2 Sheets—Sheet 1.

T. E. DUTTON.

Vise.

No. 207,349 Patented Aug. 27, 1878.

Fig. 1.

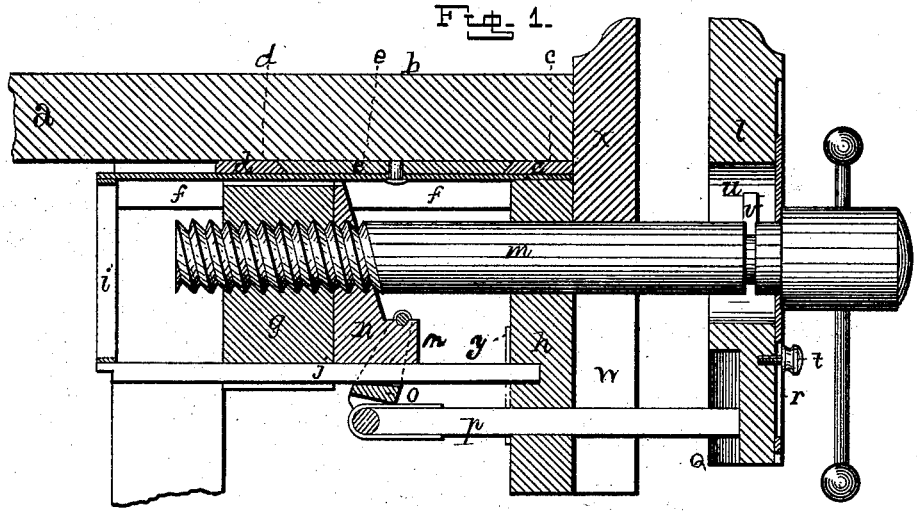


Fig. 2.

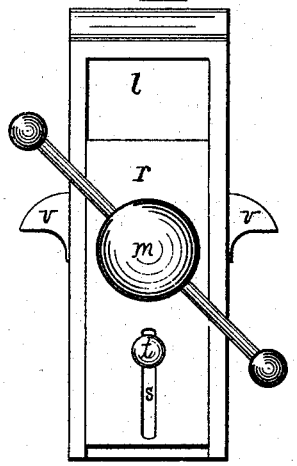


Fig. 3.

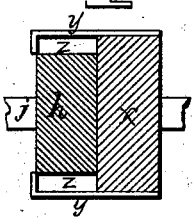


Fig. 4.

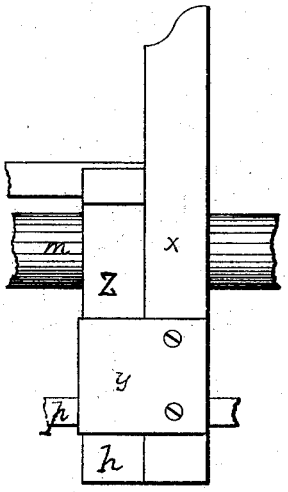
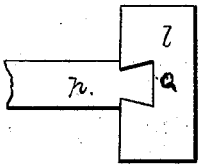


Fig. 5.



Witnesses:

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W. S. D. Baines

Inventor:

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Per F. A. Lehmann.

Atty.

2 Sheets—Sheet 2.

T. E. DUTTON.

Vise.

No. 207,349 Patented Aug. 27, 1878.

Fig. 6.

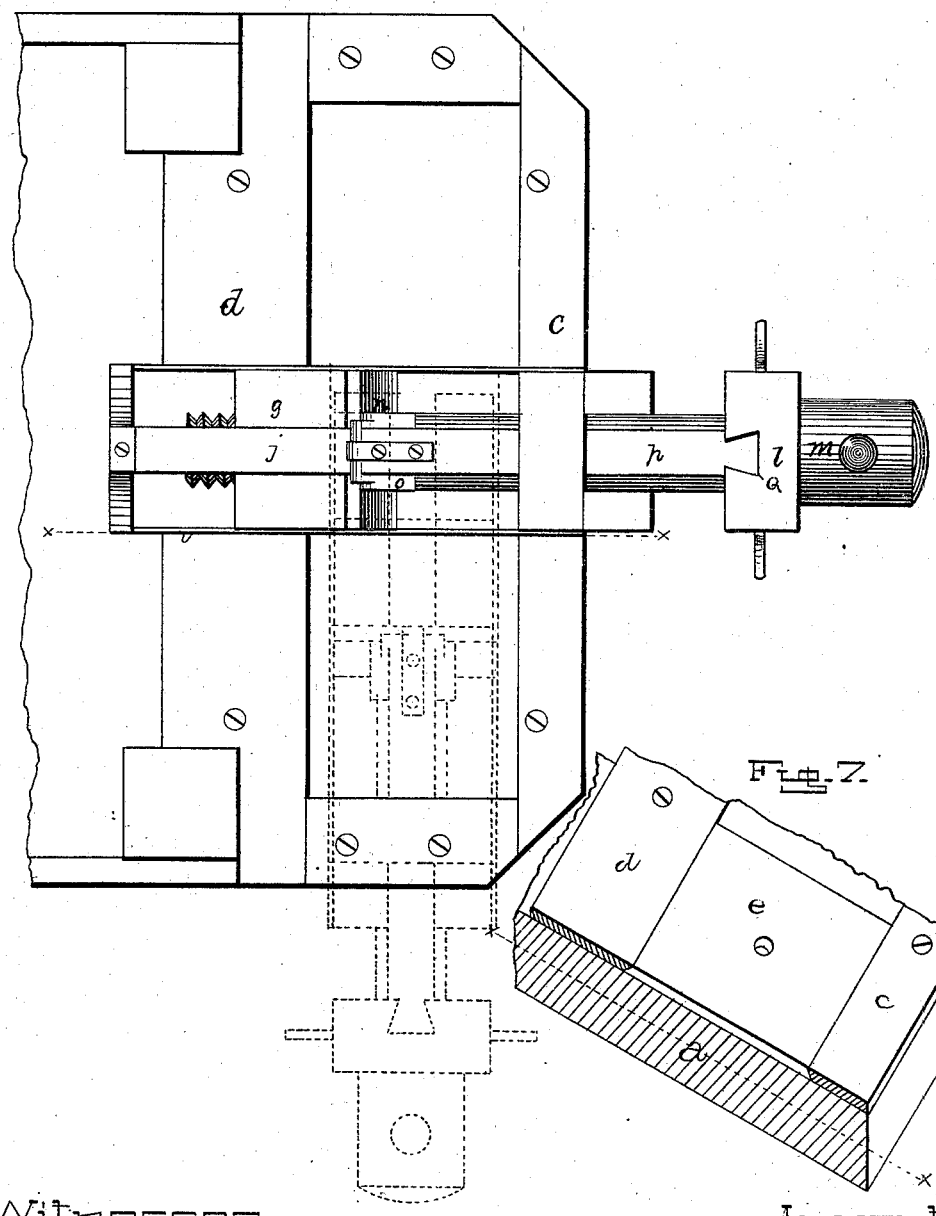

Fig. 7.

Witnesses.

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UNITED STATES PATENT OFFICE.

THOMAS E. DUTTON, OF PORT JEFFERSON, OHIO.

IMPROVEMENT IN VISES.

Specification forming part of Letters Patent No. **207,349**, dated August 27, 1878; application filed June 24, 1878.

To all whom it may concern:

Be it known that I, THOMAS E. DUTTON, of Port Jefferson, in the county of Shelby and State of Ohio, have invented certain new and useful Improvements in Vises; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in vises; and it consists in the arrangement and combination of devices, that will be more fully described hereinafter, whereby the vise can be used upon the end or either side of the bench, and is adapted for a variety of uses.

The accompanying drawings represent my invention.

a represents a work-table, having its top *b* made to extend farther beyond the legs at the end where the vise is to be attached than at the other. Secured to the under side of this extended end is a metal plate, *c*, which has its inner edge beveled away, and screwed across the under side of the table, at any suitable distance from this plate *c*, is another plate or strip, *d*, which has its outer edge beveled away. Between these two plates *c d* is held the slide *e*, which is pivoted upon the top of the vise. This slide is held up against the under side of the table by the plates, which catch over its beveled ends and yet allow it to slide freely back and forth across the end of the table. This slide is pivoted upon the top of the iron frame *f* of the vise, in which the nut *g* slides horizontally back and forth.

When the slide is in the center of the end of the table, the vise can be used upon the end; but when the slide is moved toward either side, it can be used from that side, as the vise swings freely around upon the slide, to which it is pivoted.

Secured to the outer end of the frame *f* is the stationary piece *h*, and to this piece and to a downwardly-projecting extension, *i*, from the rear end of the frame, is rigidly secured the supporting-rod *j*, upon which the nut *g* moves back and forth. This nut is preferably made rectangular, as here shown, and slides freely back and forth in the frame as the outer jaw, *l*, and screw *m* are drawn out or shoved in.

Where the nut is made of wood, an iron block or casting will be rigidly secured to its side toward which the screw enters, and from the center of the lower edge extends the projection *n*, which is recessed on its upper side. Upon this projection is hung the clutch *o*, which has a hole through it for the rod *j* to pass through, and which clutch has the connecting-rod *p* hinged or pivoted to its lower end. The outer end of this rod *p*, after passing through the piece *h*, has its outer end caught in a dovetailed groove, *q*, in the lower end of the outer jaw, *l*. This rod *p* moves back and forth with the nut and outer jaw, and serves to make the clutch *o* bite against the under side of the rod *j* whenever the screw is turned in either direction, and thus lock the jaw rigidly in position.

As the nut and screw slide freely back and forth with the jaw *l*, it is only necessary that the jaw should be moved up against the object which is to be clamped, and then by turning the screw, which is swiveled in the jaw, the jaw will be clamped rigidly in place at the same time that it tightens on the object. In the outer side of this jaw *l* is made a wide shallow dovetailed groove or recess, and into this recess is slid the sheet-metal plate *r*, which has a hole through it for the screw *m* to pass through and a slot, *s*, through its lower end, through which the clamping-screw *t* passes into the jaw. Through movable jaw *l* there is made a vertical slot, *u*, through which the screw passes, so as to allow the jaw to be adjusted vertically.

By loosening the screw *t*, and then raising up or pressing down upon the jaw, it can be moved the full length of the slot *u*, or any distance less than this length, and then by tightening the set-screw into the jaw *l* it will be rigidly held in that position.

Passing through the edges of this jaw *l* are the keys *v*, which catch in a groove made in the surface of the screw *m*, so as to bind the screw and jaw together with their inner ends, while the outer ends form convenient handles for moving the jaw up or down.

The inner jaw, *x*, has a wide slot or recess,

w, made from about its center down through its lower end, so that it can be passed freely up and down over the top of the screw *m* and rod *p*. Fastened to each edge of this jaw, somewhat below its center, are L-shaped catches *y y*, which serve to catch behind the rear edge of the piece *h* and hold the jaw *x* in position. Through or in the edges of the piece *h* are made the two recesses *z*, for the bent portions of the catches *y* to pass through, so that the jaw may be entirely removed from or replaced on the piece *h* at pleasure. This jaw can be raised upward until the catches strike against the under side of the frame *f*, when the jaw can be removed; or it can be depressed until the top of the screw strikes the wood at upper end of the slot. Thus it will be seen that either one or both jaws are vertically adjustable at will.

By means of the construction above described this vise is adapted to be used by wagon-makers, carpenters, cabinet-makers, and others. All of the parts above described may be made of iron, or part of iron and part of wood.

Having thus described my invention, I claim—

1. The combination of a table having its corners rounded away, a slide moving across the end, and a vise pivoted to the slide, whereby the vise can be moved back and forth across the end of the table and swung around to the sides, substantially as shown.

2. The combination of the slide *e*, pivoted upon a vise, and the plates *c d*, secured to the under side of the table, substantially as set forth.

3. The combination of the sliding nut *g*, screw *m*, frame *f*, rod *j*, projection *n*, clutch *o*, rod *p*, and outer jaw, *l*, substantially as described.

4. The jaw *l*, having slot *u*, in combination with the screw *m*, plate *r*, and set-screw *t*, substantially as described.

5. The jaw *l*, made vertically adjustable, and having a dovetail or other suitably-shaped groove, *q*, made in its lower end for the outer end of the rod *p* to move in, whereby the jaw is permitted to be adjusted up and down without moving the rod, substantially as set forth.

6. The jaw *x*, provided with the catches *y*, and having the slot or recess *w* in its lower end, in combination with the piece *h*, having recesses *z*, upon which piece the jaw moves vertically, substantially as specified.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of June, 1878.

THOMAS EDWIN DUTTON.

Witnesses:

E. L. HARRISON,

W. BUSSARD.