

J. M. POORE.

Bench-Vise.

No. 161,984.

Patented April 13, 1875.

Fig. 1.

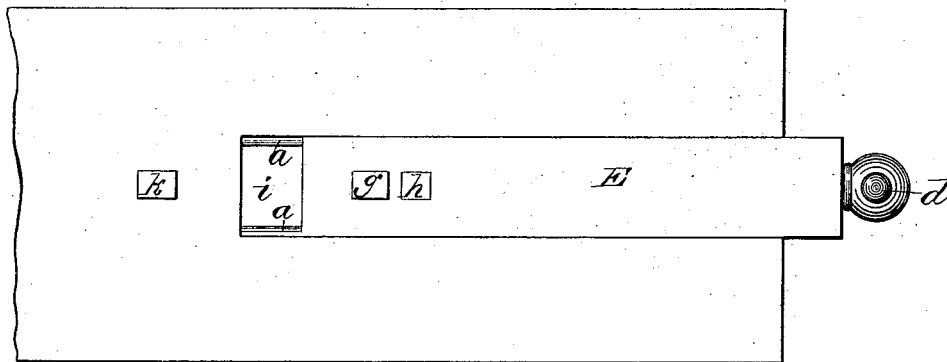


Fig. 2.

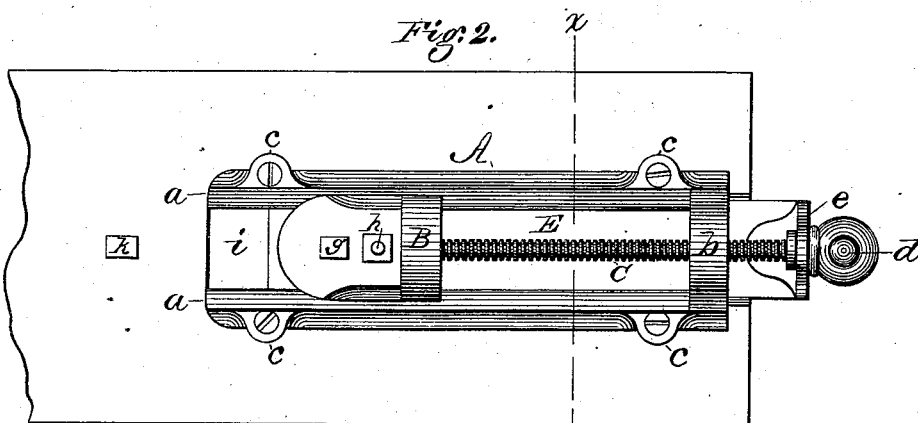


Fig. 3.

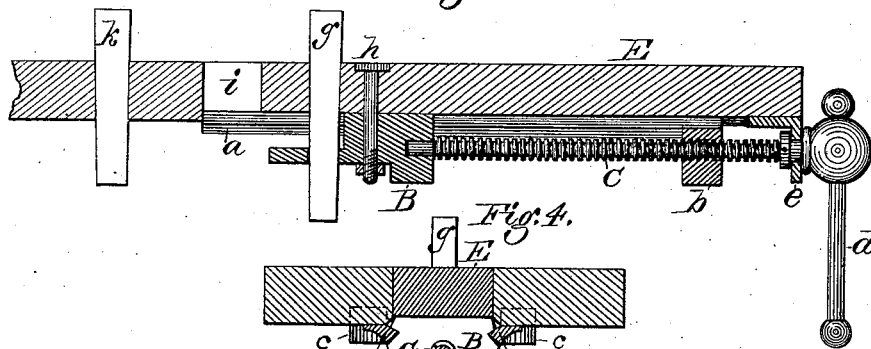
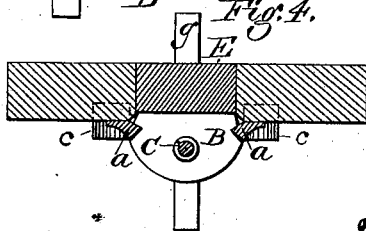


Fig. 4.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JAMES M. POORE, OF BURNETT, WISCONSIN.

## IMPROVEMENT IN BENCH-VISES.

Specification forming part of Letters Patent No. 161,984, dated April 13, 1875; application filed March 6, 1875.

*To all whom it may concern:*

Be it known that I, JAMES M. POORE, of Burnett, in the county of Dodge and State of Wisconsin, have invented certain Improvements in Bench-Vises, of which the following is a specification:

My invention consists in a metal frame containing a slide and a screw for moving the same, the device being adapted for application to carpenters' and joiners' benches for the purpose of clamping and holding blocks of wood, &c., on the face of the bench.

Figure 1 represents a top-plan view of a bench provided with my improvement; Fig. 2, a bottom-plan view of the same; Fig. 3, a longitudinal vertical section of the same; and Fig. 4, a transverse vertical section on the line *x x*.

A represents the frame of the device, consisting of two parallel arms or guides, *a*, connected at one end by a cross-piece, *b*, and provided on their outer edges with ears *c*, to receive fastening-screws. B represents a sliding block or plate, mounted between the arms *a*. C represents a screw, passing through a threaded hole in the cross-bar *b*, and bearing at its inner end in a seat or hole in the slide B, as shown in Figs. 2 and 3. The outer end of the screw is provided with a transverse rod or handle, *d*, by which to turn it, and with a plate, *e*, which is held from moving lengthwise of the screw, while at the same time the screw turns freely in it. Through the slide B I make two vertical holes, one to receive a wooden pin or key, *g*, and the other to receive a bolt or dog, *h*, as shown in Figs. 2 and 3.

In applying the device to a bench I first cut lengthwise through the top of the bench, at one end, a slot or opening, *i*, and mount therein a closely-fitting wooden slide, E, as shown in Figs. 1, 2, and 4. I then secure the frame A to the under side of the bench-top, below the slot or opening *i*, and screw the plate *e* fast to the outer end of the slide E, and also secure the slide E, by the vertical bolt *h*, to the metal slide B, as shown. When the screw is turned it is caused to move endwise through the bar *b*, and, by means of the slide B and

plate *e*, it moves the wooden slide E. In the wooden slide I mount a vertical pin or key, *g*, and in the face of the bench, in line with the key *g*, I mount a corresponding key, *k*, as shown in Figs. 1, 2, and 3, so that by placing the object to be held on the face of the bench between the two keys, and then turning the screw in the proper direction to move the slide E and its key inward, the object will be clamped tightly between the keys.

When the clamp is not required for use the keys are driven down flush with the surface of the bench, and the slide moved inward until it closes the opening or slot, after which the bench will present a smooth unbroken surface, as usual.

In order to enable my clamp to hold objects of various lengths, there may be a series of the pins or keys *k*, at proper distances apart, extending to the foot or rear end of the bench.

It is obvious that by swiveling the end of the screw in the slide B, so that it will move the same in both directions, the plate *e* may be dispensed with; but the arrangement shown is considered the better one.

The plate *e* may be arranged to fasten on the outer end of the wooden slide, or provided with a flange to fasten on the under side of the same, the latter being desirable when the slide is a thin one.

My clamp is cheap, simple, and durable, and, being applicable to all ordinary benches, it may be put on the market and sold as an article of trade.

By means of the clamp objects may be very quickly and firmly held on the face of the bench while being worked into shape or glued or otherwise secured together.

What I claim as my invention is—

The clamping device for work-benches, consisting of the frame A, slide B, and screw C, constructed and arranged to operate substantially as shown and described.

JAMES M. POORE.

Witnesses:

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