J. B. WARDWELL.

Adjustable Bench-Vises.

No. 144,934. Patented Nov. 25, 1873.

Fig. 1

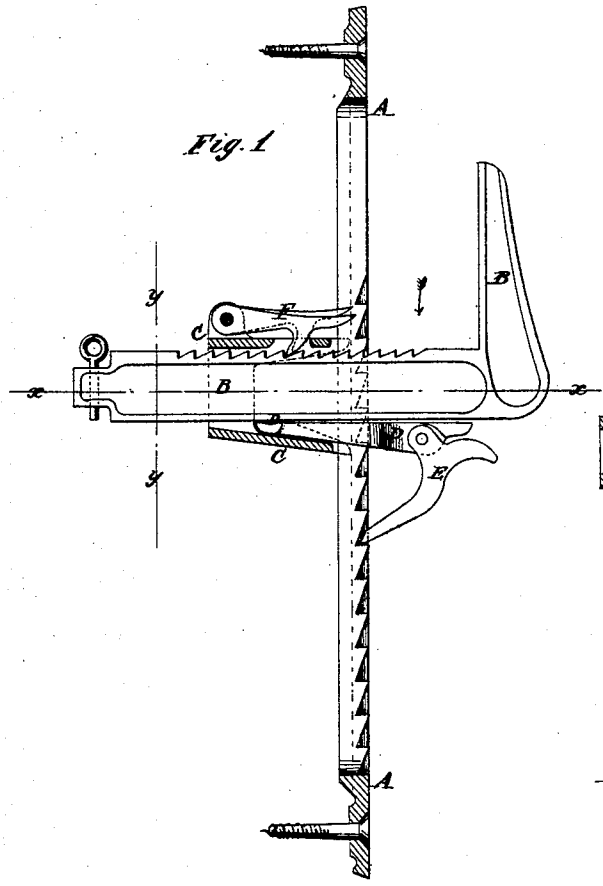


Fig. 2

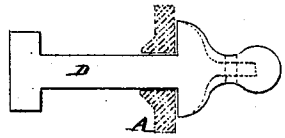


Fig. 3

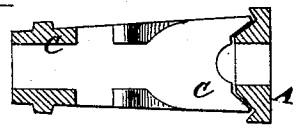
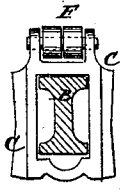


Fig. 4



WITNESSES:
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UNITED STATES PATENT OFFICE.

JEREMY B. WARDWELL, OF LAWRENCE, MASSACHUSETTS.

IMPROVEMENT IN ADJUSTABLE BENCH-VISES.

Specification forming part of Letters Patent No. **144,934**, dated November 25, 1873; application filed November 1, 1873.

To all whom it may concern:

Be it known that I, JEREMY B. WARDWELL, of Lawrence, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in Adjustable Bench-Vise, of which the following is a specification:

Figure 1 is a vertical longitudinal section of my improved bench-jack. Fig. 2 is a detail top view of the rest for the sliding jaw. Fig. 3 is a detail section of the frame or spider and ratchet-bar, taken through the line *x x*, Fig. 1. Fig. 4 is a detail cross-section of the sliding jaw, taken through the line *y y*, Fig. 1, and showing the inner end of the frame or spider.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved bench-jack for carpenters' and cabinet-makers' use, for holding boards while being jointed, and which shall be simple in construction and easily and quickly adjusted. The invention consists in the jaw, the frame or spider, the rest, the single pawl, and the double pawl, in combination with each other and with the stationary slotted and notched or toothed bar, as hereinafter fully described.

A is a bar, which is designed to be let into and secured to the forward side of the bench in a vertical position. The bar A is slotted longitudinally to receive the jaw, and has notches formed in its face upon the opposite sides of the said slot to receive the pawl, by which the jaw is supported when adjusted. B is the jaw, the shank of which projects at right angles, passes through the slot of the ratchet-bar A, and has ratchet-teeth formed upon its upper side, as shown in Fig. 1. The shank of the jaw B also passes through the frame or spider C, the forward end of which is so formed as to fit and slide upon ways formed upon the rear side of the ratchet-bar A. In the inner surface of the lower part of the frame or spider C is formed a transverse notch to receive the cross-head formed upon the rear end of the piece D, which passes through the slot in the ratchet-bar A, and has shoulders or a cross-head formed upon its forward part to rest against the forward side of the said ratchet-bar A. By this construction the shank of the jaw B holds the piece D in place in the frame or spider C, and the piece D forms a rest for the jaw B, and holds the frame or spider C in place upon the rear side of the ratchet-bar A. To the forward end of the piece D is pivoted a pawl, E, which is so formed that its own weight may hold its lower or engaging end against the notched forward side of the bar A. The pawl E thus supports the rest D, the frame or spider C, and the jaw B in any position into which they may be adjusted, the said parts all moving together. Upon the top of the inner end of the frame or spider C are formed lugs, to which are pivoted two hook-pawls, F, the hooks of which are set, the one a little in advance of the other, as shown in Fig. 1, the distance between the points of the said hooks being equal to about half the space occupied by one of the ratchet-teeth formed upon the upper side of the shank of the jaw B, to enable the jaw to be more accurately adjusted to the thickness of the board to be held. The forward ends of the pawls F project into the slot of the ratchet-bar A, so that they can be conveniently raised to allow the jaw B to be drawn outward.

In using the device, the ratchet-bar A is secured to the bench at a proper distance from the vise, and the jaw B is adjusted at the proper height to receive the board. The board is then arranged in place and the jaw B pushed in against the side of the said board.

If desired, two or more of the jacks may be attached to the bench at different distances from the vise, for long or short work; or two or more of the ratchet-bars A may be attached to the bench, and a single set of the smaller parts used, as they can be quickly shifted from one to another of said ratchet-bars.

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

The jaw B, frame or spider C, rest D, single pawl E, and double pawl F, in combination with each other and with the stationary slotted and notched or toothed bar A, substantially as herein shown and described.

JEREMY B. WARDWELL.

Witnesses:

M. BATCHELDER,

J. P. BRADSTREET.