(No Model.)

W. P. CLARK.

PIPE VISE.

No. 261,832. Patented Aug. 1, 1882.

Fig. 1.

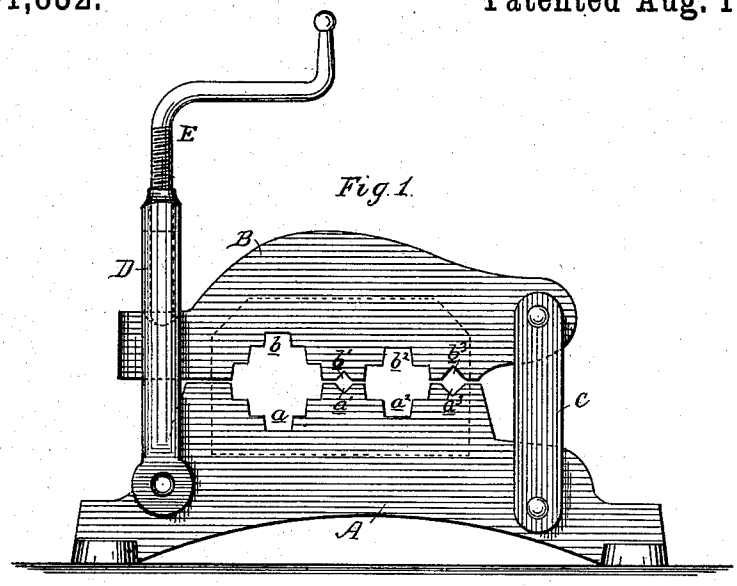


Fig. 2.

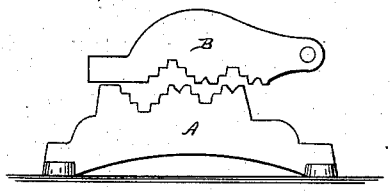


Fig. 3.

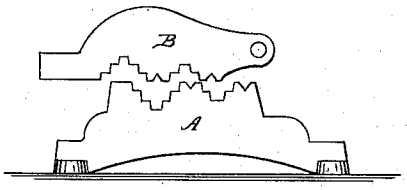


Fig. 4

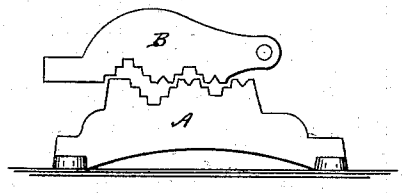


Fig. 5.

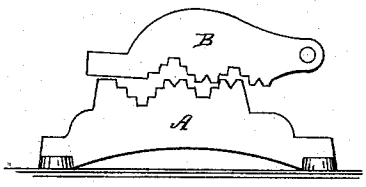
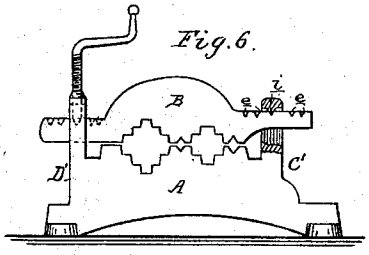


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIAM P. CLARK, OF BELMONT, NEW YORK.

PIPE-VISE.

SPECIFICATION forming part of Letters Patent No. 261,832, dated August 1, 1882.

Application filed June 9, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. CLARK, a citizen of the United States of America, residing at Belmont, in the county of Allegany and State of New York, have invented certain new and useful Improvements in Pipe-Vises, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to that class of pipe-vises in which there are two jaws, a movable connection, and a clamping device; and the invention consists in the peculiar construction and arrangement of parts hereinafter described and claimed, whereby a much larger variety of sizes of pipes can be securely clamped in such vises than is usually the case.

In the accompanying drawings, Figure 1 represents a side view of my vise in its ordinary working position; Figs. 2, 3, 4, and 5, similar views with the jaws in different positions, and Fig. 6 a modification.

A represents the lower or fixed jaw, and B the upper or movable one, the two jaws being connected together preferably by the pivoted wrought-iron bars C, one on each side of the jaws; or a single bar may be used, if preferred, either working in loose mortises or slots in the jaws, or the bar may have its ends made large and slotted, so as to embrace the jaws on both sides. Attached in any suitable way, but preferably pivoted, is a yoke, D, having a threaded hole in its upper extremity to receive a screw, E, so as to form a clamp for fastening the loose ends of the jaws together.

It will be observed that each jaw has four recesses, a a' a^2 a^3 and b b' b^2 b^3, which may all be of different sizes, or a a^2 and b b^2 may be of the same size.

It will also be seen that by moving one jaw over the other lengthwise, as shown in the outline, Figs. 2, 3, 4, and 5 in the drawings, so as to allow the recesses in one jaw to pass over another recess in the other jaw, or the projection between the large recesses in one jaw to pass into either one of the recesses in the other jaw, many different sizes of pipes or rods may be securely held and clamped.

I have shown the recesses a a^2 b b^2 of different sizes, but this is not actually necessary, as the same, or substantially the same, range of adjustability may be had by having the large recesses of the same size as when they are of different sizes, for a notched projection in either jaw passing into either of the large recesses of the other jaw will hold the larger sizes of pipe and the recesses in the projections will clamp the smallest ones.

The main object in having two large recesses in each jaw is that one recess may receive one projection on one jaw, while the projection on the other jaw passes into a recess in the other, as shown in Figs. 4 and 5, so that smaller pipes can be clamped in the large recesses than could be if there were no recess to receive the projection of the other jaw.

It will thus be seen that there is no great necessity for the large recesses being of different sizes, and that, in fact, if one of the recesses in each jaw was round and smooth and otherwise unfitted for holding pipe a large range of sizes of pipes or rods could still be clamped in the other recesses. I prefer, however, to make the recesses of different sizes, as with different sized recesses less motion of the screw or other clamping device is required.

The recesses a^3 b^3 may be entirely dispensed with, if preferred, as they are not actually necessary; or, if desired, additional recesses may be made in the other ends of the jaws. The use of the additional recesses has the advantage that the wear is more evenly distributed, and that should some of the recesses in time become worn smooth the others could still be used.

In some cases I intend to make a series of depressions on the top of the upper jaw for the end of the screw to bear upon, so that the yoke D may always remain perpendicular, or nearly so; or I may make the yoke a fixture and allow the jaw B to slide through it, and have the screw E bear on the top of the jaw.

In the modification shown in Fig. 6 I make the lower jaw with two fixed yokes, C′ D′, which may either be cast on or made of wrought or malleable cast-iron, united to the lower jaw in any convenient manner.

Instead of the upper jaw being pivoted to the yoke, as in Fig. 1, it may be made to slide through it; or the top of the upper jaw may have a series of notches, e e e, into which fits a V-shaped projection, i, on the under side of the yoke C′. The other end of the upper jaw

may be plain to form a bearing for the screw, or it may have recesses for the screw to correspond with the notches on the other end.

In lieu of the screw E, an eccentric or cam lever may be pivoted in the yoke, if preferred, or any other known clamping device in lieu of the yoke and screw may be used.

The jaws should be made with the recesses or notches chilled or case-hardened, but they may be made with removable hardened steel dies of the form shown in dotted lines in Fig. 1.

I do not limit myself to the exact form or number of recesses, as they may be varied considerably without departing from the spirit of my invention.

What I claim as new is—

1. The combination, in a vise, of two jaws constructed to be clamped together, each jaw provided with two or more recesses and one or more projections, and one constructed to be moved endwise over the other, so as to bring different recesses in line with each other and to allow of the projection in either jaw to pass into a recess in the other, and suitable means for clamping the jaws together, whereby many different-sized openings may be made, substantially as described.

2. The combination, in a vise, of two jaws constructed to be clamped together, each jaw being provided with two large recesses and a small recess between the large ones, and one constructed to be moved endwise over the other, so that the projection containing one small recess shall pass into a large recess in the opposite jaw and the projection containing the small recess in said opposite jaw shall pass into one of the large recesses of the other jaw to clamp the pipe or rod, and suitable means for clamping the jaws together, substantially as described.

3. The combination, in a vise, of two jaws connected together so as to traverse one over the other lengthwise, each jaw provided with two pipe-recesses, and the projection between the recesses in one jaw having a smaller recess to pass over either recess in the other jaw and a device for clamping the jaws together, substantially as and for the purpose specified.

4. The combination, with the base A, provided with two notched recesses, of the traversing jaw B, also having two recesses, the pivoted connection C, and the clamp D, the base, jaw, and connections all being loosely connected to allow of the notched projection between the recesses in one jaw passing over either of the recesses in the other jaw, substantially as and for the purpose specified.

5. The combination, with the base A, provided with two notched recesses of different sizes, of the traversing jaw B, also having two recesses, the pivoted connection C, and the clamp D, the base, jaw, and connections all being loosely connected to allow of the notched projection between the recesses in one jaw passing over either of the recesses in the other, substantially as described.

6. The combination, with the base A, provided with the recesses a a' a^2, of the jaw B, also having recesses b b' b^2, the swinging clamp D, and the pivoted connection C, all constructed substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM PENDLETON CLARK.

Witnesses:
W. H. DAVIS,
V. A. WILLARD.