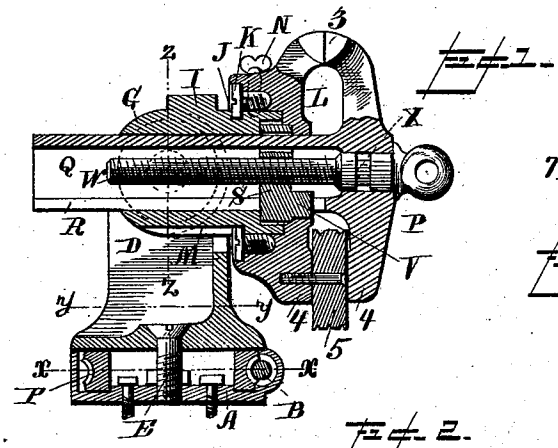
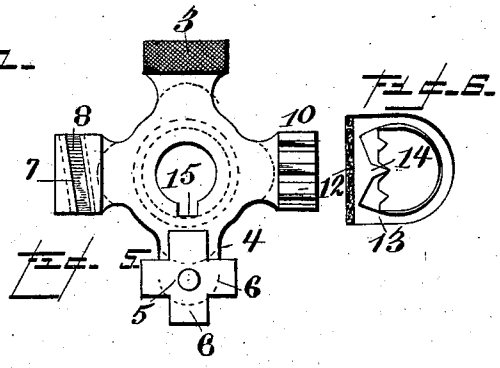
(No Model.)

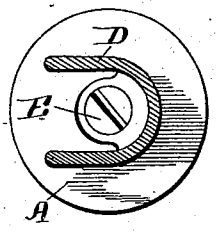
# J. F. EMMERT.

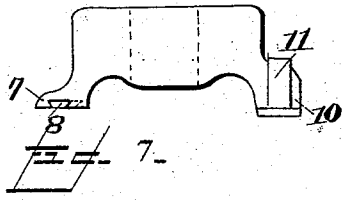
## JEWELER'S VISE.

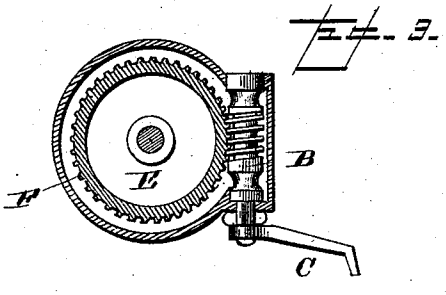
No. 510,124. Patented Dec. 5, 1893.

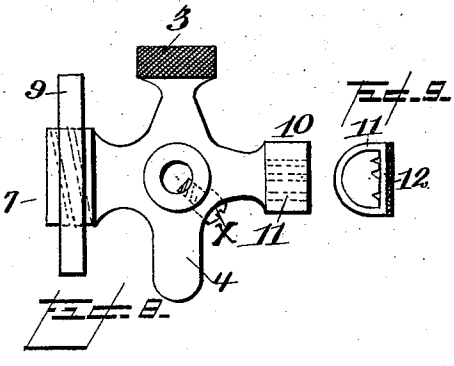


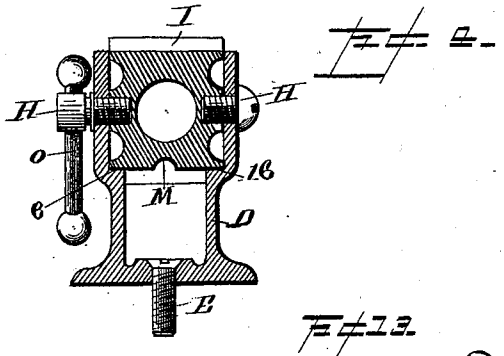


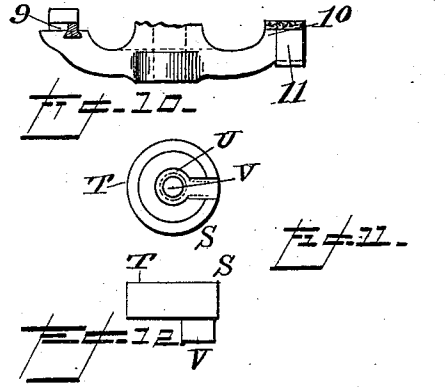


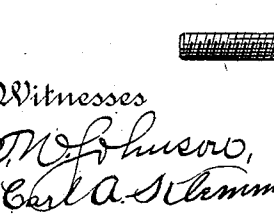


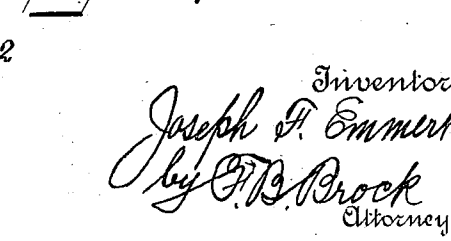






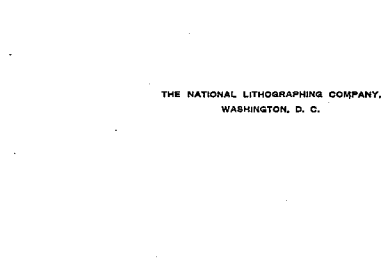












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# UNITED STATES PATENT OFFICE.

JOSEPH F. EMMERT, OF WAYNESBOROUGH, PENNSYLVANIA.

## JEWELER'S VISE.

SPECIFICATION forming part of Letters Patent No. 510,124, dated December 5, 1893.

Application filed July 15, 1893. Serial No. 480,567. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH F. EMMERT, a citizen of the United States, residing at Waynesborough, in the county of Franklin, State of Pennsylvania, have invented certain new and useful Improvements in Jewelers' Vises; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the letters and figures of reference marked on the accompanying drawings, which form a part of this specification.

Figure 1 is a central vertical section of a vise to which my improvements have been applied. Fig. 2 is a horizontal section through the line *y y* of Fig. 1. Fig. 3 is a horizontal section along the line *x x* of Fig. 1. Fig. 4 is transverse section through the line *z z* of Fig. 1. Fig. 5 is a front elevation of the inner vise-jaw, and Fig. 6 is a detail thereof. Fig. 7 is a side or edge view of the inner jaw. Fig. 8 is a front elevation of the outer jaw, and Fig. 9 is a detail of the same. Fig. 10 is an edge view of the outer jaw broken way. Figs. 11 and 12 are front and side elevations of the operating nut. Fig. 13 is an elevation and partial section of the main operating screw bolt and handle.

The object of my invention is to provide a vise for jewelers having certain advantageous functions which will be hereinafter fully set forth. While designed for such purposes, however, I wish it clearly understood that I do not desire to confine the use of my vise to work in connection with the jeweler's trade, because it is perfectly obvious to those skilled in the art that the vise, as a whole or in part, may be used in other connections.

The invention therefore consists in the following construction and combination of parts, which will first be fully described, and the features of novelty therein, then pointed out and claimed.

In the drawings—A. represents the base-plate for attaching the vise to any suitable support.

B. is a worm wheel mounted in the plate A, and having a crank C for rotating it.

D. is a pivoted standard mounted upon plate A. and oscillating upon bolt E.

F. is a gear formed with or attached rigidly to the under side of standard D, and meshing with worm B.

G. represents the vise-head journaled in the forked upper arms of standard D.

H are the bearings for the head upon which it may turn a quarter revolution, or from a vertical to a horizontal position.

I is an anvil-block upon head G.

J. is an annular groove formed on the outside of head G adapted to receive the heads of a series of screws K.

L. is the inner jaw-head provided with a central cylindrical recess adapted to fit onto a similarly formed projection upon the head G, it being held rotatably thereon by said screws K. taking into the jaw-head.

M. is a channel formed on the under side of head G, along which each of the screw-heads K may pass, and be driven home in succession, so that said screws, collectively, form a holding device between heads G and L, and yet permit the rotation of the latter upon the former.

The inner jaw-head L is preferably adjusted to four positions corresponding to the four jaws thereon, and a set-screw N takes into four depressions in the vise-head G for locking the jaw-head in such positions.

The vise-head G may be set at either its extreme or intermediate range of adjustment by the lever O and bearings H.

P is the outer jaw-head provided with an inwardly projecting hollow sleeve Q, having a slot R extending through one side. The head G is pierced to receive this sleeve.

S is a collar-nut which is put in place before the heads G and L are brought together, and held therein in bearings and secured by screws K. It has an outer band T, and inner nut U, connected by a tang or lug V, between which is an annular opening W, through which the sleeve Q slides. The band T surrounds sleeve Q, the nut V is within the sleeve opening, and the rib or lug V is within the slot R, thereby preventing the rotation of the collar-nut S, except when the outer jaw-head P is rotated.

W is the jaw-clamping-screw bolt rotating in jaw-head P and the nut V, and held in place by a screw X. Bolt W acts in the usual manner to advance and recede the jaw-head P.

Y is the operating lever of screw-bolt W.

It is recessed to receive a yielding spring Z, having an intermediate hump 1, which takes into a depression 2 in bolt W, holding the lever Y at the center so that it may be operated like a balance wheel, at the same time yielding to a lengthwise pull in order that the full leverage may be had.

The pair of jaws 3 3 are of the usual form. The opposite pair of jaws 4 4 carry preferably a rotating hard-wood filing block 5 pivoted to one of the jaws, and having a radial series of arms 6, each of which may be appropriately fashioned for the work to be done.

I may provide the jaw 7 with a diagonally disposed dovetail groove 8 to receive a correspondingly shaped bar 9 for special work. This bar 9 has endwise movement in the dovetail groove 8, which also causes a movement to or from the jaw-head. The diagonal tenon portion of the bar 9 is fixed to said bar at an angle thereto, so that, in the endwise movements of the bar, its edges will remain parallel with the faces of the opposite jaw-clamp. Both the inner and outer jaw-clamp 7 may likewise be provided with grooves 8, if desired, to receive bar 9. The opposite jaw 10 may have a grooved face, upon which I may slip, when desired, a strap 11 carrying a facing of gum 12 or other yielding substance.

As a substitute for strap 11, I contemplate using a strap 13 having any desired facing, such as gum for instance, and provided with a rocking bearing 14 upon which the strap may tilt adjustably to adapt it for special work.

By manipulating set-screw N any pair of jaws may be brought to any desired position upon rotating the jaw-head, the lug V of the collar-nut S projecting into the slot 15 of jaw-head L, so as to cause both jaw-heads to move together. This movement is in addition to the pivoted movement of the vise-head G upon the standard D.

16 are shoulders upon standard D, limiting the downward movement of vise-head G.

I claim—

1. The combination of a swiveled standard, a vise head hinged in said standard, a jaw-head revolubly mounted upon the head, and a second jaw-head revolubly mounted upon the vise-head, and mechanism for moving the latter jaw-head to and from the former one.

2. The combination of a vise, a swivel standard, a base, a gear upon the standard post, and a worm upon the base.

3. The combination of a vise having a standard post, a vise-head hinged thereto, revolving jaw-heads carried thereby, a stop-piece for limiting the downward movement of the vise-head, and means for adjusting the same.

4. The combination of a vise, a swivel standard, a head hinged upon the standard, and jaws rotatably mounted thereon.

5. The combination of a vise-head, a collar-nut secured thereto having an inner and outer sleeve and connecting lug extending outwardly and laterally from the nut, a jaw-head secured to the vise-head, another jaw-head, and means for adjusting the latter to and from the former jaw-head.

6. The combination of a vise, a screw bolt, a lever on the screw bolt, and a spring mounted upon the lever for holding the lever centrally upon the screw bolt.

7. In combination with the essential elements of a vise structure, a jaw-face having a diagonal groove, and a bar movably mounted therein as described.

8. In combination with the essential elements of a vise, a collar-nut having an outer and inner band or sleeve, and a lug-piece connecting the two and extending outwardly and laterally from the nut.

9. The combination of a standard, a vise-head hinged vertically therein, an inner jaw-head rotating on and adjustably set upon the vise-head, an outer jaw-head rotating with the inner jaw-head, and means for advancing and receding the outer jaw-head.

10. The rotating radial armed filing-block, combined with the vise and secured to the jaw-head.

11. The combination of a base, a swiveled standard mounted thereon, a vise-head hinged upon the standard, at the upper end thereof, and an inner and an outer jaw-head revolubly mounted upon the vise head.

12. The combination of a swiveled standard, a vise-head hinged upon the top of the standard, an inner and an outer jaw-head revolubly mounted in the vise-head, a feed-nut, and a locking-piece for adjustably setting the rotating jaw-heads.

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

JOSEPH F. EMMERT.

Witnesses:
E. J. OLLER,
F. C. CUNNINGHAM.