

W. STARKEY  
Vise.

No. 200,101.

Patented Feb. 5, 1878.

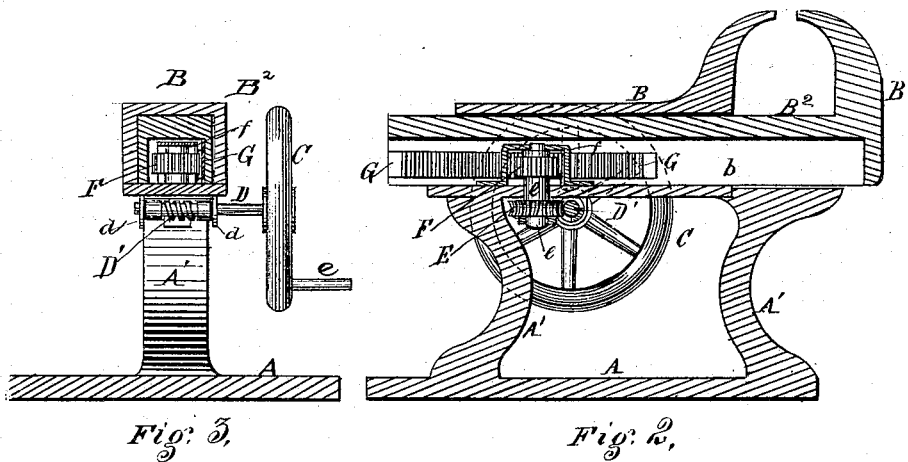
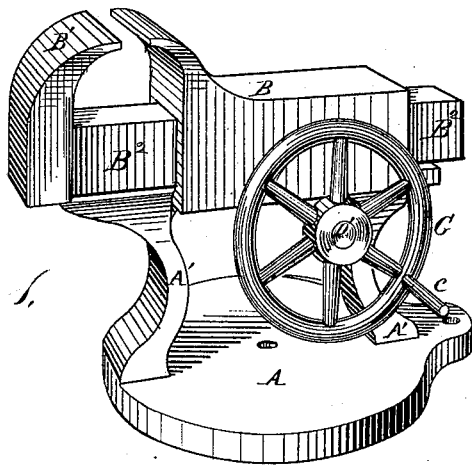


Fig. 1.



Witnesses  
Francis L. Clark  
Carin Butcher

Inventor William Starkey  
By Attorney John H. Stevenson

# UNITED STATES PATENT OFFICE.

WILLIAM STARKEY, OF PITTSBURG, PENNSYLVANIA, ASSIGNOR OF ONE-EIGHTH HIS RIGHT TO THOMAS GLAZE, OF SAME PLACE.

## IMPROVEMENT IN VISES.

Specification forming part of Letters Patent No. **200,101**, dated February 5, 1878; application filed December 20, 1877.

*To all whom it may concern:*

Be it known that I, WILLIAM STARKEY, of Pittsburg, Pennsylvania, have invented a new and useful Improvement in Vises, which improvement is fully set forth in the following specification, reference being had to the accompanying drawing.

Similar letters of reference indicate corresponding parts.

In the accompanying drawing, Figure 1 is a perspective view of my vise. Fig. 2 is a longitudinal section of the same, and Fig. 3 is a cross-sectional view.

A is the base of the vise. A' A' are standards to support the stationary jaw B. B<sup>1</sup> is the movable jaw, having the extension-slide B<sup>2</sup>. C is the power-wheel, and has a handle, c. D is a shaft, on which the wheel C is placed. D' is a worm-screw on the shaft D. E is a cog-wheel on the vertical shaft e, and at the upper end of this shaft is the cog-wheel F. f is a guard for the shaft e. This shaft has likewise a support at the bottom. G is a rack, extending along the inside of the jaw B<sup>1</sup> and its extension B<sup>2</sup>.

The jaw B has a square boxing lengthwise through the same, and in size is made to admit of free movement of the part B<sup>2</sup> of the jaw B<sup>1</sup>, which is also made square, and has a square slot, b, running the entire length of the same. Inside this slot I put the rack G. To the bottom of the jaw B is firmly journaled the shaft D by supports d d, and also the shaft e, and

to the latter is fixed the wheel E. This cog-wheel E is made to be operated by the screw D' on the shaft D. The guard of the shaft e is placed inside the part B<sup>2</sup>, and is also fixed to the jaw B. The wheel F is adjusted so as to operate the rack G backward and forward.

When thus constructed, the operation of my vise will be about as follows: The operator will take hold of the handle c and turn the wheel C. This turns the shaft D and screw thereon, D', and as this screw operates in the cogs of the wheel E a revolving motion laterally is given to it, and as it is fixed to the shaft e a similar revolution is given the cog-wheel F, and thus the jaw is made to move lengthwise forward or backward.

To make my vise more firm, I use two standards, A' A', as seen in Fig. 1.

The base A has holes for screws or bolts, to secure or fasten the same to benches, &c.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

In a vise, the combination of the wheel C, shaft D, wheel E, shaft e, wheel F, movable jaw B<sup>1</sup>, fixed jaw B, and rack G, substantially as described and shown, and for the purpose set forth.

WILLIAM STARKEY.

Witnesses:

SAMUEL SMITH,  
MARTIN CONNELLY.