(No Model.) 2 Sheets—Sheet 1.

J. P. L. HALYBURTON.

VISE.

No. 342,008. Patented May 18, 1886.

Fig. 1.

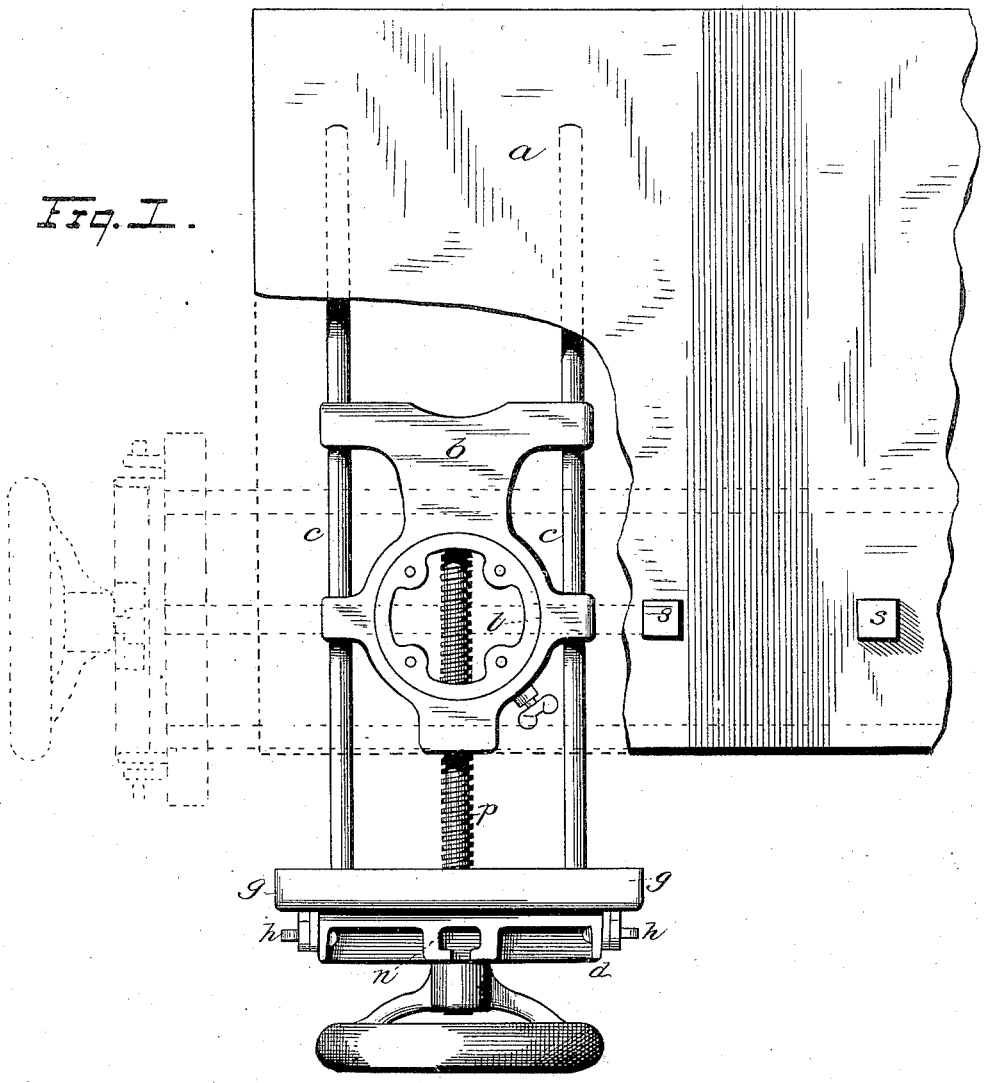
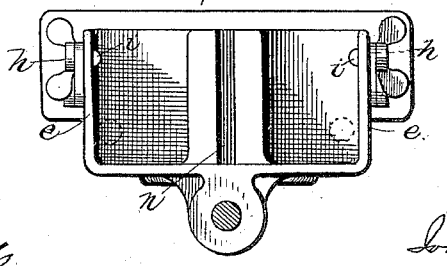


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

J. P. L. HALYBURTON.

VISE.

No. 342,008. Patented May 18, 1886.

Fig. 3.

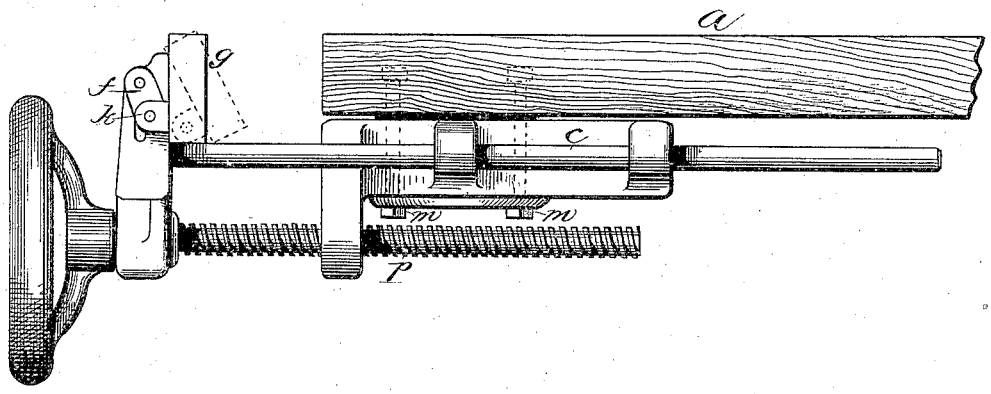


Fig. 4.

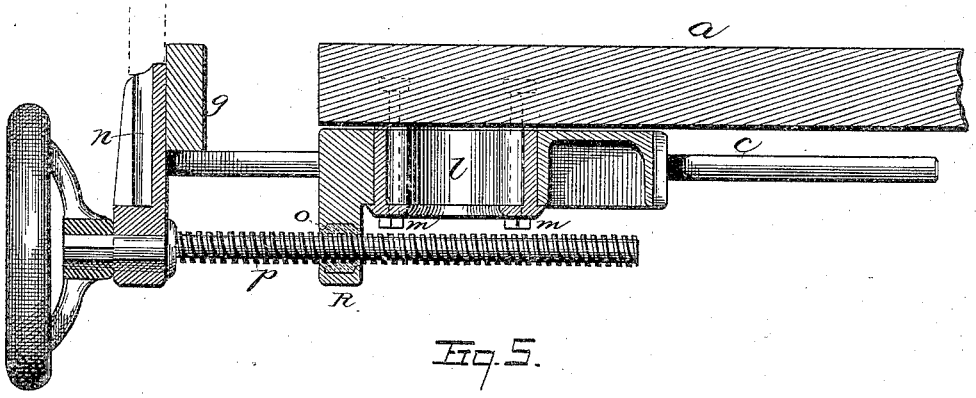
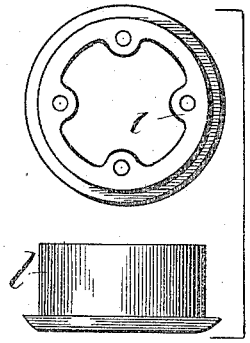


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHN P. L. HALYBURTON, OF PHILADELPHIA, PENNSYLVANIA.

VISE.

SPECIFICATION forming part of Letters Patent No. 342,008, dated May 18, 1886.

Application filed April 29, 1885. Serial No. 163,209. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. L. HALYBURTON, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Vises; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a plan view of a carpenter's bench with parts broken away. Fig. 2 is a vertical section of the movable jaw. Fig. 3 is a side elevation. Fig. 4 is a longitudinal section. Fig. 5 is the bottom and plan view of the boss.

This invention relates to improvements in vises; and it consists of a self-adjustable vise of novel construction, as hereinafter described, which may be used as a tail-screw attached to a carpenter's bench.

In the annexed drawings, *a* represents the top of a work-bench having a part broken away, showing the ribbed casting *b*, with four projections—two on each side, front and back—with holes cast in them for carrying the guide-rods *c c*, which may be solid or tubular. The guide-rods are rigidly secured in the movable jaw *d*. This jaw is a plate with two ribs, *e e*, on the back at either end, as shown in Fig. 2, which tend to stiffen the plate, and also act as guides for the links *f f*, Fig. 3, which allow the intermediate jaw, *g*, to be adjusted to any angle.

The links *f f* are clamped at any point by means of bolts *i i* in the following manner: A slot is cut in the ribs *e e*, and bolts *i i* pass through the links and the slot, and are provided with thumb-nuts *h h*. The bolts are square where they pass through the slot, to prevent them from turning. The intermediate jaw is provided with projections *k k*, which are pivoted to the free end of the links.

The sleeve or bushing *b* is fitted to the boss *l*, so as to turn freely thereon. The boss is secured to the under side of the bench by bolts *m m*, or other firm means of fastening. This boss has a ledge around the outer lower edge of the same, which supports the sleeve or bushing and vise when in position.

The screw *p* works loosely through the movable jaw in the usual manner and through the nut *o* of Babbitt metal placed in an opening or recess in the lug *r*, depending from the sleeve or bushing *b*.

I locate the screw near the head end of the bench, as shown in Fig. 1, and I provide the bench with dogs *s s* at various intervals along the working edge of the bench. These dogs may be simply wooden pins fitting in the bench, or they may be iron bench-dogs of improved pattern and construction. They must be so constructed as to be lowered out of or raised into position, or entirely removed when desired.

There is a socket, *n*, in the jaw *d*, to receive a removable dog to be used when the vise is used as a tail-screw.

There is a thumb-screw, *t*, which is used to hold the vise in position, and which prevents the sleeve or bushing *b* from turning on the boss *l*, when desired.

There is a removable dog, *v*, made to fit in the socket *n*, to be used when the vise fills the place of a tail-screw. The supplemental jaw may, however, be slightly raised above the level of the bench, in which case the removable dog is not required.

In the lug *r* is a recess in which is placed a Babbitt metal nut in which the screw works.

When it is desired to use the machine as a vise, the thumb-screw *t* is loosened, and the movable jaw swung round to the position in Fig. 1. The thumb-screw is then tightened and the machine can be used as an ordinary vise.

The supplementary jaw can be accommodated to different shapes, in the manner hereinbefore described.

When used as a tail-screw the movable jaw is swung round to the position on the end of the bench, indicated by the dotted lines Fig. 1, a dog, *v*, placed in the socket *n*, the material to be operated upon placed between the dog and any one of the series of dogs with which the bench is provided and secured firmly by screwing up the movable jaw, when the material may be operated upon as if in an ordinary tail-screw.

Having thus described my invention, I claim—

1. The combination of a boss with a sleeve or bushing mounted thereon, provided with a guideway, and a depending projection having a screw-threaded aperture therein, a screw, a movable vise-jaw mounted thereon, and a guide-bar rigidly attached to the vise-jaw and engaging the guideway of the sleeve or bushing, substantially as described.

2. The combination, with a boss, of a sleeve or bushing mounted thereon, having projections provided with guideways, and a projection having a screw-threaded aperture with a screw, a movable vise-jaw mounted thereon, and a guide-bar rigidly attached to said jaw and engaging the guideways of the casting, substantially as described.

3. The combination, with a boss, of a sleeve or bushing having lateral projections on each side provided with guideways and a depending projection having a screw-threaded aperture with a screw, a movable vise-jaw mounted thereon, and guide-bars rigidly attached thereto and engaging the guideways, substantially as described.

4. The combination, with a movable jaw of a bench-vise, of the supplementary jaw, links attached thereto, and fastening devices connecting said links to a movable jaw, substantially as described.

5. The combination, with the movable jaw of a bench-vise provided with slots, as described, of the supplementary jaws, links connected thereto, and bolts connecting said links with movable jaw through slots in the same, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN P. L. HALYBURTON.

Witnesses:
W. J. SMYTH,
ARCHER MCLEAM.