G. M. RATHBUN.

WORK-BENCH.

No. 187,558. Patented Feb. 20, 1877.

Fig. 1.

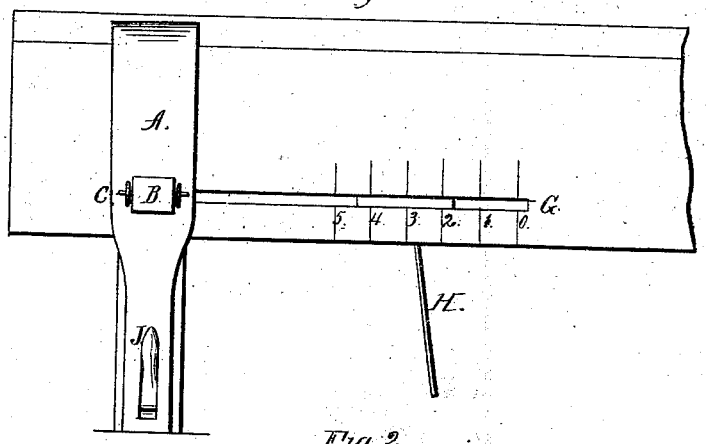


Fig. 2.

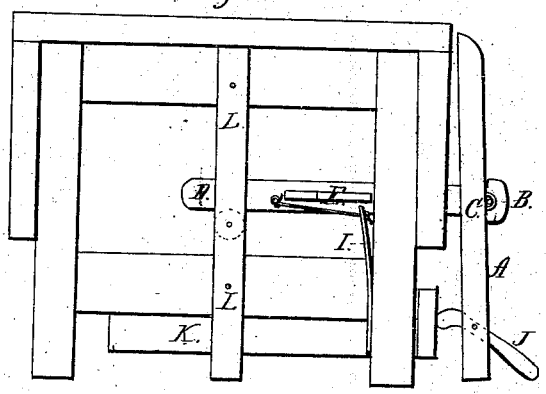
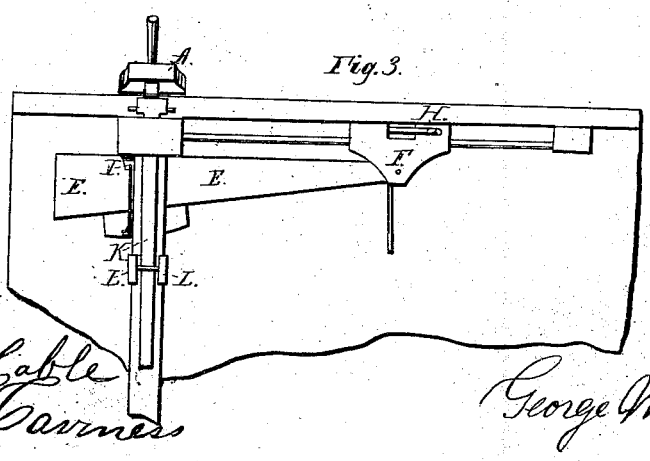


Fig. 3.



Attest:

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UNITED STATES PATENT OFFICE.

GEORGE M. RATHBUN, OF SEDAN, KANSAS.

IMPROVEMENT IN WORK-BENCHES.

Specification forming part of Letters Patent No. **187,558**, dated February 20, 1877; application filed March 24, 1876.

To all whom it may concern:

Be it known that I, GEORGE M. RATHBUN, of Sedan, in the county of Chautauqua, and State of Kansas, have invented certain new and useful Improvements in Work-Benches; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 represents a side view of the bench. Fig. 2 is an end view, and Fig. 3 is a view of the under side, showing the operating devices.

A represents the jaw of the vise, which is attached to the bench by an extension-bar, B. This bar passes through a mortise in the jaw A, and also through one of the legs of the bench as far as is required to secure regular movements. The jaw A plays loosely on the bar, being held to its place by a pin, C, which passes through the bar at its head and rests in staples or sockets in the jaw.

The bar B may be made to pass over one or two small wheels, so as to lessen the friction and permit its moving forward with ease.

A mortise in the center of the extension-bar B extends from within one of the legs of the bench, when the jaw is pressed to the bench, as far toward the end of the bar as is necessary to give sufficient movement to hold as thick or as thin material as desired. One or more wedges, E, are placed in this mortise, the first one, or one nearest the leg of the bench, being tapered sufficiently so that it will not slip when pressed in operating the vise.

A slide, F, is placed in the mortise G in the front side of the bench, with a bar or rod through or behind it, holding it firmly to its place; but allowing it to move endwise in the mortise. The point of the wedge E is attached to this slide, so that when the slide is moved it carries the wedge with it. A lever, H, attached to the under side of the plank which forms the top of the bench, passes down through the slide F, and far enough below, so that it may be easily moved with the hand or foot.

A spring, I, is placed on the back of one of the front legs of the bench, and is attached to the extension-bar B by a string or strap, so as to draw or press the bar forward as fast as the wedge E is loosened.

In a mortise in the lower end of the jaw A a cam-lever, J, is placed with a pivot-pin holding it near the center of the mortise. This lever is curved enough to extend toward one of the front legs of the bench, when the outer end of it is raised to its highest extent; but when pressed to the floor it will extend from two to four inches beyond the face of the jaw.

At the foot of the bench is placed a bar, K, with a flat face of sufficient size, for the lever J to work upon. This bar passes back through one of the legs of the bench as far as is desired to hold it steady, and may be extended to keep the jaw A in a proper position while working very thick material, by placing a pin through it in front of the leg of the bench.

The figures 1, 2, 3, &c., are placed along the slide-mortise G to indicate the place where the mark on the slide should stop while working lumber of the thickness indicated by the figure.

The extension-bar B and the bar K may be held to their places by perpendicular slats L, or by any other suitable means.

When the vise is in proper order for work, move the mark on the slide F to the figure desired by means of the lever H; then place the foot under the lever J and raise it, at the same time pressing the bottom of the jaw toward one of the front legs of the bench; then place the plank in the vise, put the foot on the lever J, and press it to the floor, thus fastening the plank. To loosen the plank, place the foot under the lever and raise it.

I am aware that a vise has, to a very limited extent, been used with a foot-lever similar to the one here described, and a bar extending forward from one of the legs of the bench through the jaw, with one wedge in front; but the action of that vise was so imperfect that it failed to be of value. In my invention the bar being fastened in the jaw, and extending beneath the bench, instead of

being in an inverted position, renders it more easily adjustable, and secures important advantages.

I claim—

In a work-bench the combination of the jaw A, extension-bar B, wedge E, moving devices H G, foot-bar K, and retracting-spring I, all constructed and arranged substantially as and for the purpose set forth.

GEORGE M. RATHBUN.

Witnesses:

JOAB CAVINESS,

HIRAM CABLE.