

G. MITCHELL.
VISE.

No. 105,588.

Patented July 19, 1870.

Fig. 1.

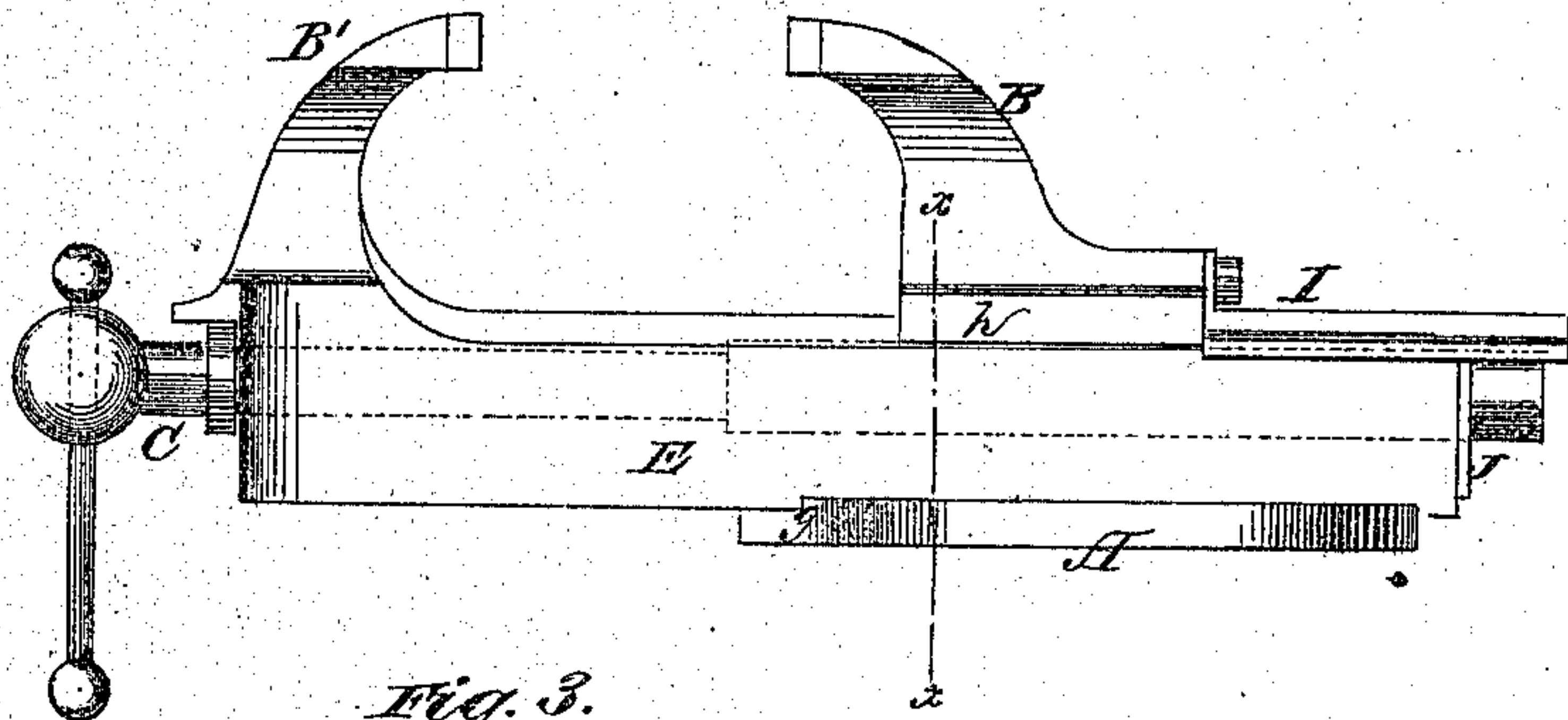


Fig. 3.

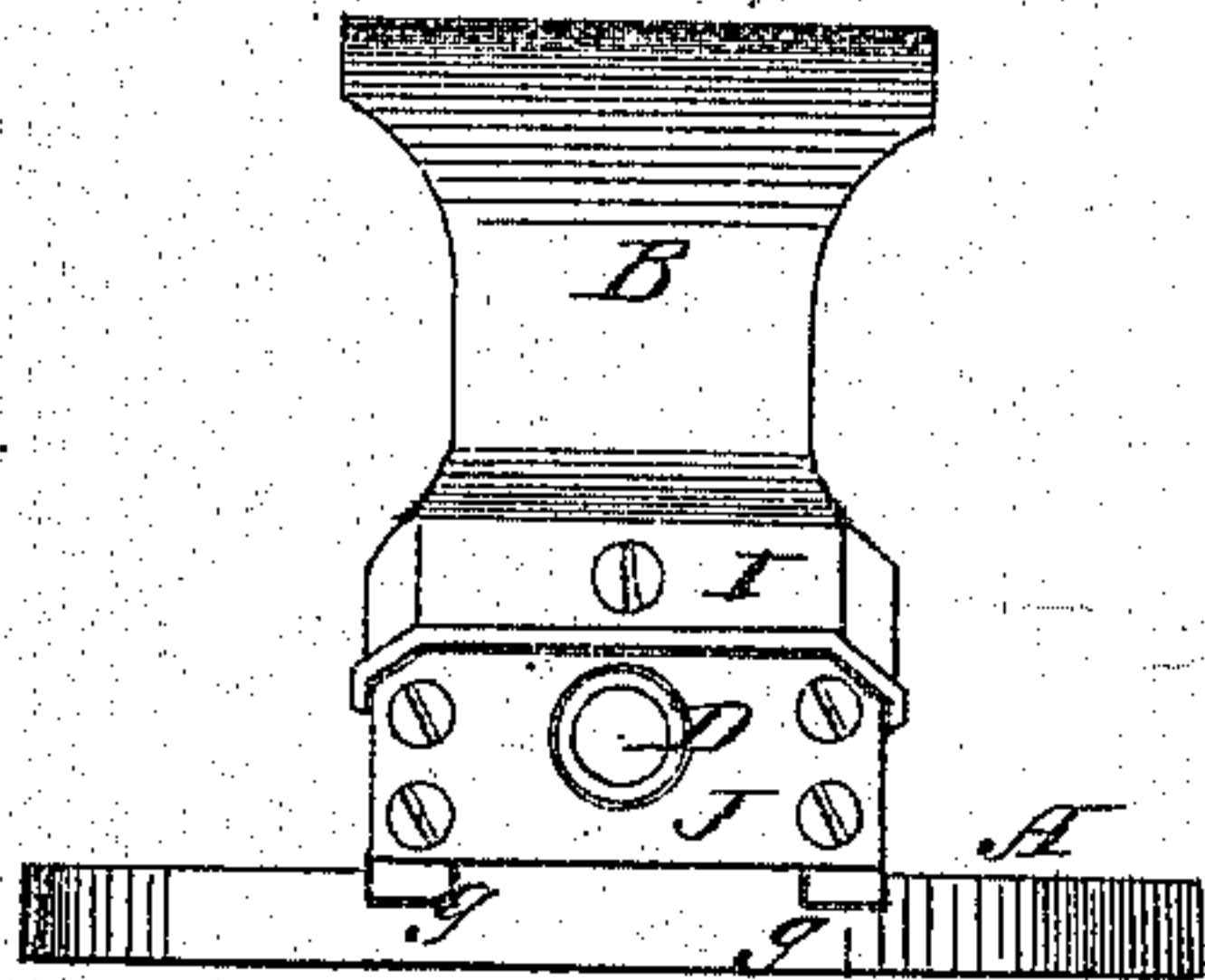


Fig. 4.

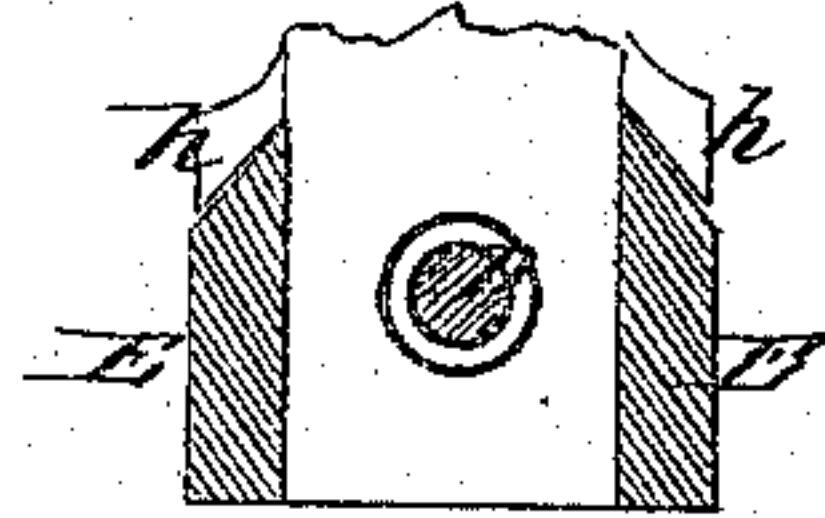
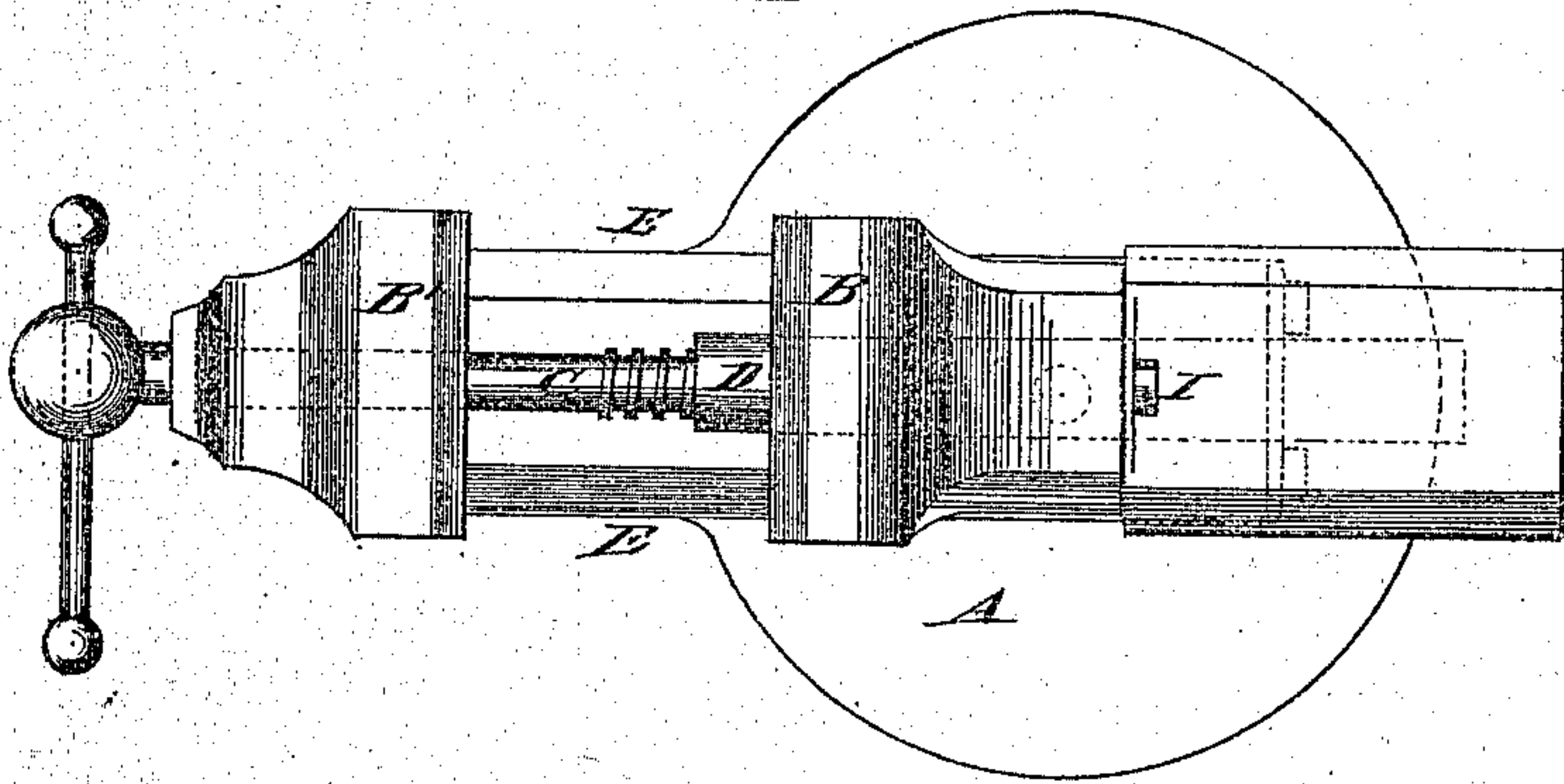


Fig. 2.



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GEORGE MITCHELL, OF TRENTON, NEW JERSEY.

Letters Patent No. 105,588, dated July 19, 1870.

IMPROVEMENT IN 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, GEORGE MITCHELL, of Trenton, in the county of Mercer and State of New Jersey, have invented a new and useful Improvement in Parallel Vise; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to new and useful improvements in vises with parallel jaws, whereby they are made stronger and more durable and useful than such vises have hitherto been; and

It consists in the construction and arrangement hereinafter described.

In the accompanying drawing—

Figure 1 represents a longitudinal side view of the vise.

Figure 2 is a top view.

Figure 3 is a rear-end view.

Figure 4 is a vertical cross-section of the vise on the line *xx* of fig. 1.

Similar letters of reference indicate corresponding parts.

A is the bed-plate of the vise.

B is the stationary jaw, which is a portion of or fast to the bed-plate.

B' is the movable jaw.

C is the screw, which, by means of the collars thereon, (near its head,) is confined in the base or shank of the movable jaw B', but is allowed to revolve freely.

D is the nut-tube, which is removably connected with the base or shank of the stationary jaw B. The screw-thread is formed in the tube by either cutting or brazing, and the tube is screwed into the base or

shank, so that it can be removed when the thread is worn out, or for other purposes.

Connected rigidly with the movable jaw are two sliding guide-bars, E E, one on each side of the screw.

These bars slide in grooves, *g g*, in the bed-plate.

Their upper edges form acute angles, and are confined in corresponding grooves in base of the stationary jaw, as seen at *h h*, fig. 4.

I is a covering-plate screwed to the rear portion of the back jaw, extending back, so as to cover and protect the back ends of the bars E, and also the end of the screw.

The back ends of the bars E are connected together by the plate J, which is screwed on after the bars are in place, and which acts as a stop against the base of the stationary jaw, to limit the forward movement of the front jaw.

By this mode of construction, the movable jaw is kept parallel with the stationary jaw, while the vise is greatly strengthened by the two sliding bars.

Having thus described my invention,

I claim as new and desire to secure by Letters Patent—

The arrangement of parts, substantially as herein described, consisting, essentially, of the attachment of the stationary jaw to the bed-plate A, and of the movable jaw to the parallel jaws B, the grooves *g* and *h* in the stationary jaw and bed-plate, for the support and guidance of bars E, the connecting-plate J, the movable nut D, and the screw C.

GEORGE MITCHELL.

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