P. CAMPBELL.
Combined Tool.

No. 207,500. Patented Aug. 27, 1878.

Fig. 1.

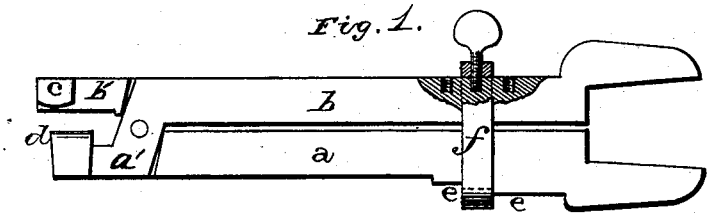
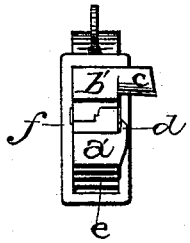


Fig. 2.



WITNESSES.
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per
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UNITED STATES PATENT OFFICE.

PETER CAMPBELL, OF CARROLLTON, PENNSYLVANIA.

IMPROVEMENT IN COMBINED TOOLS.

Specification forming part of Letters Patent No. **207,500**, dated August 27, 1878; application filed January 23, 1878.

To all whom it may concern:

Be it known that I, PETER CAMPBELL, of Carrollton, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Combined Wrench and Tool for Locking Nuts in Position upon the Bolts; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in a combined wrench and tool for locking nuts in position upon the bolts; and it consists in providing one end of the instrument with suitable devices whereby the nut can be locked firmly to the bolt, and the other end with adjustable jaws, which will serve as a wrench, as will be more fully described hereinafter.

The accompanying drawings represent my invention.

a b represent the handles of the instrument, which are pivoted together near one end, in the usual manner, and which have one of their ends shaped like tweezers, as shown.

The short end *a'* of the handle *a* projects a small distance farther out than the short end *b'* of the handle *b*, and is provided with the projection *c*, which has its inner surface rounded, as shown. This projection *c* catches against the side of the bolt, and serves as a brace while the surface of the bolt is being cut and twisted. The short end of the handle *a* is provided with the cutting-blade *d*, for cutting a groove in the edges of the thread, and then twisting the edges sidewise, so as to break the continuity of the thread, to prevent the nut from becoming unscrewed.

The opposite ends of the handles are shaped so as to form a wrench, as shown. Upon the handle *a* are formed a number of steps, *e*, and to the handle *b* is secured, by means of a set-screw, a rectangular loop, *f*, which can be adjusted to the shoulders *e*, thereby enabling the wrench to be applied to nuts of different sizes.

The operation of the nut-locking device is as follows: After the nut has been screwed to position by means of the wrench-shaped end, the jaws *a'* and *b'* are applied to the outer end of the bolt, the handles being in line therewith, so that the blade *d* shall rest upon the screw-thread in a line with the length of the bolt. A sharp twist and pressure are applied to the handles, which cause the blade to cut into the threads and twist them in such a manner as to break their continuity. The threads being thus broken, the nut cannot be unscrewed without the application of a wrench.

Having thus described my invention, I claim—

A combined tool for cutting the thread of the bolt and a wrench having one end formed into an adjustable wrench for tightening the nuts, and the other end made in the form of a pair of tweezers and provided with a cutting or bending blade, *d*, whereby the nut can be locked securely to the bolt, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 17th day of January, A. D. 1878.

PETER CAMPBELL.

Witnesses:
JAMES V. SCANLAN,
JOHN SNYDER.