A. W. Bush,

Watchmaker's Vise.

No. 108877. Patented Nov. 1. 1870.

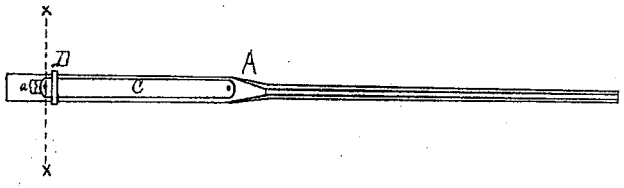


FIG: 1.

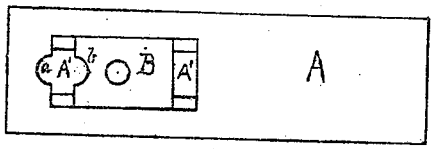
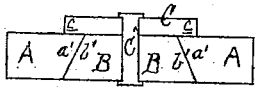


FIG: 2.

FIG: 3.



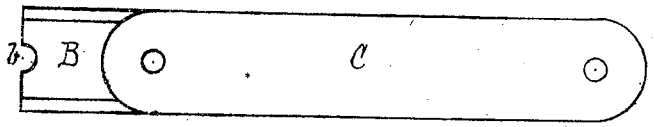


FIG: 4.

WITNESSES.
Edwin James.
J. L. Litton

INVENTOR.
Arthur W. Bush.
per J. E. P. Holmead
Attorney

United States Patent Office.

ARTHUR W. BUSH, OF ST. CLOUD, MINNESOTA.

Letters Patent No. 108,877, dated November 1, 1870.

IMPROVEMENT IN WATCHMAKERS' 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, ARTHUR W. BUSH, of St. Cloud, in the county of Stearns and State of Minnesota, have invented a certain new and useful Improvement in Watchmakers' Vises; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon making part of this specification, in which—

Figure 1 is a top-plan view.

Figure 2 is a bottom-plan view of the main plate or arm with the sliding jaw in position.

Figure 3 is a vertical sectional view on the line *x x*, fig. 1.

Figure 4 is a top-plan view of the sliding jaw and spring detached from the main plate or arm.

The object of my present invention is to furnish a convenient tool or vise for the use of the makers and repairers of watches, and which, while chiefly designed for holding the stump on the under side of the second-hand, for the purpose of filing and reaming out the necessary socket or recess therein, is also admirably adapted to many other branches of the fine work peculiar to this art.

Heretofore the second-hand, during the process alluded to, has been usually held between the fingers of the watchmaker, which was always more or less objectionable and inconvenient, and in view of which the advantages of a cheap, convenient, and secure instrument, such as hereinafter described, as an aid in the work, will readily suggest themselves.

The invention consists in cutting in a flat metallic plate an oblong slot, and inserting in said slot a short sliding plate.

The head of the slot and the forward end of the sliding plate furnish the jaws of the vise, and are provided, at their centers, with semicircular recesses, which insure the secure retention of the stump of the second-hand of the watch during the process of filing and reaming the same.

The slot and sliding plate are beveled, so as to guide the movement of the latter in the former, and prevent the plate from being drawn out of the slot by the tension of the spring.

To the main and sliding plates are secured the ends of a spring.

This spring is of such length and attached at such a point to the main plate as to give it a slight hooped form, its force being such as to draw the sliding plate against the rear end of the slot in the main plate.

The sliding plate is operated by means of a clamp-slide, which encircles both the main plate and spring, driving the jaws of the vise together by depressing the spring.

To enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

A is the main plate or stock of the device, and may be constructed of any suitable metal or other material.

This stock is a flat plate at its forward end, and rounded at its rear end, so as to afford a convenient handle for the workman to grasp.

A′ is an oblong slot cut in the flat portion of the stock A.

The forward end of this slot is provided with a semicircular recess, *a*, as clearly shown in fig. 2, and is beveled at its sides, as clearly shown at *a′ a′*, fig. 3.

B is the sliding jaw of the vise, and consists of a short rectangular plate, made of metal or other suitable material.

This plate B, like the stationary jaw, is recessed at *b*, and is also provided with beveled sides *b′ b′*, corresponding with the sides *a′ a′* of the slot A′.

This plate B is retained in position by the spring C, to which it is secured by the bolt C′.

The projecting edges *c c* of the spring C rest on the upper face of the plate A, as clearly shown in fig. 3, whereby all danger of the plate B falling out of the slot is securely guarded against.

C is a flat metal-plate spring.

One end of this spring is attached to the stock A, and the other to the sliding jaw or plate B, as clearly shown in fig. 1.

This spring is of such length and is attached to the plate or stock A, at such a point that when not depressed by the clamp-slide E, or its equivalent device of a hoop form, its tension draws the plate or jaw B against the rear end of the slot A′.

D is an ordinary clamp-slide, and encircles the plate or stock A and spring C.

From the foregoing description the operation of the device can be readily understood.

As has been stated, the spring C draws the sliding jaw B against the rear end of the slot A′.

When it is to be used, the clamp-slide D is passed over the plate A and spring C, as shown in fig. 1. This depresses the spring and drives the jaws together, the stump of the second-hand of the watch being firmly held in the recesses *a b*.

Having thus fully described my invention,

What I claim therein as new, and desire to secure by Letters Patent of the United States, is—

The slotted plate or stock A, sliding plate B, spring C, and clamp-slide D, combined and arranged as shown, so as to furnish a watchmaker's tool or vise, substantially as described.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

ARTHUR W. BUSH.

Witnesses:

GEO. L. HAYS,

Z. H. MORSE.