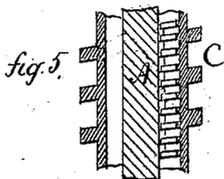
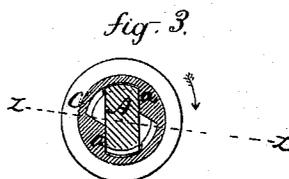
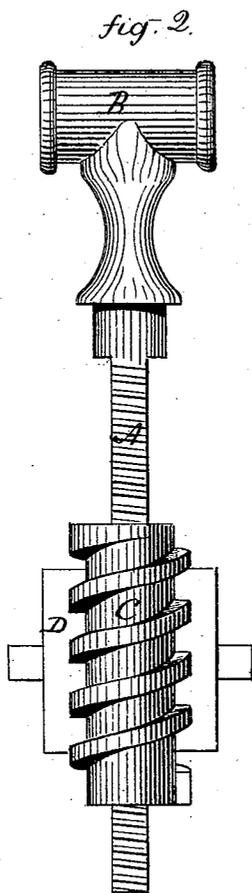
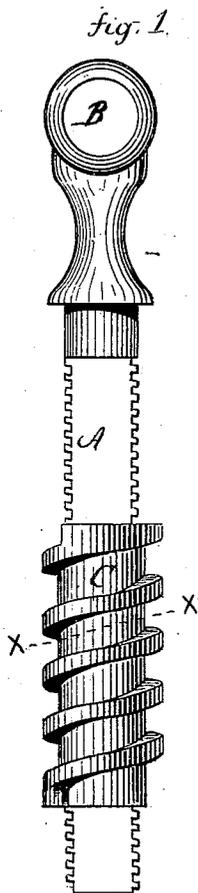


JOHN L. ISBELL.

Improvement in Vises.

No. 128,045.

Patented June 18, 1872.



Witnesses

A. J. Tibbitts
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UNITED STATES PATENT OFFICE.

JOHN L. ISBELL, OF NAUGATUCK, ASSIGNOR TO CHARLES PARKER, OF
MERIDEN, CONNECTICUT.

IMPROVEMENT IN VISES.

Specification forming part of Letters Patent No. 128,045, dated June 18, 1872.

To all whom it may concern:

Be it known that I, JOHN L. ISBELL, of Naugatuck, in the county of New Haven and State of Connecticut, have invented a new Improvement in Vise-Screws; and I do hereby declare the following, when taken in connection with the accompanying drawing and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawing constitutes part of this specification, and represents, in—

Figure 1, a side view; Fig. 2, the same turned one-fourth around and as placed in one-half the nut; Fig. 3, a transverse section on line *x*; Fig. 4, the same, the bar in a different position; and, in Fig. 5, a section on line *z z*.

This invention relates to an improvement in screws for what are termed carpenter's vises, but is also applicable to other vises, the object being to adjust the vise more quickly than can be done by the common-threaded screw; and the invention consists in a flat or similar shaped bar, to the ends of which the usual devices, to afford a convenient means for turning the screw are applied, the edges of the said bar threaded with a left-hand thread and combined with a sleeve, placed longitudinally thereon, having a segmental thread cut therein corresponding with and so as to engage the thread on the edge of the bar, and also with a section through which the bar will freely pass without connection with the sleeve; the said sleeve threaded upon its outer surface, and combined with a nut, so that when the said bar engages the sleeve it will cause it to turn in the said nut, but when the bar is turned into the open portion of the sleeve it will slide freely through, all as more fully hereinafter described.

A is a flat bar, constructed at its end with a cylinder, B, or other device, by means of which the bar may be turned; this being the device usually applied for carpenters' use. The edges of the said bar are threaded with a left-hand thread, as denoted in Fig. 2. C is a sleeve, having an opening longitudinally through it, so that the bar A will pass freely through, as seen in Fig. 3, in that position,

the opposite sides to bear against shoulders *a* within the sleeve, so that turning the bar in the direction of the shoulders the sleeve will be turned accordingly; but, in that position, the bar may be moved back and forth longitudinally in the sleeve with freedom. Turned in the opposite direction, the threads of the bar pass onto corresponding segmental threads in the sleeve, as seen in Fig. 5, and into the position seen in Fig. 4, against the shoulders *b*, where, having engaged the threads of the sleeve, the sleeve will turn with the bar, but the bar cannot be moved longitudinally; hence, in that position the action of the bar and sleeve combined is the same as the common vise-screw. Continuing the turning of the bar, turns the sleeve correspondingly. The outside of the sleeve is threaded and operates in a nut, D, correspondingly threaded.

The operation of this construction is as follows: The bar in Figs. 2 and 4 represents the vise as set at a given position, and, if it is desired that the vise should be opened to its extreme, the bar is turned back—that is, to the left—into the relative position seen in Fig. 3, and the screw drawn out to the desired position; then turned to the right, as for ordinary screwing up. The screw engages the sleeve, as seen in Fig. 4; consequently turns the sleeve in the nut to draw up the jaw of the vise. In order that in releasing the compression of the screw the sleeve should turn with the bar, the thread on the bar is made the reverse of that on the sleeve, so that the thread on the bar will hold on the thread of the sleeve on loosening the screw sufficiently to hold the sleeve until unscrewed to the desired extent. To close the jaw, the screw is turned to its free position and passed through the sleeve.

While the left-hand thread, as thus described, is desirable, the object of the invention will be accomplished with any other means of connecting the bar with the sleeve when turned in one direction and relieved when turned in another; hence, I do not confine myself to the left-hand thread on the edge of the sleeve.

I have represented and described this invention as applied to vise-screws; but it will

be evident to those familiar with such devices that this may with advantage be applied to jack-screws, press-screws, and other purposes.

I claim as my invention—

In combination with a sleeve, C, threaded upon its outside, and the nut D within which the said sleeve works, I claim a flat or similar shaped bar, A, the said sleeve and bar being

constructed substantially as described, so that in one position the bar will pass freely through the said sleeve, and in another will engage the said sleeve, substantially as set forth.

JOHN L. ISBELL.

Witnesses:

L. S. SPENCER,

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