hinged jaw and clevis with a spring connecting them, to lock the clevis into engagement with the notches of the handle.

In the accompanying drawings, Figure 1 is a side view of the tool constructed in accordance with my invention; Fig. 2, a bottom view of the same. Fig. 3 represents the same in use as a pipe-wrench or as a bolt-holder; Fig. 4, a transverse section on line *yy* of Fig. 1 through the handle and movable jaw, with the clevis and thumb-lever in elevation.

In the drawings, A represents a lever-bar provided with a handle, A', at one end, while the opposite end, A², is made of hardened steel and has transverse serrations or teeth *a*² to engage with pieces of tubing, cylindrical surfaces, or bolts, to rotate them or prevent their rotation, if required. Adjacent to the end A² the lever-bar is provided with a stationary jaw, A³, made integral therewith and having its outer face at an obtuse angle to the adjacent side of the end A², to operate more effectively as a pipe-wrench, and equally so as a nut-wrench. Between the jaws A² and the handle A' the lever-bar is provided with a series of notches, *a*, to receive into engagement the acute inner edge of a clevis, D, that embraces the lever-bar, and is pivoted at *d'* to the movable jaw C. A spring, C^t, secured to one side of the movable jaw, has its free end bearing against the free end of the clevis, and holds it with sufficient security to prevent the accidental displacement of the edge of said

clevis from the notches *a*, and a thumb-lever, D', secured to the side of the clevis, projects backwardly therefrom within convenient reach of the thumb of the operator. The outer end, C', of the movable jaw C is substantially at right angles to the length thereof. It is made of steel and provided with acute teeth *c'*, for use as a pipe-holder. The end C' of the movable jaw has a perforation, C³, alongside of its body for the passage of the end A³ of the lever-bar when the device is to be used either as a nut-wrench or as a pipe-wrench, as shown in Figs. 1 and 2.

When the device is to be used as a pipe-wrench, as in Fig. 3, the end A² is withdrawn from the perforation C³, and the serrated end *a*² made to bear against the side of the pipe, rod, or bolt, while the other side thereof is supported by the serrated end C' of the movable jaw. The device can also be used as a bolt-holder when the parts are as shown by dotted lines in Fig. 3.

In operation, when the thumb-lever D' is depressed until the sides of the clevis are at right angles with the lever-bar, the latter becomes unlocked and is free to be moved through said clevis; and upon removing the pressure from the thumb-lever the clevis will engage with the notches *a* at any required point along the handle. As the thumb-lever extends beyond the front of the clevis, it protects the spring and prevents its displacement.

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

1. In a wrench, the combination of a lever-bar provided with notches along one side, a sliding jaw, a clevis hinged to the sliding jaw, and a spring to retain the clevis and sliding jaw and to hold the former in contact with the notches of the lever-bar, substantially as described.

2. In a wrench, the combination of a lever-bar, A, provided with notches along one side, a sliding jaw, C, a clevis, D, thumb-lever D' upon said clevis, and a spring, C^t, secured to the movable jaw and bearing against the clevis, substantially as described.

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

ALBERT A. COON.

Witnesses:

J. M. McNUTT,
J. M. HENDY.