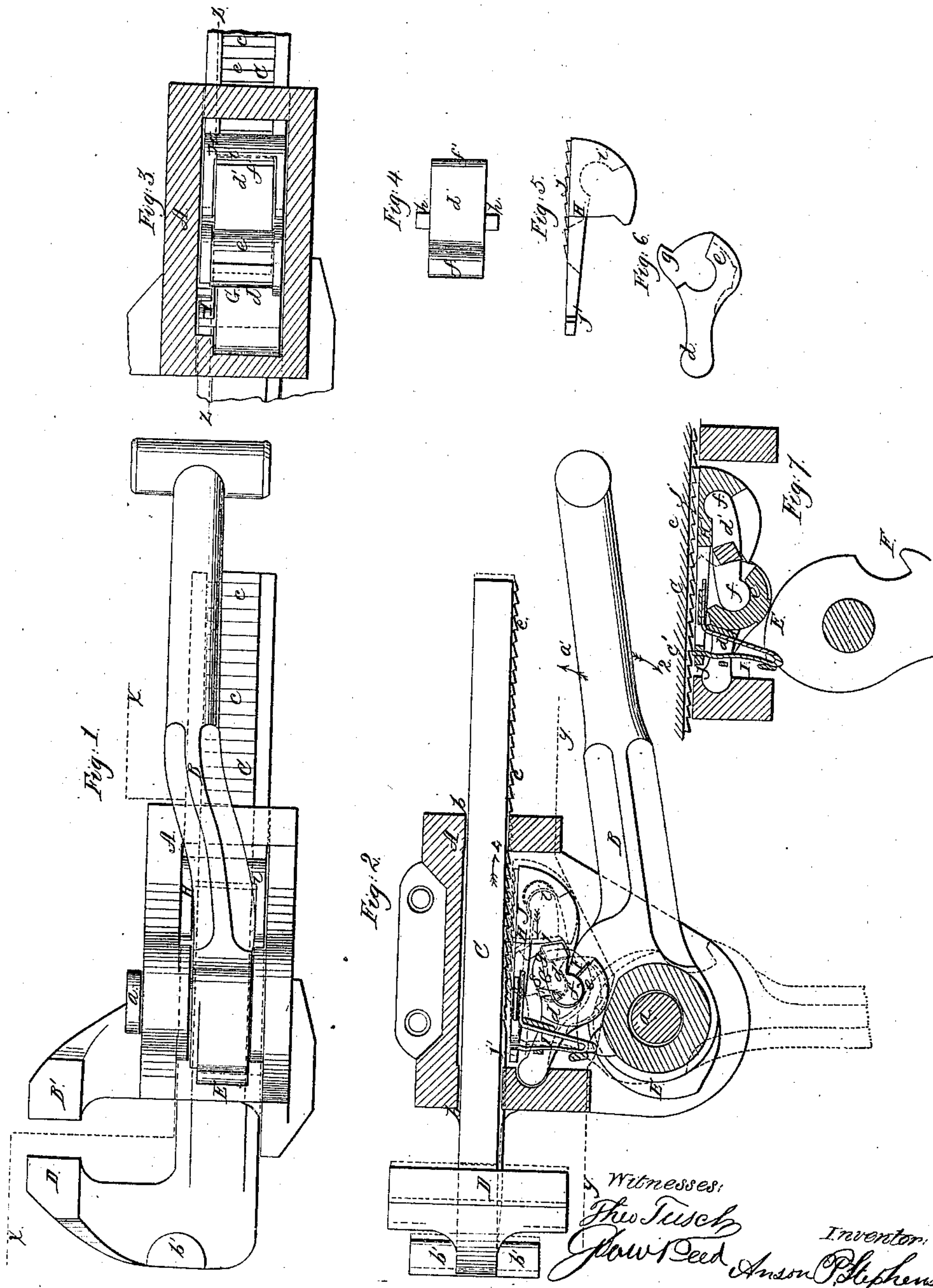


A. P. Stephens,
Vice.

N^o 42,236.

Patented Apr. 5, 1864.



UNITED STATES PATENT OFFICE.

ANSON P. STEPHENS, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN VISES.

Specification forming part of Letters Patent No. 42,236, dated April 5, 1864.

To all whom it may concern:

Be it known that I, ANSON P. STEPHENS, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Vise; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of my invention; Fig. 2, a horizontal section of the same taken in the line *x x*, Fig. 1; Fig. 3, a vertical section of the same taken in the line *y y*, Fig. 2; Figs. 4, 5, and 6, detached views of parts pertaining to the same. Fig. 7 is a horizontal section in the line *z z*, Fig. 3.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to an improved vise of that class which are placed on benches or supports, and are commonly termed "bench-vises."

The object of the invention is to obtain, by a simple arrangement or mechanism, vise of the class specified which will admit of its sliding or adjustable jaw being quickly adjusted to the work or article designed to be held by it and at the same time admit of the work or article being firmly grasped and held in the vise.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents what may be termed the "stock" of the vise, the same being a box having one open side, in which a lever, B, works horizontally on an upright pin, *a*. This stock A has the permanent or fixed jaw B' of the vise on its upper part at one end, and the ends of the stock have openings *b b* in them to admit of a bar, C, passing through the stock. This bar C may be of rectangular form, and it should be perfectly straight, so as to admit of it sliding freely in the stock A.

D is a jaw at one end of the bar C, the face of which is parallel with the face of the jaw B'. The shank of the jaw D has a horizontal projection, *b'*, at each side of it, and these projections serve as a handle to move the bar C and the jaw D toward and from the fixed jaw B'. The bar C is provided with teeth *c* at its inner side, as shown in Figs. 1, 2, 3, and 7. The lever B at its end, through which the pin

a passes, has a projection, E, and also a hook projection, F, both of which are shown clearly in Figs. 2 and 7. Within the stock A there is a toggle, G, one part, *d*, of which is formed with a semi-cylindrical socket, *e*, to receive the cylindrical end *f* of the other part, *d'*. (See Fig. 2.) This socket *e* is provided with a hook projection, *g*, at its lower end, and one may be used at its upper end, if necessary or desired. The part *d'* of the toggle is provided with a projection, *h*, one at its upper and the other at its lower edge, if two hook projections, *g*, are employed. These projections *h* serve as stops for the hook projections *g* and prevent the two parts *d d'* of the toggle being moved outward or backward beyond a certain distance. The end *f* of the part *d'* of the toggle opposite to the end *f* also has a semi-cylindrical form, and is fitted in a socket, *i*, at one end of a bar, H, which is provided with teeth *j* to engage with the teeth *c* of the bar C. The bar H at the end opposite to that where the socket *i* is formed is provided with an upright spur or arm, *j'*, against which a spring, I, bears, said spring having a tendency to draw the bar H in the direction indicated by the arrow 1 in Fig. 2, and to keep said bar, as well as the toggle G, toward the bar C. The two parts, *d d'*, of the toggle and the bar H are shown detached in Figs. 4, 5, and 6. By shoving the lever B toward the bar C the hook F of said lever will catch behind the socket *e* of the part *d* of the toggle G, as shown in Fig. 2, and when the lever is thus shoved inward toward the bar C, as indicated by arrow 2, the toggle will be drawn outward, so as to insure the bar H being free from the bar C and admit of the latter moving freely through the stock A, so that the jaw D may be moved directly in contact with the article to be grasped by the two jaws B' D, and when the jaw D is thus adjusted the hook F, by drawing the lever B still farther outward in the direction indicated by arrow 2, will slip off from socket *e*, and the cam E of said lever will act against the outer side of *e* and press the toggle G toward bar C, as indicated by arrow 3, and the bar H, by this movement of the toggle, engages with the bar C and moves it in the direction indicated by arrow 4, and causes the jaw D to press firmly against the work, which will consequently be held between the two jaws B' D. Thus by this simple means the

article or work to be grasped and held between the two jaws B' D may be quickly adjusted in the vise and also quickly removed from it.

The vise may be cheaply constructed, and there are no parts liable to get out of repair or become deranged by use.

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

1. The toothed bar C, with jaw D attached, in connection with the toggles G, toothed bar H, and the lever B and cam E, or their equivalents, for operating the toggle, all arranged

substantially as and for the purpose herein set forth.

2. The hook F on the lever B, when used in connection with the toggle G and toothed bars C H, for the purpose specified.

3. The hook projections *g g* on the part *d* of the toggle, in connection with the projections *h* on the part *d'* thereof, for the purpose set forth.

ANSON P. STEPHENS.

Witnesses:

THEO. TUSCH,
GEO. W. REED.