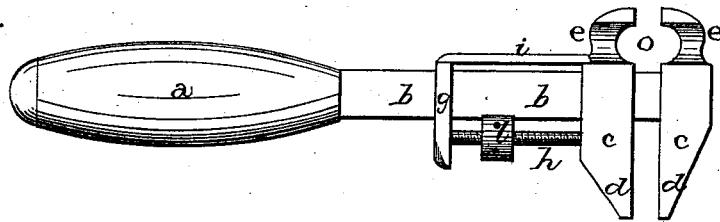


C. A. CORMAN.
Wrench.

No. 197,459.

Patented Nov. 27, 1877.



WITNESSES.

J. W. Garner.
Will. H. Kendall

INVENTOR.

C. A. Corman,
per
H. W. Lehmann,
Att'y

UNITED STATES PATENT OFFICE.

CHARLES A. CORMAN, OF COCHITUATE, MASSACHUSETTS.

IMPROVEMENT IN WRENCHES.

Specification forming part of Letters Patent No. **197,459**, dated November 27, 1877; application filed October 3, 1877.

To all whom it may concern:

Be it known that I, CHARLES A. CORMAN, of Cochituate, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Wrenches; 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 wrenches; and it consists in combining with the wrench a vise, in such a manner that one end of the jaws can be used for unscrewing nuts and bolts, and the other end as a vise, in which all kinds of small articles can be held with as much ease and a great deal more freedom, so far as turning the articles in all sorts of positions is concerned, as can be done in an ordinary vise, all of which will be more fully described hereinafter.

The accompanying drawings represent my invention.

a represents the handle, *b* the shank, and *c* the two jaws, the outer jaw being secured to the head of the shank, and the inner jaw sliding back and forth over the shank, in the usual manner. The longer ends *d* of the jaws are shaped in the usual manner, and form the ordinary wrench for unscrewing nuts and bolts of all kinds. The opposite or shorter ends *e* of the jaws are shaped like the jaws of a common vise; and as they fit accurately and snugly together, and have the enlarged opening *o* through their sides in the same manner as a vise, it is evident that the wrench can not only be used as a wrench, but also as a vise for all small articles.

As the wrench can be turned readily and easily in every direction, it is evident that a greater freedom and a larger and more extended use can be given to a vise of this kind than to one that is fastened to a bench or any other object.

The lower jaw is connected to the slide *g* by means of the screw *h* and brace *i*. As this brace and screw are placed upon opposite sides of the shank, it is evident that the jaw will be held in position so as to move evenly and smoothly back and forth upon the shank. The nut *l* is passed over the screw, and is held by a notch cut in the side of the shank, in the usual manner.

A wrench having a vise combined with it, as here shown and described, gives a much larger range of usefulness to the vise, and serves for so many different purposes that a vise will not be required except for large articles.

I am aware that wrenches have been made having jaws that project each side of the shank, and this I disclaim.

Having thus described my invention, I claim—

In a wrench, the combination of handle *a*, shank *b*, jaws *c*, having the groove *o* across their inner sides, slide *g*, screw *h*, nut *l*, and brace *i*, all the parts being constructed and arranged to operate substantially as shown.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 27th day of September, 1877.

C. A. CORMAN. [L. S.]

Witnesses:

WALTER F. SMITH,
JOHN B. YEAGER.