(No Model.)

W. P. SHAW.

PORTABLE BENCH VISE.

No. 513,206. Patented Jan. 23, 1894.

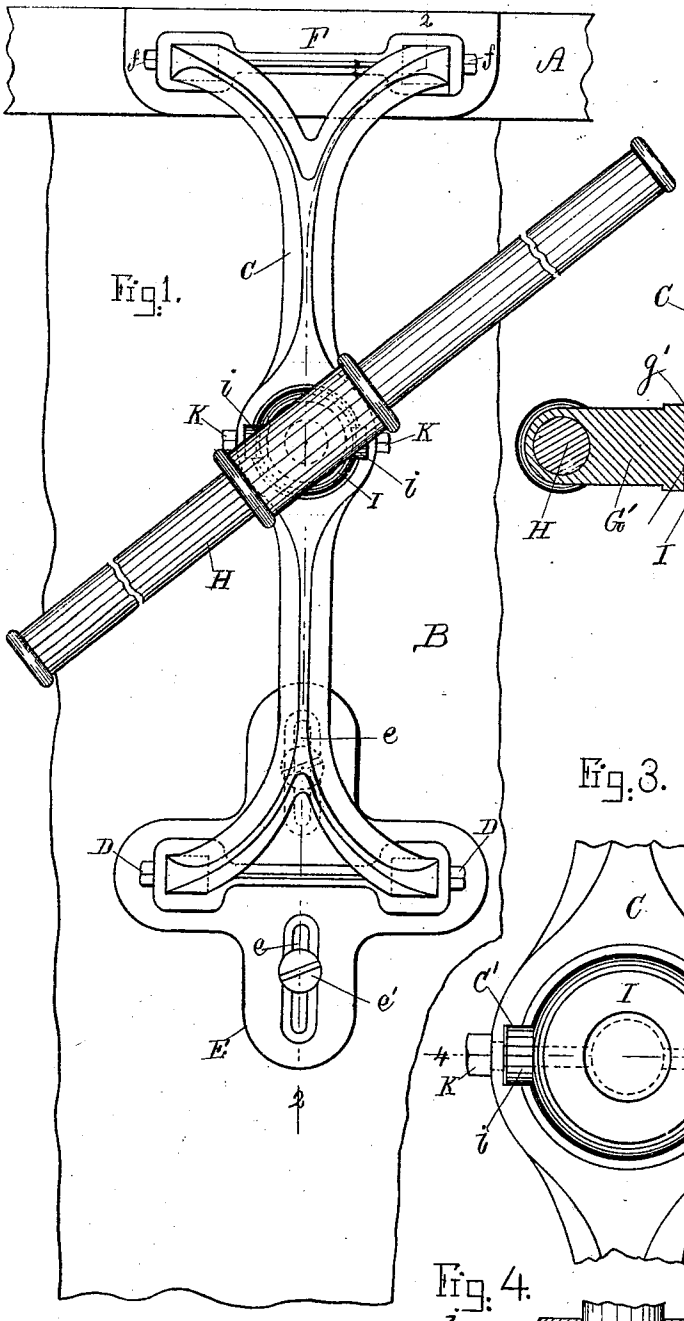

Fig. 1.

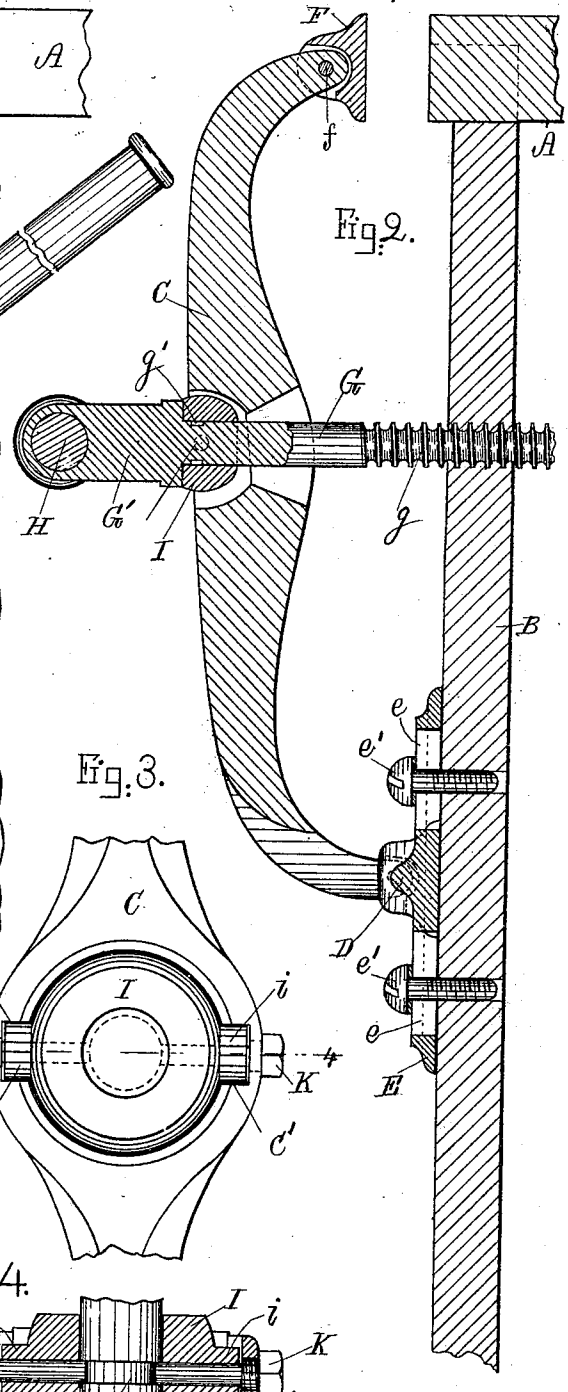

Fig. 2.

Fig. 3.

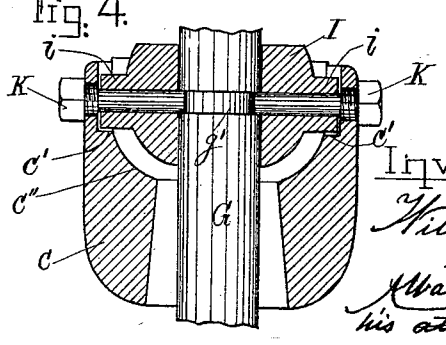

Fig. 4.

Witnesses.

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WILLIAM P. SHAW, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO ROBERT D. WARD, OF SAME PLACE.

PORTABLE BENCH-VISE.

SPECIFICATION forming part of Letters Patent No. 513,206, dated January 23, 1894.

Application filed November 16, 1893. Serial No. 491,084. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. SHAW, a subject of the Queen of Great Britain, and a resident of Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Portable Bench-Vises, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in portable bench vises and it has for its object to provide a practical and conveniently ready means for clamping articles of wood or metal to a bench, box or any convenient object while such articles are being shaped or operated upon.

The invention is particularly useful for artisans having to do work or repairs, &c., away from the work shop in localities not provided with bench vises and it is also very useful for any and all purposes where it is required to hold or clamp articles while being cut, sawed, planed or otherwise, as will hereinafter be more fully shown and described reference being had to the accompanying drawings, wherein—

Figure 1, represents a front elevation of the improved portable bench vise. Fig. 2, represents a longitudinal section of the same. Fig. 3, represents a detail front view of the middle portion of the pivoted clamping arm; and Fig. 4, represents a cross section on the line 4—4 shown in Fig. 3.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

In the drawings Figs. 1 and 2, A, represents the top of a work bench, box or other suitable object to which my improved portable bench vise is to be temporarily attached, and B, represents the vertical portion of such bench, box or other object.

In the drawings I have shown my improved bench vise as attached to the vertical portion B, but I wish to state that it is equally well adapted for being secured to the horizontal or top portion A according to the nature of the work that is to be done without departing from the essence of my invention.

My invention consists of a movable clamping arm or lever C which is pivoted in its lower end at D to a fulcrum plate E having slotted perforations *e*, *e*, as shown. The said plate E is secured to the bench part B by means of headed nails or screws *e' e'* going through the slotted perforations *e*, *e*, and driven or screwed into said bench part B in such a manner as to permit said plate E to be vertically adjustable or movable relative to said bench part B for a purpose as will hereinafter be described.

F is the jaw which is pivoted to the upper end of the clamping arm C at *f*, *f*, so as to conform to or fit the object which is to be held and clamped between said pivoted jaw and the edge or side of the bench A as shown. About midway through a perforation in the arm C passes the clamping screw spindle G the inner screw threaded end *g*, of which is adapted to be screwed into a perforation in the bench portion B as shown in Fig. 2. In its outer end the spindle G is provided with an enlarged head G' provided with a handle H as is common in bench vises. The spindle G passes loosely through a bearing I having side trunnions *i*, *i*, journaled in side recesses C' C' in a socket C'' in the arm C as shown in the drawings so as to permit of an automatic adjustment of said clamping screw relative to the arm C as the latter is swung out or in during the clamping operation.

K K are pins or screws going through the arm C the trunnions *i*, *i*, and bearing I and having their inner ends projecting into an annular groove *g'* on the spindle G so as to hold the bearing I pivotally connected to the arm C as well as holding the spindle G connected to the said bearing I in such a manner that said spindle may be turned freely around its axis and cause the bearing I and arm C to follow the axial adjustment of said spindle G as it is being turned around in expanding or closing the work holding jaw F.

The operation of this my improved portable bench vise is as follows: In using the invention I secure the plate E by means of screws or nails *e' e'* to a bench, box or other convenient object B as shown, in such a manner as to allow such plate to slide up or down on the bench portion B relative to the screw spindle G during the swinging movement of the clamping arm C as it is being expanded

or closed; a hole is bored in the upright B of sufficient size to permit the screw threaded portion *g*, of the spindle G to be screwed therein, and said spindle is pivotally connected to the arm C and its bearing I by means of the screws or pins *i*, *i*, after which the vise is ready for use for clamping the object between the pivoted jaw F and the side or edge of the bench or box A which serves as the back jaw of the vise. It will thus be seen that the device is applicable as a means for clamping or holding articles to be worked or shaped in connection with any suitable bench, box or other object and when no longer needed for use it may be detached and packed away in a very small compass.

The invention is very simple in construction very light, strong and durable, is composed of very few parts and may be placed in position for use in connection with any convenient bench, box, or other object at a moment's notice, thus supplying a quick and ready means for clamping and holding articles to be worked without the need of the usual heavy complicated and cumbersome bench vises.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent and claim—

The herein described portable bench vise consisting of a clamping arm pivoted in its lower end to a plate adjustably secured to a bench or other object and having a jaw pivoted to its upper end combined with a clamping screw pivotally connected to the said arm and adapted to be screwed into the object on which the vise is used substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 8th day of November, A. D. 1893.

WILLIAM P. SHAW.

Witnesses:
ALBAN ANDRÉN,
KITTIE M. HANSON.