E. Sprague,

Bench Vise.

No. 111,396. Patented Jan. 31. 1871.

Fig: 1.

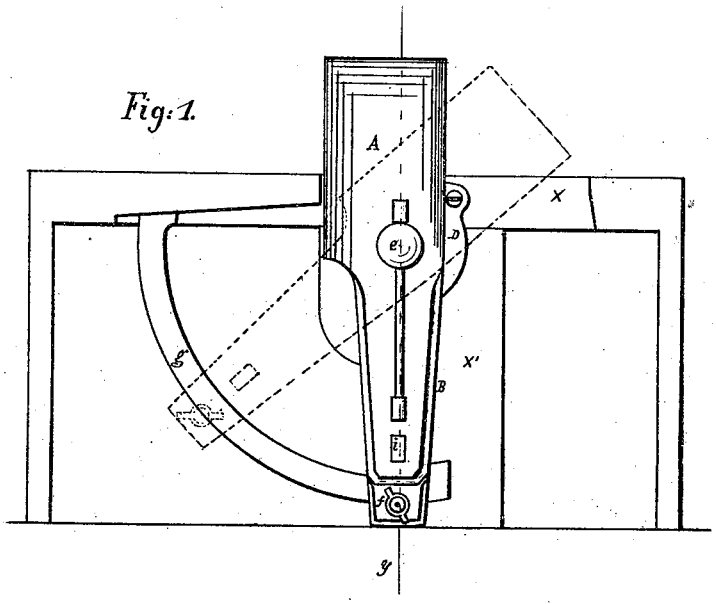
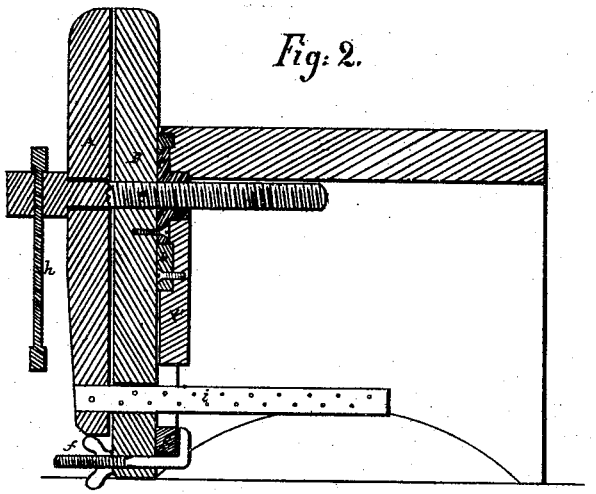


Fig: 2.



Witnesses.

James L. Johnston

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EDWIN SPRAGUE, OF ALLEGHENY, ASSIGNOR TO HIMSELF AND JOHN R. BLAKESLEE, OF BIRMINGHAM, PENNSYLVANIA.

Letters Patent No. 111,396, dated January 31, 1871.

IMPROVEMENT IN BENCH-VISES FOR WOOD-WORK.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, EDWIN SPRAGUE, of the city and county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Bench-Vises for Wood-Work, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

The nature of my invention consists in a bench-vise having the clamping-jaws pivoted to a support which may be secured to a bench or other place, the clamping-jaws and support being so arranged with relation to each other as to form a "high-and-low vise," the clamping-jaws of which may be set at any desired angle substantially as hereinafter described.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the accompanying drawing, which forms part of my specification—

Figure 1 is a side elevation of my improvement in bench-vises.

Figure 2 is a vertical section of the same, cut through at line *y* of fig. 1.

In the accompanying drawing—

x represents a bench or table, to which is attached a support, *x'*, into which is fitted the attachment-plate D, which is secured in support *x'* by means of screws or bolts.

In the attachment-plate D is fitted the flange of the nut C, which is secured to the clamping-jaw B by means of screws or bolts.

The flange of the nut C is fitted in the opening of the attachment-plate D so as to form a dovetail and pivot-joint, as shown in fig. 2.

The clamping-jaw A is operated by the screw *e*, which is of ordinary construction, and works in the nut C.

The screw *e* is turned and manipulated by means of the lever *h*.

The lower end of the clamping-jaw is held in the desired position with relation to the clamping-jaw B by means of the ordinary steady-bar *i*.

To the lower end of the support *x'*, and to the leaf or top of the bench *x*, is secured a sector, *g*, to which is fitted a tightening-screw, *f*, which is fitted in the lower end of the clamping-jaw B.

By means of this tightening-screw *f*, sector *g*, and pivoting the clamping-jaw B in the manner hereinbefore described, the vise can be set at any desired angle, and the vertical plane of the clamping-jaws can be arranged parallel to the horizontal plane of the leaf or top of the bench *x*, in which position the entire length of the clamping-jaws A and B may be used for griping or holding any article placed between them, the advantage of which will be apparent to carpenters, pattern-makers, cabinet-makers, and other wood-working mechanics.

By constructing a vise as hereinbefore described, a high-and-low vise is obtained, with the advantages of a narrow and broad grip of the jaws, and also the advantage of setting the clamping-jaws at any desired angle.

Having thus described the nature, construction, and operation of my improvement,

What I claim as of my invention is—

The clamping-jaw B, provided with a nut or box, C, attachment-plate D, and combined with the clamping-jaw A, and screw *e*, substantially as herein described.

EDWIN SPRAGUE.

Witnesses:

A. C. JOHNSTON,

JAMES J. JOHNSTON.