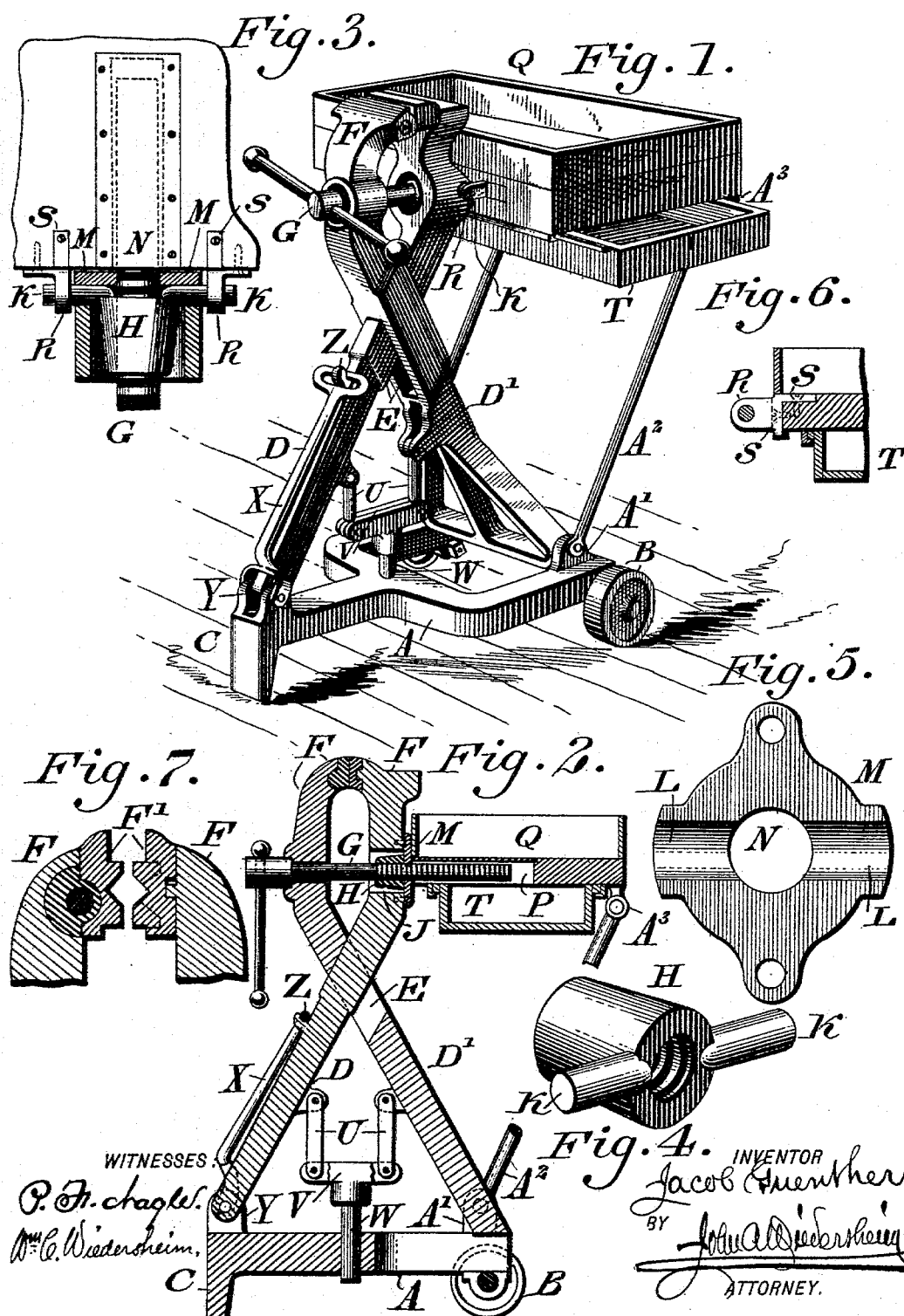


(No Model.)

J. GUENTHER.
PORTABLE VISE.

No. 490,112.

Patented Jan. 17, 1893.



UNITED STATES PATENT OFFICE.

JACOB GUENTHER, OF PHILADELPHIA, PENNSYLVANIA.

PORTABLE VISE.

SPECIFICATION forming part of Letters Patent No. 490,112, dated January 17, 1893.

Application filed September 3, 1892. Serial No. 444,939. (No model.)

To all whom it may concern:

Be it known that I, JACOB GUENTHER, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Portable Vises, which improvement is fully set forth in the following specification and accompanying drawings.

My invention consists of a portable vise of novel construction, the same embodying two arms which cross each other and carry the jaws, and are mounted on a suitable truck. Said arms are provided with means for guiding, steadying and sustaining the same, and the jaws are operated by a screw which is mounted in such manner as to compensate for the change in the angle thereof. A tray and drawer are provided, the tray sustaining said drawer, and being connected with one of the jaws, and a handle is added for conveniently moving the vise, all as will be hereinafter set forth.

Figure 1 represents a perspective view of a vise embodying my invention. Fig. 2 represents a vertical section thereof. Fig. 3 represents a partial top view and partial horizontal section of a portion thereof. Fig. 4 represents a perspective view of the boss to which the operating screw is fitted. Fig. 5 represents a face view of a plate which is secured to one of the jaws and forms the bearing for the gudgeons on said boss. Fig. 6 represents a section of a portion on an enlarged scale. Fig. 7 represents a section of the jaws on an enlarged scale.

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

Referring to the drawings:—A designates a base which is mounted on wheels B, after the manner of a truck, whereby the vise may be moved from place to place. At the end of the base opposite to the wheels B, is a leg C, which depends in such manner as to rest on the floor or ground, and prevent slipping or shifting of the vise. Pivoted to the base are the crossed arms D, D', one of which passes freely through the other, as at E, the upper ends of said arms carrying the jaws F, F', which may be set or movable, for the purpose of holding pipe or other objects as desired.

G designates a screw which passes freely through the arm D' and engages with an in-

ternally threaded boss H, which freely occupies an opening J in the arm D, said boss having gudgeons K projecting laterally therefrom, the same being mounted or seated in recesses L in a plate M, the latter being secured to the jaw D and having an opening N for the free passage of the screw G therethrough, said screw also passing freely into a recess P in the bottom of the tray Q, which is secured in position aside of the jaw D' relatively to the location of the screw G, as most clearly shown in Fig. 2. Secured to said bottom of the tray Q, are ears R, in which are mounted the gudgeons K of the boss H, said ears having angular plates S formed therewith, for firmly connecting the ears with said bottom, as will be seen in Fig. 6. The tray Q is provided with a drawer T for storage of tools, &c.

Connected with the arms D, D', above the axes thereof are links U, which are pivoted to a cross-head V, the latter having connected with it a guiding stem W, which is freely fitted in an opening in the frame or base A.

The operation is as follows:—When the screw is rotated, the jaws open or close, as the case may be, and the arms move on each other, thus steadying the same. This steadying of the arms is increased by the action of the links U, the cross-head V and stem W, whereby lateral motions of the arms and jaws are prevented. As the arms change their angles, the boss H oscillates and conforms to the same, owing to its gudgeons being freely seated on the plate, and thus the screw is permitted to adjust itself relatively to the motions of the arms and prevented from being strained.

X designates a handle which is mounted on ears Y, secured to or framed with the truck A, said handle being adapted to move the vise from place to place, and when not in use, to be folded on the arm D and engaged by a hook Z thereon, so as to be prevented from displacement.

Mounted on the ears A' on the base A are props or stays A² whose upper ends are mounted on ears A³ which are secured to the tray Q, said stays turning on their axes as said tray rises and falls, due to the opening and closing motions of the jaws F, thus firmly supporting said tray, especially at its outer end. The ears A' on which the lower ends of the stays are mounted also constitute the bear-

ings for the axis of the arms D'. The inner sides of the jaws F are provided with faces F', which are adapted to clamp pipe, tubing and other shapes, said faces being removable and adjustable in their nature.

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

1. A vise having a base with ears thereon, two arms pivoted to said ears, one of said arms freely passing through an opening in the other, jaws on the upper ends of said arms, a plate with an opening therein connected with one of said arms, an interiorly threaded boss mounted in said plate, and a screw rotatable in one of the arms and working in said boss, and passing freely through the opening in said plate, said parts being combined substantially as described.

2. A vise having a base, arms pivoted thereto and crossing each other, a tray having ears,

stays connecting said ears, and ears on the base, jaws on said arms, and mechanism substantially as described connected with said tray and arms for operating the said jaws, said parts being combined substantially as described.

3. A vise having a base with ears, arms pivoted to said ears, and crossing each other, jaws on said arms, a cross head with a stem, the latter moving in an opening in the base, links connecting said cross head to said arms, a screw rotatable in one of said arms, and working in a pivoted boss in the other arm, and a tray having journal bearings for said boss, said parts being combined substantially as described.

JACOB GUENTHER.

Witnesses:

JOHN A. WIEDERSHEIM,
R. H. GRAESER.