



# United States Patent Office.

FERNANDO J. DIBBLE, OF CHICAGO, ILLINOIS.

*Letters Patent No. 82,095, dated September 15, 1868.*

## IMPROVEMENT IN VISES.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, FERNANDO J. DIBBLE, of Chicago, in the county of Cook, and State of Illinois, have invented a new and useful Improvement in Vises; and I do hereby declare and make known that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and the letters and figures marked thereon, which form part of this specification.

My said invention consists in supporting the vise in a socket, to be secured in or fastened to the bench, in such a manner that the vise-jaws may be raised and lowered at pleasure, and so that the vise can be removed from the socket or support, to permit a pair of bench-shears, or a small anvil, or any other desired implement to be applied upon the bench, said attachment to permit of a rotating movement of the vise, or not, as may be preferred.

My invention further consists in a novel construction or form of the slide, which lies above the screw, connecting the jaws, it being of a roof-shape or angle, with its apex upward, so that the filings or dust will not lie upon the same, but will slide or fall off, as is hereinafter more fully explained and described.

To enable those skilled in the art to construct and use my said improvement, I will now describe the same with particularity, making reference in so doing to the aforesaid drawings, in which—

Figure 1 represents a side elevation of my invention, and

Figure 2 is a cross vertical section at the line *x* in fig. 1.

Similar letters of reference in the several figures denote the same parts of my invention.

A represents the bench upon which the vise is to be applied, in which a suitable opening is made to receive the socket B, which is secured to the bench by means of screws, *b*, passing through the horizontal flange thereof, and into the bench, as shown.

The said socket B may be circular in form, to receive a round standard or spindle, C, upon which the vise is supported, so that said vise may be revolved laterally upon its support, or said socket and standard C may be of a rectangular or any other shape, provided it admits of a vertical movement of said standard, whether the vise or its standard be susceptible of a rotation in its support or not.

But in case the configuration of the socket and the standard be angular, so as to prevent the rotation of the standard in the socket, still, if the form of the standard and the socket corresponds, the rotation of the vise to occupy different positions could be effected by raising the standard wholly out of its socket, turning it to the desired position, and then dropping it back into the socket, where it may be secured at the desired height, by means of a set-screw, *a*, by operating upon the handle *e*, or in any other suitable manner.

When the vise is at its lowest position, it may be sustained in its position by resting upon the flange or top of the socket, as indicated in fig. 2.

The jaw D is fixed upon the top of the standard C, and the jaw E is connected therewith by a slide, H, which is rigidly attached to the jaw E, and reciprocates through a suitable slot in D as the jaws are made to approach each other, or as the jaw E is made to recede from the jaw D.

The jaw E, which is the movable jaw of the vise, is caused to move towards or away from the jaw D by means of a screw, F, turned by an arm, G, in the ordinary manner, said screw passing through a nut, N, rigidly secured to the stationary jaw D, and being provided with a groove or depression between the collars, marked *d*, into which a saddle, *e*, rigidly fixed to the jaw E, enters, so that by turning the screw into said nut N, the jaw E is forced towards the jaw D, and by turning said screw out from said nut N, the jaw E is moved away from the jaw D in the usual manner.

It will be seen from the drawings, that the upper side of the said slide H, instead of being flat, as in ordinary vises, is made roof-shaped, or sloping down each way, so that the filings or dust created by operating upon the material held in the jaws of the vise will at once slide off from the surface of the slide, instead of accumulating upon the same, as is the case with the flat-topped slides in ordinary use.

The slide H is thus kept clean, and prevented from wearing out, which would cause the jaws to loosen upon their guides, so as not to come accurately together in their operation.

I do not claim any of the devices herein described separately, as they have heretofore been used in other combinations.

Having described the construction and operation of my improvement, I will now proceed to specify what I claim, and desire to secure by Letters Patent.

1. I claim the combination and arrangement of the jaws E D, the standard C, and socket B, provided with a set-screw or its equivalent, the whole operating in the manner and for the purposes set forth.

2. I claim the combination of the jaws E D, slide H, screw F, standard C, and socket B, arranged and operating in the manner and for the purposes described.

F. J. DIBBLE.

Witnesses:

W. E. MARRS,

L. L. COBURN.