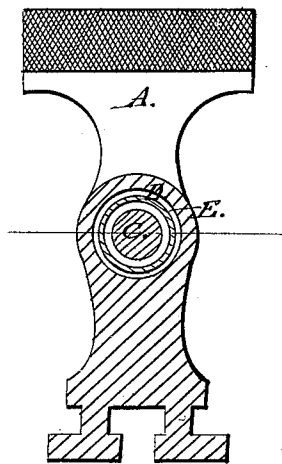
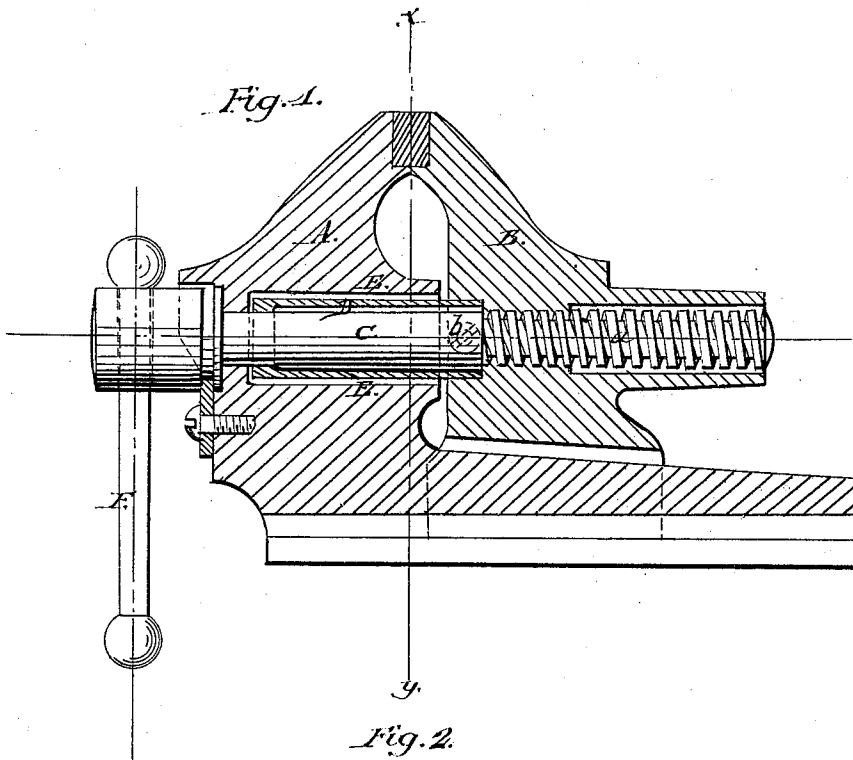


*A. G. Andren,*

*Vise.*

*No. 91,065.*

*Patented June 8, 1869.*



*Section Y. Y.*

*Witnesses:*  
*R. H. Cuddy.*  
*Samuel V. Piper.*

*Inventor,*  
*Alvan G. Andren*

# United States Patent Office.

ALBAN G. ANDRÉN, OF GOTTENBURG, SWEDEN.

Letters Patent No. 91,065, dated June 8, 1869.

## 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, ALBAN G. ANDRÉN, of Gottenburg, in the Kingdom of Sweden, have invented a new and useful Improvement in Bench-Vise; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a longitudinal section of a vise with my improvements applied thereto; and

Figure 2 represents a transverse section, taken on line *x-y* of fig. 1.

The nature of my invention consists in the arrangement, with the deeply-recessed stationary jaw and the screw-shaft, of the protecting and sliding flanged support, as shown and hereafter described.

In the accompanying drawings—

A is the stationary jaw;

B, the movable jaw; and

C, the screw-shaft, which is provided with a screw, *a*, to fit the female screw thread, cutting the movable jaw B.

D is the screw-shaft protector and sliding support, arranged concentric with the screw-shaft C, its rear end being fitted in a recess, or chamber formed in the sliding jaw B, as fully indicated in fig. 1.

The outer end of the screw-protector and support D is securely fastened to the movable jaw B, by a clamp-screw *b*, or similar means.

The front end of the screw-protector and sliding shaft support D is made with an internal flange, *n*, which just fits the smooth part of the screw-shaft C.

From the flange *n* back to the stationary jaw B, a narrow space, or chamber, *o*, is left between the protector D and the shaft C, as clearly indicated in the drawings.

A groove, *c*, is cut in the front end of the screw-

shaft C, to receive the upper end of the locking-piece *d*, which is held to the front end of the stationary jaw A, by means of the screw, or bolt *e*, whereby, when the screw-shaft is turned, by means of the handle F, to throw the movable jaw in or out, the screw-shaft is retained in its proper relative position, while, at the same time, it can be quickly removed from both of the jaws by detaching the locking-parts *d* and *e*.

As the protecting-tube D extends into the stationary jaw, the distance the jaw B is ordinarily moved, the bearing, or support which the shaft C has in the stationary jaw A is very much reduced; consequently the screw-end of the shaft would have a tendency to sag and bear heavily upon the lower part of the female thread in the movable jaw B, if it were not for the flange *n*, which serves as a sliding support to retain the outer screw-end of shaft C in a central position, as respects the hole in the movable jaw B.

The flange *n* also serves the purpose of a sliding guard to prevent dirt and dust working in upon the shaft C and screw *a*, through the chamber B.

I am aware that a patent was granted to Q. S. Backus, on the 2d day of June, 1868, for improvement in vises, and I do not, therefore, claim any part of the invention shown and described in said Backus's patent; but

What I do claim as my invention, and desire to secure by Letters Patent, is—

The arrangement, with the deeply-recessed stationary jaw A and screw-shaft C, of the flanged protecting and sliding support D, substantially as shown and described.

ALBAN G. ANDRÉN.

Witnesses:

R. H. EDDY,  
SAMUEL N. PIPER.