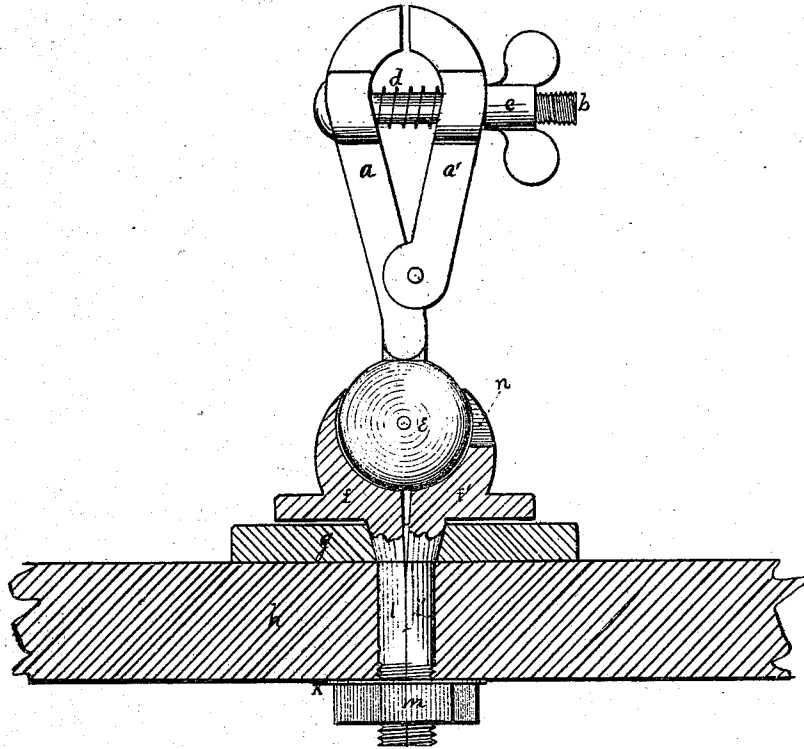


*R. J. Cushing,*

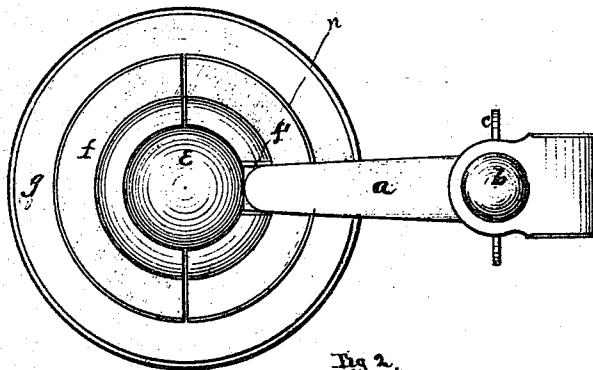
*Vise.*

*No. 100,868.*

*Patented Mar. 15, 1870.*



*Fig 1*



*Fig 2.*

*Witnesses.*  
*Isaac N. Leonard*  
*Sidney Sanders*

*Inventor.*  
*Royal J. Cushing*

# United States Patent Office.

ROYAL J. CUSHING, OF BOWDOINHAM, MAINE.

Letters Patent No. 100,868, dated March 15, 1870.

## IMPROVED VISE.

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, ROYAL J. CUSHING, of Bowdoinham, in the county of Sagadahoc, and State of Maine, have made and invented a new and useful Improvement in Vises; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, in which—

Figure 1 is a sectional side elevation, wherein the vise is shown in a vertical position, and

Figure 2, a plan, wherein the vise is shown in a horizontal position.

My invention consists in providing the foot of an ordinary vise with a ball-and-socket joint, the socket whereof is compressible, and in an appropriate device for compressing the same, whereby the ball may be set or loosened therein, the object thereof being to enable the workman to arrange and hold the vise vertically or at any angle of inclination in any direction above, and for a limited distance below, a horizontal plane bisecting the ball.

To enable others skilled in the art to practice my invention, I describe the same as follows:

In the accompanying drawings, the parts marked *a* are the jaws of the vise, hinged together near the bottom.

*b* is the screw.

*c* and *d* are the nut and spring thereon, for compressing and opening the jaws.

*e* is a ball, in which is set the foot of the main jaw *a*.

*f f* are sections or halves of the spherical socket, in one of which, *f*, is formed a notch or recess, *n*, to allow

the arrangement of the vise in a horizontal position, as in fig. 2.

*g* is a plate resting on the bench *h*, and provided with a conical hole, through which pass the conically-topped shanks *i i* of the sections *f f*.

The lower part of shanks *i i* come together and form a bolt, which is provided with a thread and nut, *m*, between which latter and the bench is a washer, *k*.

The vise being arranged at any desired angle of inclination, by turning on the nut *m* the conical tops of shanks *i i* are drawn down into the conical hole in plate *g*, compressing sections *f f*, which set the ball *e*, and thus hold the vise as arranged.

By turning the nut *m* back, the ball *e* is loosened and the whole device may be partly or wholly turned around on the bench, the bolt formed of shanks *i i* operating as a pivot.

It is obvious that the socket may be formed of two or more compressible sections, and that other arrangements of nuts and screws may be used for compressing such sections without departing in the least from the principle of my invention.

Thus having described my improved vise,

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

The combination of the sectional socket *f f* with conical, sectional, and screw-threaded shank *i i*, nut *m*, plate *g*, and socket-ball *e*, substantially as described and for the purpose set forth.

ROYAL J. CUSHING.

Witnesses:

ISAAC N. LEONARD,  
SIDNEY SANDERS.