

E. A. COOPER.

Wrenches.

No. 135,084.

Patented Jan. 21, 1873.

Fig. 1.

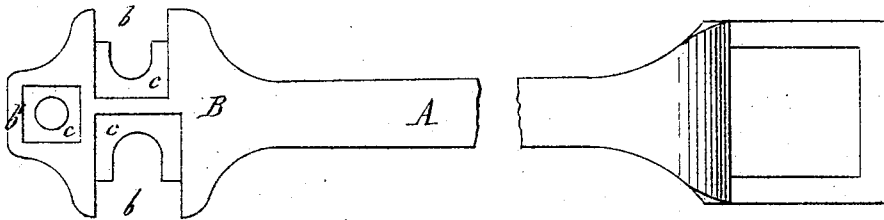


Fig. 2.

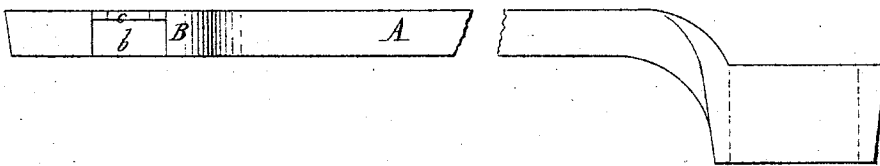
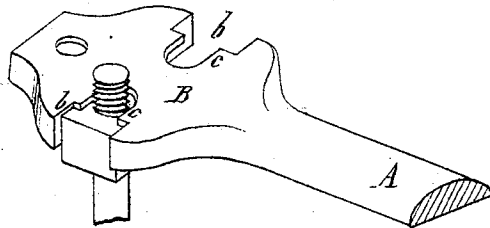


Fig. 3.



Geo. J. Lonnard  
Edward Wilhelm  
Witnesses

Edward A. Cooper, Inventor  
by Jay Hyatt  
Atty.

# UNITED STATES PATENT OFFICE.

EDWARD A. COOPER, OF LANCASTER, NEW YORK.

## IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. 135,084, dated January 21, 1873.

*To all whom it may concern:*

Be it known that I, EDWARD A. COOPER, of Lancaster, in the county of Erie and State of New York, have invented a certain Improvement in Wrenches, of which the following is a specification:

My invention relates to the ordinary inadjustable wrench provided with one or more notches or recesses of rectangular or other suitable shape, which are engaged with screw-nuts for turning the same.

In using this class of wrenches, more especially with carriage-bolts, great annoyance is experienced from the frequent disengagement of the wrench from the nut, occasioned by the wrench slipping past the nut in the direction of the bolt.

The object of my invention is to obviate this difficulty; and it consists of a wrench in which the notches or recesses which receive the nuts are provided with a lip or flange projecting inward from the edge of the notch or recess on one side of the wrench, so as to overlap the edge of the outer face of the nut when the wrench is applied thereto, and prevent the accidental displacement of the wrench.

In the accompanying drawing, Figure 1 is a plan view of my improved wrench. Fig. 2 is a side elevation thereof; and Fig. 3, a perspective view, showing the wrench applied to a screw-nut.

Like letters designate like parts in each of the figures.

A represents the body of a wrench for carriage-bolts, and B the head thereof, provided

with two rectangular notches, *b*, and a rectangular recess, *b'*, of various sizes. *c* is the flange or lip arranged to project inward from the edge of the notch, so as to contract the size of the recess on one side of the wrench or partially obstruct it, so as to prevent the passage of the nut, or slipping inward of the wrench past the nut, while sufficient space is left in the center of the recess for the projecting end of the bolt. This lip may project from all sides of the nut opening or recess, as shown at *b'*, or it may project as a lug or flange from one or two sides of the notch or recess sufficiently to overlap the nut, as represented at *b b*.

In applying my improved wrench to a screw-nut and slightly pressing inward the flange or lip *c* is kept in contact with the top of the nut and prevents the wrench from slipping past the same, thereby retaining the jaws of the notch in their proper position with reference to the nut and greatly facilitating the operation of turning the same.

I claim as my invention—

A wrench constructed with a flange or lip, *c*, arranged so as to partially obstruct on one side of the wrench the notch or recess which receives the nut and prevents the accidental displacement of the wrench, substantially as hereinbefore set forth.

EDWARD A. COOPER.

Witnesses:

JNO. J. BONNER,  
EDWARD WILHELM.