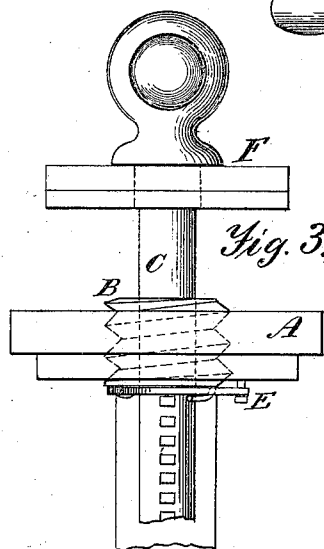
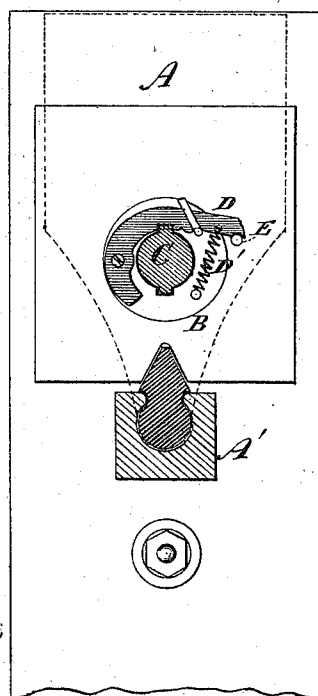
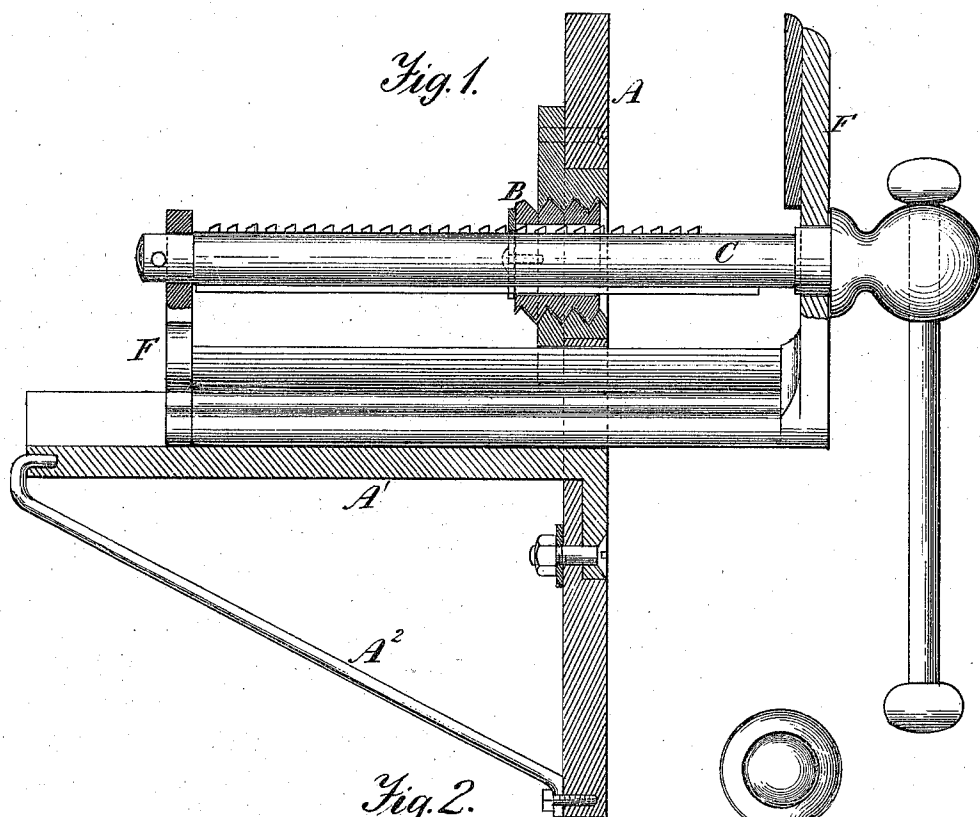


J. HUNT.
Vises.

No. 142,470.

Patented September 2, 1873.



Witnesses.
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Wilmer Bradford

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Attys

UNITED STATES PATENT OFFICE.

JOSHUA HUNT, OF RICHMOND, INDIANA, ASSIGNOR OF ONE-HALF HIS
RIGHT TO JOSHUA FOULKE, OF SAME PLACE.

IMPROVEMENT IN VISES.

Specification forming part of Letters Patent No. **142,470**, dated September 2, 1873; application filed
April 22, 1873.

To all whom it may concern:

Be it known that I, JOSHUA HUNT, of Richmond, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Vises, of which the following is a specification:

Figure 1 is an elevation of my improved vise, showing the fixed and movable jaws, the guide in which the movable one slides, the detachable threaded nut, the screw-shaft, and the handle for operating the same. Fig. 2 is a rear end elevation, showing the fixed jaw, the guide in which the movable one works, the screw-shaft, the threaded nut, and the attaching and detaching mechanism; and Fig. 3 is a plan view of the screw-shaft, a portion of the jaws, and of the attaching and detaching mechanism.

Corresponding letters are used to designate corresponding parts in the several figures.

This invention relates to that type of vises which are known as carpenters' or wood-workers' vises, and which are so arranged that the screw or nut which is brought into requisition in clamping articles between their jaws may be detached when it becomes necessary to move the jaw for a considerable distance, and thus permit the same to be moved without turning the screw; and it consists in the construction, combination, and arrangement of some of the parts, whereby the threaded nut is attached to and may be detached from the screw-shaft, as a consequence of which the movable jaw is made to clamp any article which may be placed between it and the fixed jaw by turning the screw-shaft in one direction, while by turning it in the opposite one the movable jaw is first withdrawn from contact with the article which has been clamped, and then the threaded nut is automatically released from the control of the screw-shaft, so far as to permit the movable jaw in which it is placed to be drawn out to any extent, or to be moved in either direction, within the range of its movement.

In constructing devices of this character I use a fixed jaw, A, which may be of the form shown in the drawing, or of any other that will adapt it to receive the guide A¹, and to be firmly secured to a bench, or to any other

device. This guide has a groove formed in it, as shown in Fig. 2, for the under surface of the movable jaw to slide in, and may be supported by a brace, A², as shown, if found necessary. That portion of the jaw A which is above the guide A¹ is thickened, and has a screw-thread cut in an aperture which is formed in it to adapt it to receive a nut, B. This nut has a thread upon its outer surface, and it also has a hole formed in its center for the passage of the screw-shaft C, soon to be described. To the rear end of the nut there is pivoted a pawl, D, as shown in Fig. 2. To one end of this pawl there is attached a spring, D', which is so arranged that it will cause the lower surface of the pawl to rest in a thread formed upon the screw-shaft C, or in the spaces between teeth formed thereon, while the clamping-process is going on, at which time the nut B is attached to the screw-shaft, and through it to the movable jaw.

When it is desirable to detach the nut from the screw-shaft so far as to permit the sliding jaw to be moved by the hand without turning the screw-shaft, the movement of said shaft is reversed, and by turning it in that direction a revolution or two the end of the pawl D is brought in contact with a stop, E, which is fixed in the stationary jaw A, when, by a further movement of the shaft in the same direction, the pawl will be lifted out of the recess in the screw-shaft, or from the space between the threads or teeth formed thereon, when the movable jaw may be slid in either direction by the hand of the operator. During the backward movement of the screw-shaft, and before the pawl D comes in contact with the stop E, the movable jaw will be carried away from the fixed one far enough to release anything that may have been clamped between them, and thus allow it to be removed without difficulty. The screw-shaft, which has previously been alluded to, is a shaft of sufficient length to allow the movable jaw to be removed the requisite distance from the fixed one, and has upon its outer end an enlargement for the reception of a handle, as shown, and it also has a collar for forcing inwardly the movable jaw. Beyond that portion of this shaft which rests in the jaw it is

cylindrical in form, and is provided with a feather which fits into a groove in nut B, and which causes said nut to rotate with the shaft while it permits it to move longitudinally thereon. It is also provided with a screw-thread, or with a rack, or projections, into the spaces between the threads or teeth of which the ratchet falls, as above described. The construction of the movable jaw F is clearly shown in Fig. 1, it being such that it furnishes bearings for the screw-shaft C, a flat surface for bearing against the article to be clamped, and a base for sliding in the guide A¹.

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

1. In a vise of the character described, the combination of the screw-threaded sleeve B, turning in a tap in the fixed jaw, shaft or stock

C of the movable jaw having a toothed feather and fitted in the sleeve B, and an adjustable dog automatically operated to connect and disconnect the sleeve and stock, substantially as and for the purpose specified.

2. The arrangement of the tubular nut B, the stationary jaw A, pawl D, spring D', and stop E, whereby the movable jaw is removed from the article clamped, by the backward turning of the screw-shaft, previous to the liberation of the nut from the screw-shaft, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSHUA HUNT.

Witnesses:

J. O. BARBER,

A. H. CHAPMAN.