

A. Z. Mason,

Vise.

No. 100,541.

Patented Mar. 8. 1870.

Fig. 1.

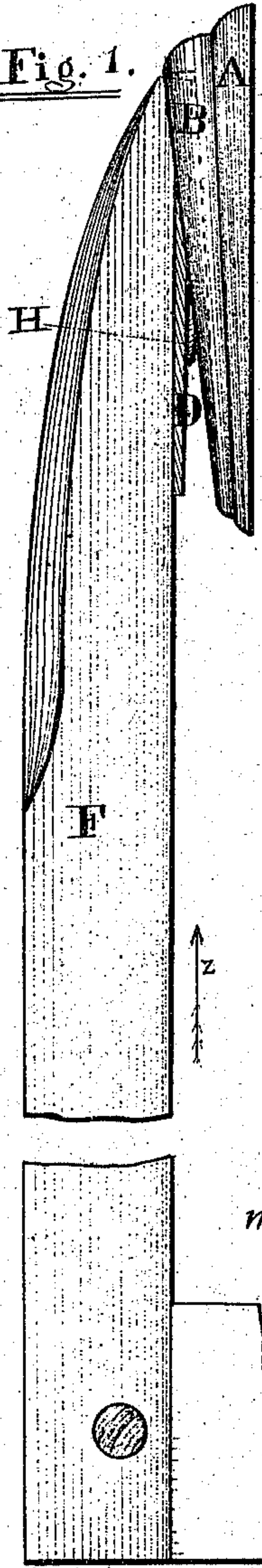


Fig. 2.

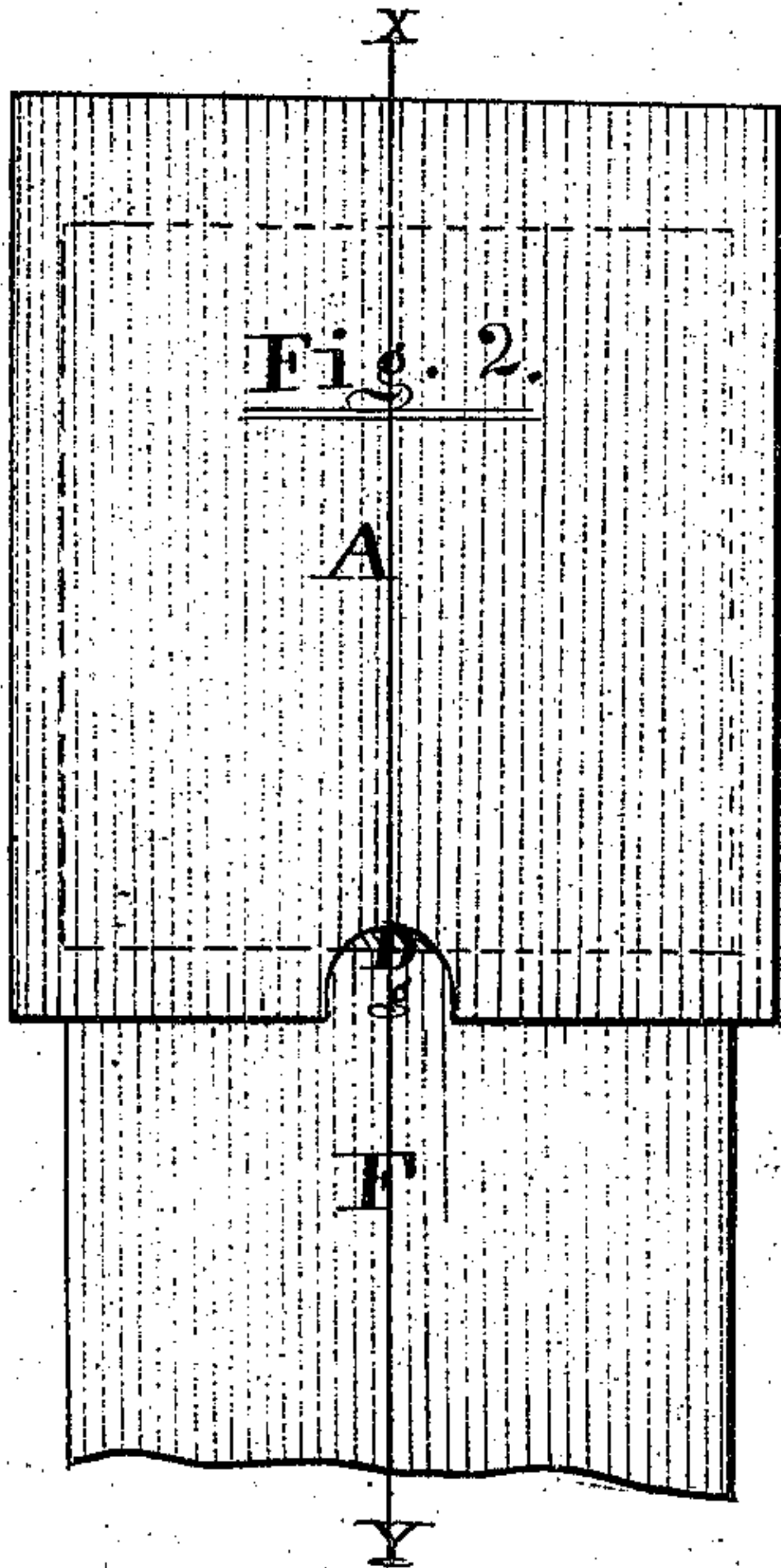


Fig. 3.

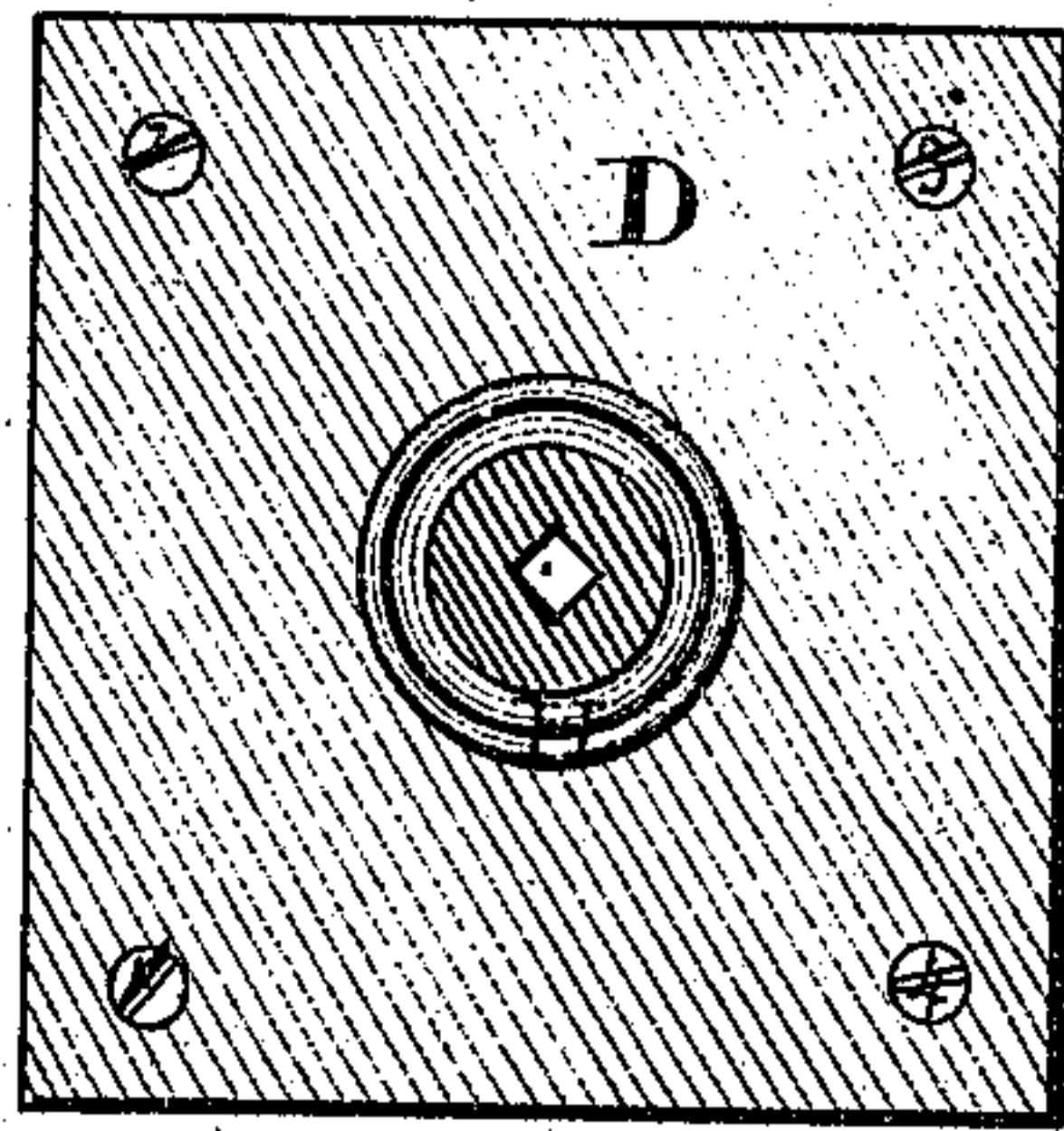


Fig. 4.

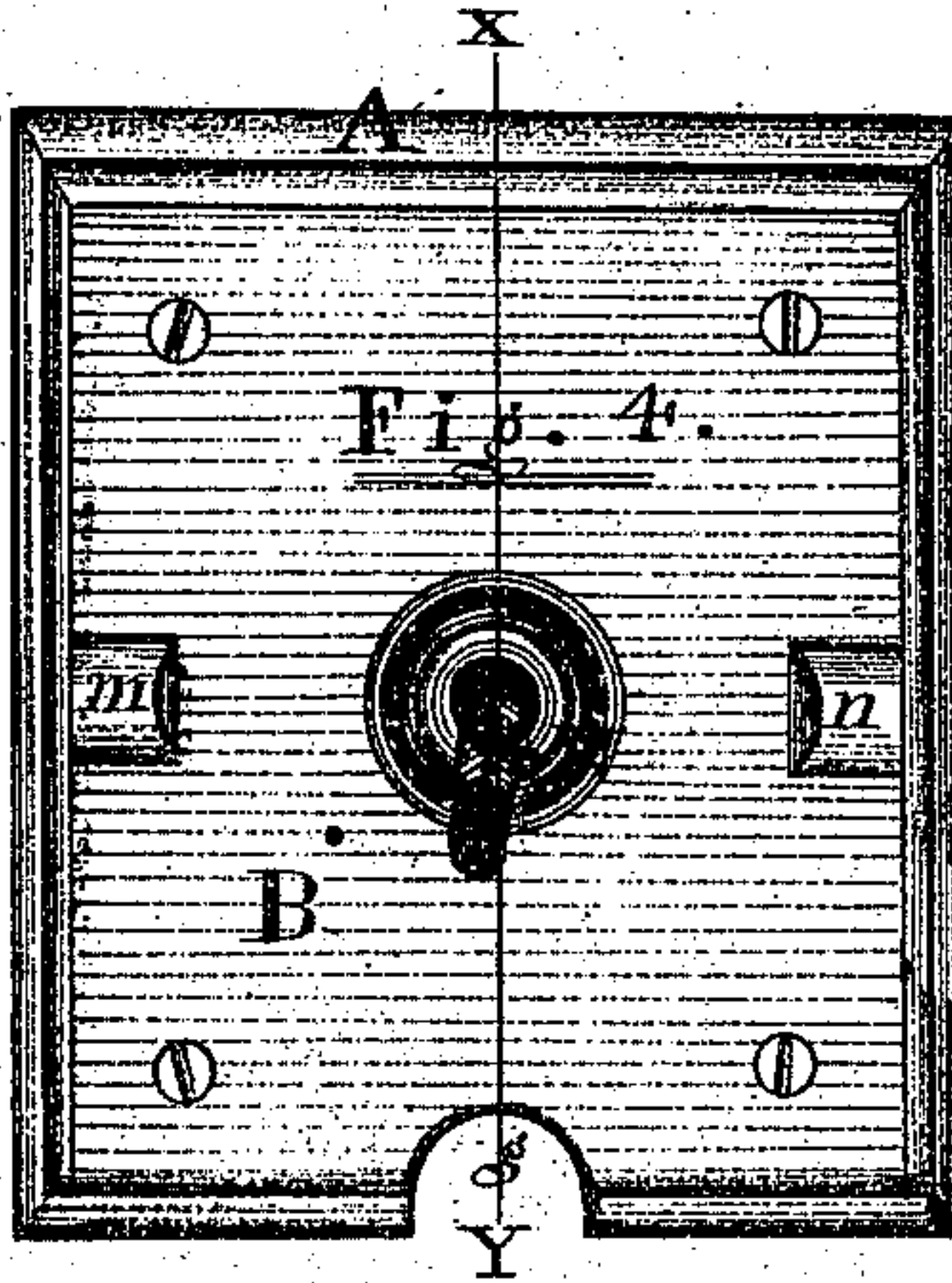


Fig. 5.

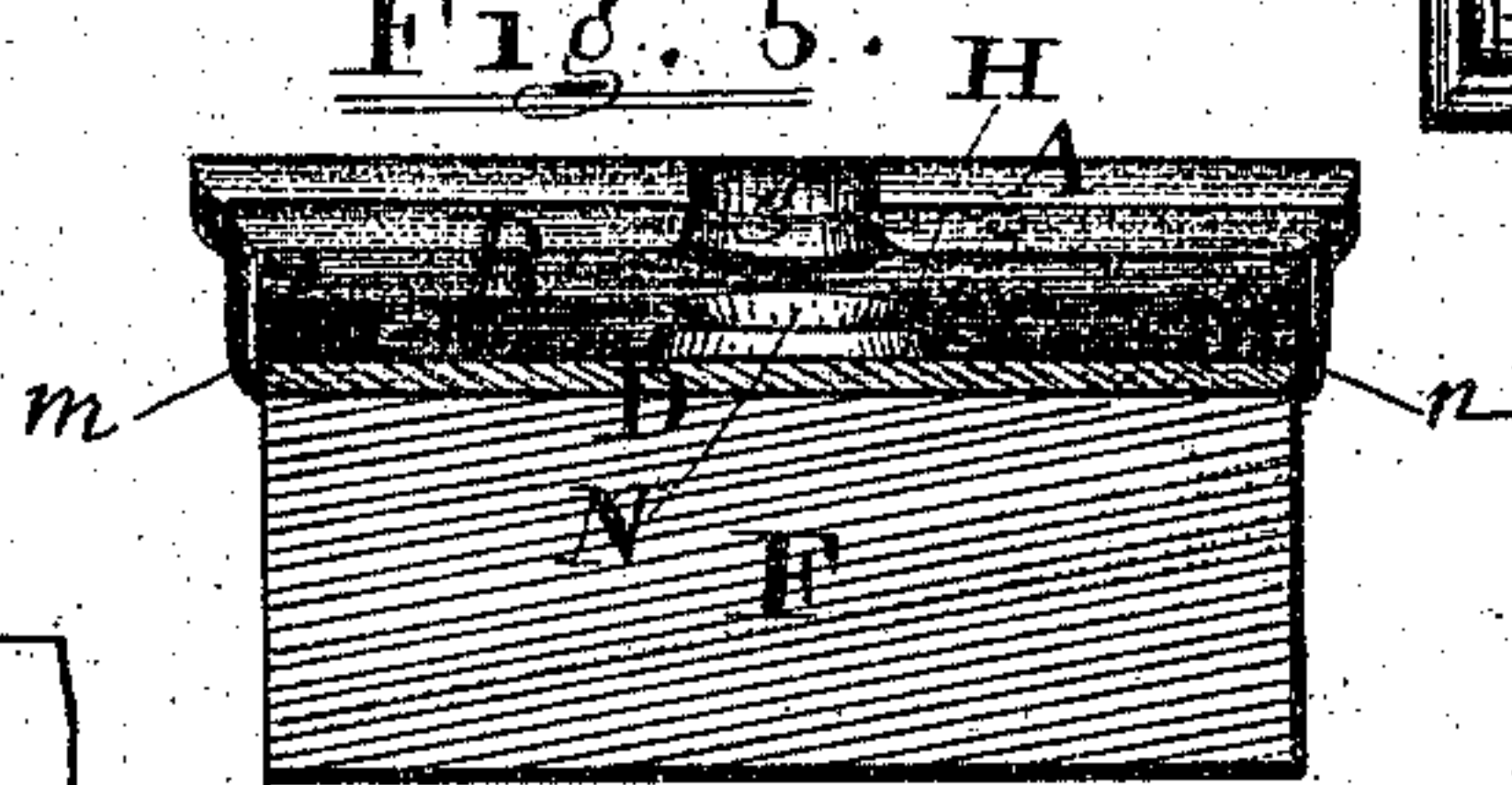
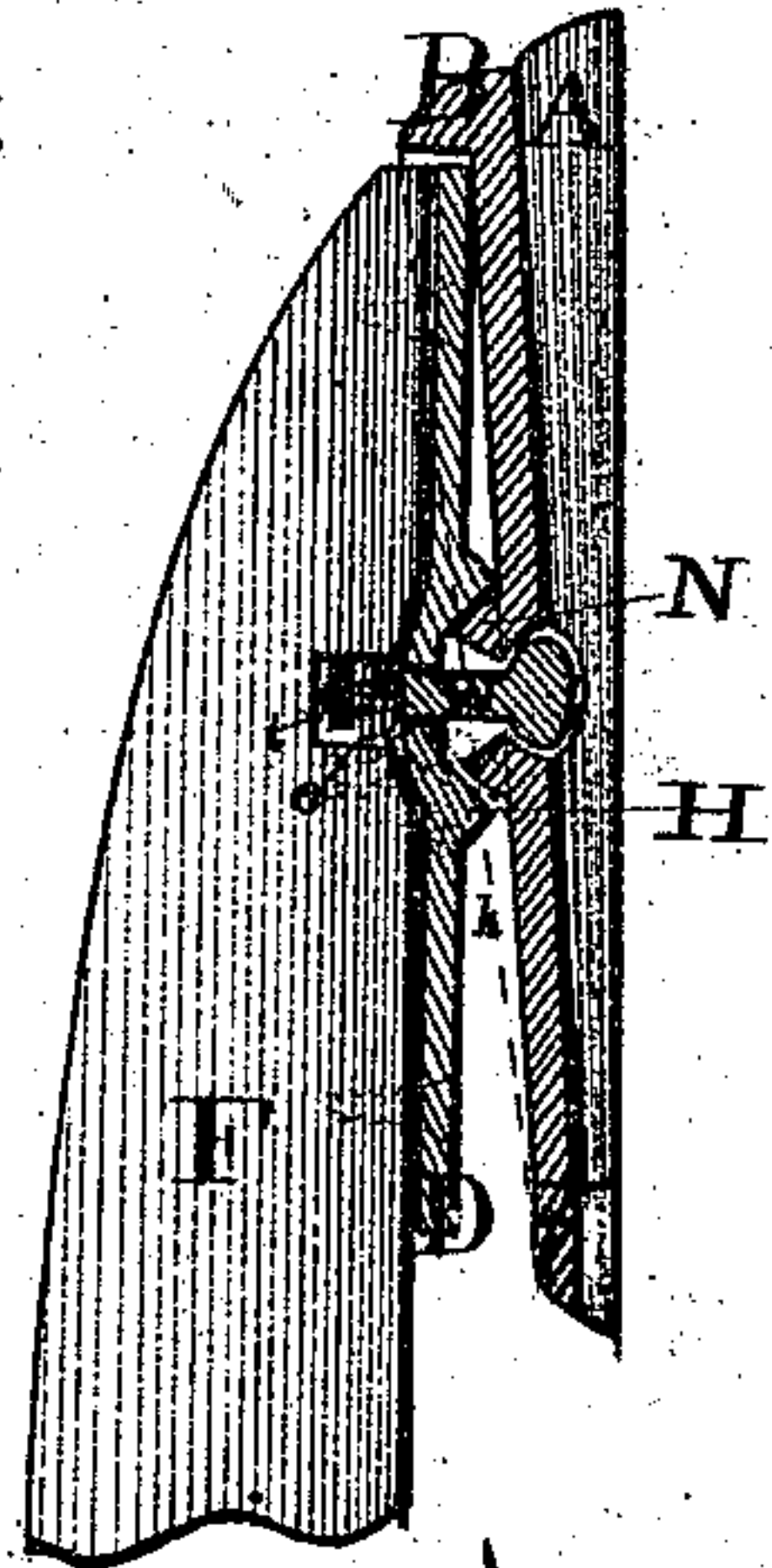


Fig. 6.



Witnesses:

N. M. Peters
W. E. Stewart,

Inventor:

Austin Z. Mason
by W. B. Fessenden Atty.

United States Patent Office.

AUSTIN Z. MASON, OF ADRIAN, MICHIGAN, ASSIGNOR TO R. B. ROBBINS,
OF SAME PLACE.

Letters Patent No. 100,541, dated March 8, 1870.

IMPROVED BEVEL-JAWED 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, AUSTIN Z. MASON, of Adrian, in the county of Lenawee, and State of Michigan, have invented certain new and useful Improvements in Vises, the same being improvements upon the improved vise for which Letters Patent were issued to AUSTIN Z. MASON, February 6, 1869, No. 92,337; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, like letters referring to similar parts.

The object of this invention is to simplify the construction of the above-mentioned vise by lessening the number and modifying the form of the parts used.

In the drawings—

Figure 1 is a side elevation of a vise embodying my invention.

Figure 2 is an elevation of the same, showing the face of the vise at the right hand in fig. 1.

Figure 3 is an elevation showing the face of one of the two iron plates which cause the bevel movement of the vise, and is made firm to the movable jaw of the vise.

Figure 4 is a similar elevation of the other iron plate, the two sides thus shown being placed toward each other when in use.

Figure 5 is a view of the parts represented when seen in the direction of the arrow *z*, in fig. 1.

Figure 6 is a sectional view cutting the line X Y in fig. 2, and showing a plan of the vise.

F represents the movable jaw of a common wooden vise; the stationary jaw, being the same as those in common use, is not represented.

D is an iron bed-piece screwed fast to the movable jaw F.

B is an adjustable iron face-plate.

The side of the bed-piece D, shown in fig. 3, is to be placed next to the recessed face of the iron face-plate B, and there held by the bolt W, as shown in fig. 6.

A is a wooden wedge-shaped face secured to the adjustable iron face-plate B, to be used when the vise is to be employed for clamping wooden pieces, and to be removed, if desirable, when it is intended to use the vise for clamping iron pieces.

The adjustable face-plate B, figs. 4 and 6, is a flat, square disk of iron, having two fulcra, *m* and *n*, which are cast solid to the recessed side of the face-plate, on opposite sides of the central socket-joint, hereafter more fully described; the same made sufficient in height to touch the bed-piece D, whenever the two parts of the socket are brought together.

Across the upper end of this face-plate B a flange or edge is turned up to a uniform height, as shown at B, fig. 6, and from this flange another extends in

like manner downward upon the edges of the plate B, diminishing its projection, as it descends, as shown by the dotted line *h*, in fig. 6, until it is lost at the bottom edge in the surface of the plate.

In the center of this face-plate B is a ball and socket which joins the face-plate B to the bed-piece D, being held together by the ball-headed bolt W, nut *t*, and coiled spring *c*, fig. 6.

This socket-joint is shown in a sectional view in fig. 6, and is there shown how the lower end of the wood face A may be thrown in toward the movable jaw F, by clamping a wedge shaped piece with the thick end downward, the fulcra *m* and *n* preventing horizontal movement around the socket.

This socket-joint is made up by throwing up the conical-shaped ring N, figs. 4 and 6, upon the face-plate B, and inserting it in a similar ring thrown up from the outer face of the bed-piece D.

The ball-headed bolt W is first passed through the opening in the bottom of the conical ring N, and then the face-plate B fastened to the wooden face A by screws, as represented.

The bolt is then passed through the square opening in the center of the conical ring H, figs. 3 and 6, and then the coiled wire spring *c* slipped around the bolt up against the back of the bed-piece D, and the nut *t* screwed up against the coiled spring; the object of this spring being to give uniform tension to the turning of the face-plate.

The bed-piece D is made to fit into the recess in the face-plate B, so that by crowding the lower end of the face-plate B against the lower end of the bed-piece D the upper end is thrown out of the recess, when the whole face-plate and wooden face A may then be turned by the hand around edgewise to any desirable position, and at every successive quarter of a circumference to which they are turned, the planes of the angle of their inclination will be correspondingly turned, so that a wedge-shaped piece may be clamped in either a perpendicular or horizontal position, the socket-joint H N causing the wooden face-plate A to conform readily to the angle of the piece clamped.

When the face-plate B is turned to the position shown in figs. 1 and 6, the vise above the socket-joint becomes a solid parallel vise; and as the face-plate is turned to the right or left by quarters of a revolution, the solid parallel will be correspondingly turned.

The opening *g* in the lower end of the face-plate and wooden face is for the purpose of bringing it successively over the screw-holes 1 2 3 4, in the bed-piece, when a screw-driver may be inserted to drive the screws that fasten the bed-piece to the movable jaw F.

Inasmuch as the office of the socket-joint H N is

simply to form a pivot around which the face-plate B may turn, and also allow, at the same time, a rocking motion over the fulera *m* and *n*, it is evident that a single common bolt may be used to perform that function, thereby dispensing with the use of the socket-joint altogether.

I do not, therefore, wish to limit myself to the use of the socket-joint alone, but to use a bolt in its stead, if desirable.

I claim as an improvement on the vise patented to me July 6, 1869, No. 92, 331—

The omission of the plate C, described in said patent, and the construction herein described of the plates B and D, and the arrangement of the same on the vise-jaw, substantially as and for the purpose set forth.

AUSTIN Z. MASON.

Witnesses:

M. E. STEWART,

J. E. TOOKER.