

J. H. WILKINSON.

PIPE VISE.

No. 182,783.

Patented Oct. 3, 1876.

Fig. 1.

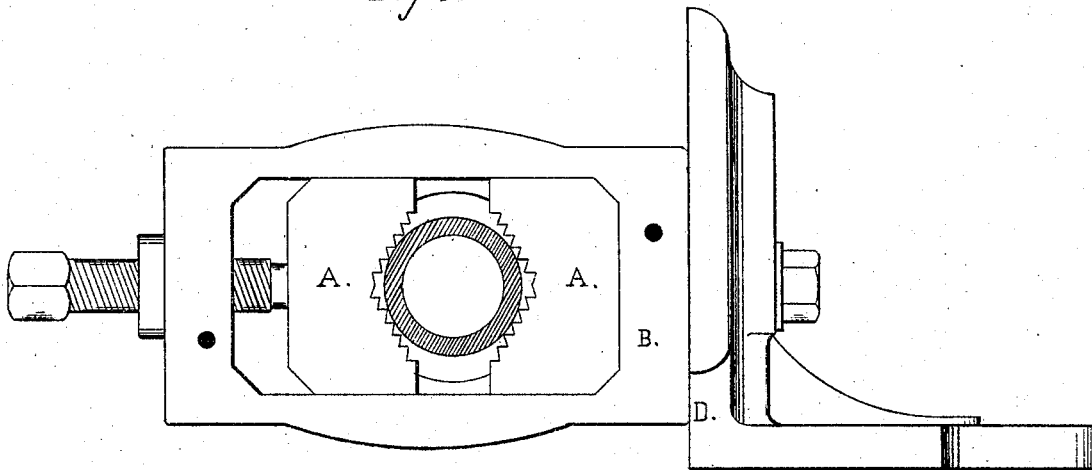
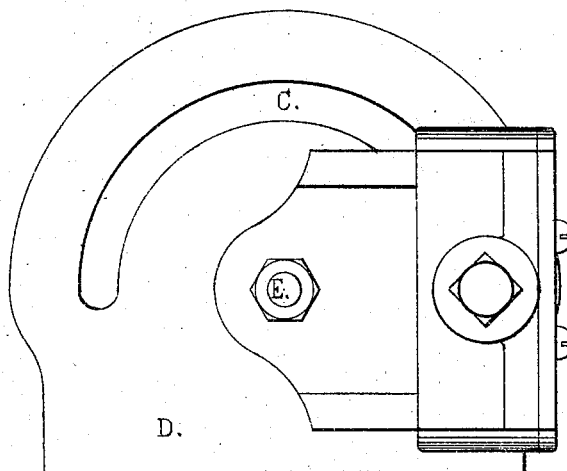


Fig. 2.



Witnesses;
Greenleaf Brown Rundlett.
Edwin Cressy Williams.

Inventor;
James Handforth Wilkinson.

UNITED STATES PATENT OFFICE.

JAMES H. WILKINSON, OF SOUTH NEWMARKET, NEW HAMPSHIRE.

IMPROVEMENT IN PIPE-VISES.

Specification forming part of Letters Patent No. 182,783, dated October 3, 1876; application filed March 25, 1875.

To all whom it may concern:

Be it known that I, JAMES HANDFORTH WILKINSON, of South Newmarket, State of New Hampshire, have invented a Pipe-Vise, so called, of which the following is a specification:

My invention consists of two jaws, A A, Figure 1, made of any suitable material, but preferably of cast-iron, and, when made of cast-iron, having the corrugated or fluted surface, which comes in contact with the pipe or other object held chilled. Both jaws are loose or movable in the box B, Fig. 1, but in actual use only one jaw is moved, and that in the usual way by a feed-screw.

The chilling of cast-iron for various purposes is well known to all mechanics, but the application of it for the purpose of a pipe-vise is new and original with me, as I verily believe. I do not, however, confine myself in the use of chilled cast-iron jaws to a pipe-vise only, as, in my judgment, they can be used with great if not equal advantage as a substitute for the steel jaws that are cast in or attached by screws or rivets to a common vise.

The bench-plate D and the vise proper B are connected by means of bolts, one of which is a center or swivel bolt, E, Fig. 2, and the other, at a suitable distance from the said center, traverses the circular slot c, and when tightened secures the vise and object held at any desired angle, from the horizontal to the perpendicular inclusive.

A very important advantage in my improved vise is that the top or front of the vise, at whatever angle, is always free from interference, thus enabling one to cut the shortest possible piece of pipe.

It has been my aim to construct a durable, simple, cheap, and efficient vise, and so far as I know my invention secures these ends more fully than any other. The first cost of an article, and the expense of keeping it in repair, are items which largely determine its value to the user, and in my judgment cast-iron jaws perfectly chilled will outlast any steel jaws that can be made, and when worn out can be replaced by new ones at less than one-quarter the cost of repairing steel ones.

By my construction of jaws in small loose pieces, both free to move in a frame or box, and to be loosely placed therein without needing to be in any way permanently attached,

and free to be lifted out whenever desired, it will be seen they can be very cheaply made, and that in case of the damage or loss of a jaw it can in a moment be replaced by another at a trifling cost, or that any jaw can be transferred from one vise to another without any labor or cost, or any alteration whatever, and by making them of cast-iron with the teeth, flutes, or corrugations on their holding surface, formed in the very act of casting, there is positively no expense at all incurred in order to provide them with these corrugations, and that being small they can be more thoroughly and evenly chilled, while, as above stated, they will, it is believed, outlast steel ones, even if the latter were made loose and of the same size and shape. Again, I dispense with the large body of metal of which the vise-jaw usually forms an integral part, and which is costly, and which, if the biting-surface of the jaw becomes impaired or damaged, renders the vise useless. When one of my loose jaws wears out by use, the integrity and completeness of the vise is not thereby affected, for another jaw being in its stead deposited in the frame or jaw-holder, the vise is instantly ready for use.

It will be noticed that the holder which contains the loose jaws, is suspended upon and arranged to be turned in a vertical plane upon a fixed center, so that the mouth of the jaws may be presented in any position allowable by this movement, and that the arched slot for adjusting to these positions is in a vertical plane, and parallel with the plane of the space between the mouths of the jaws, and that the bench-plate does not require to be shifted before such turning, as the arched slot in the stationary bench plate D permits all the movement needed.

I do not claim a horizontal bed-plate having a straight slot terminating in an arched one; but

I claim—

In combination with the box or jaw-holder, the two loose detached chilled cast-iron jaws, A A, located therein, and a jaw-adjusting screw unattached to either jaw, substantially as shown and described.

JAMES HANDFORTH WILKINSON.

Witnesses:

GREENLEAF BROWN RUNDLETT,
EDWIN CRESSY WILLIAMS.