(No Model.)

3 Sheets—Sheet 1.

J. O. BARRETT.

VISE.

No. 284,997. Patented Sept. 18, 1883.

Fig 1.

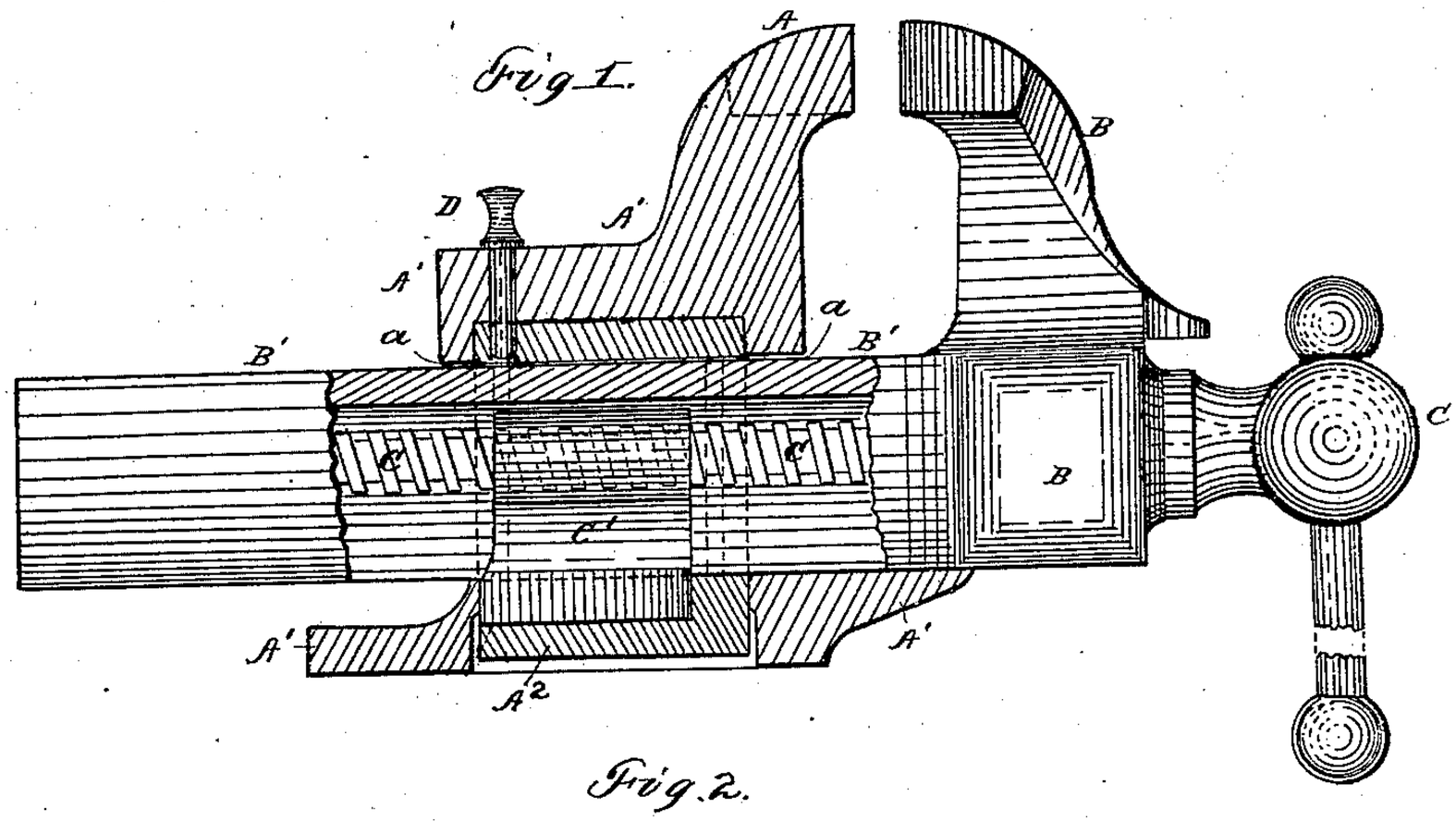


Fig. 2.

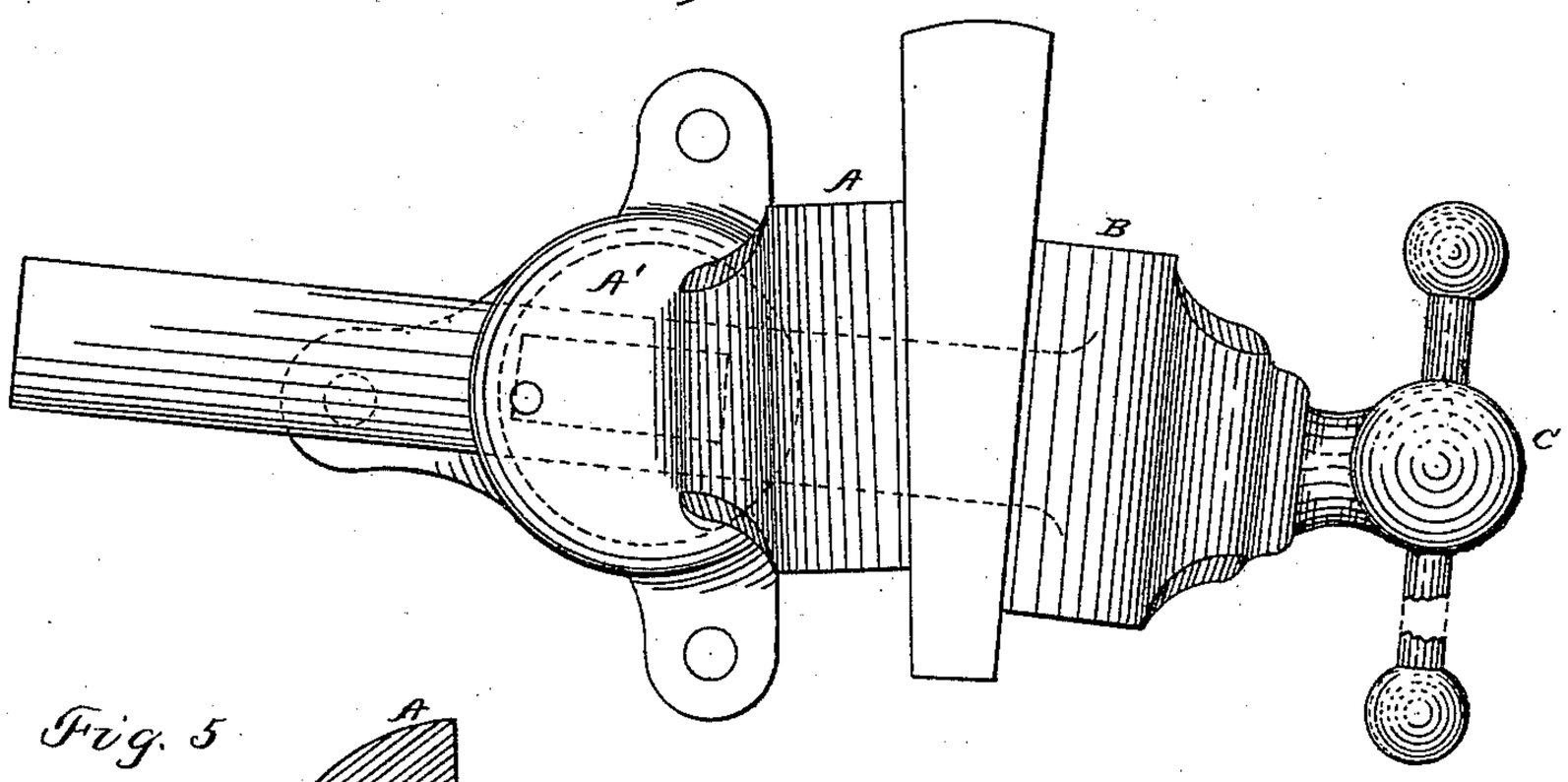


Fig. 5

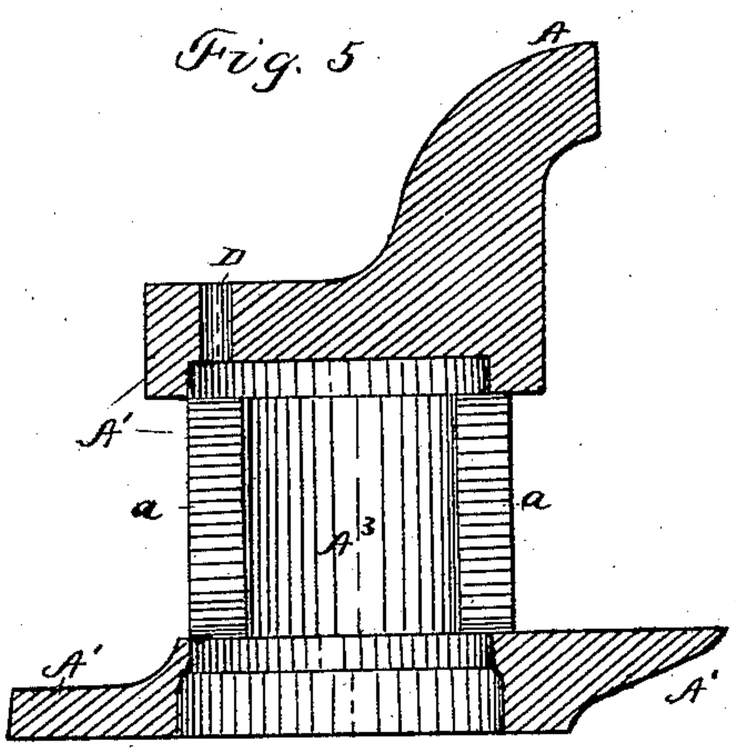
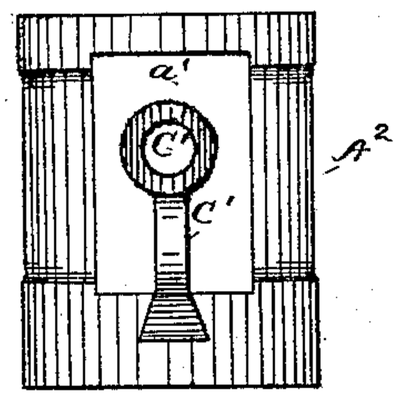


Fig. 6.



Witnesses
H. R. Edelen
Robt. H. Porter.

Inventor
James O. Barrett
Per Hullock & Hullock
Att's

(No Model.) 3 Sheets—Sheet 2.

J. O. BARRETT.

VISE

No. 284,997. Patented Sept. 18, 1883.

Fig. 3

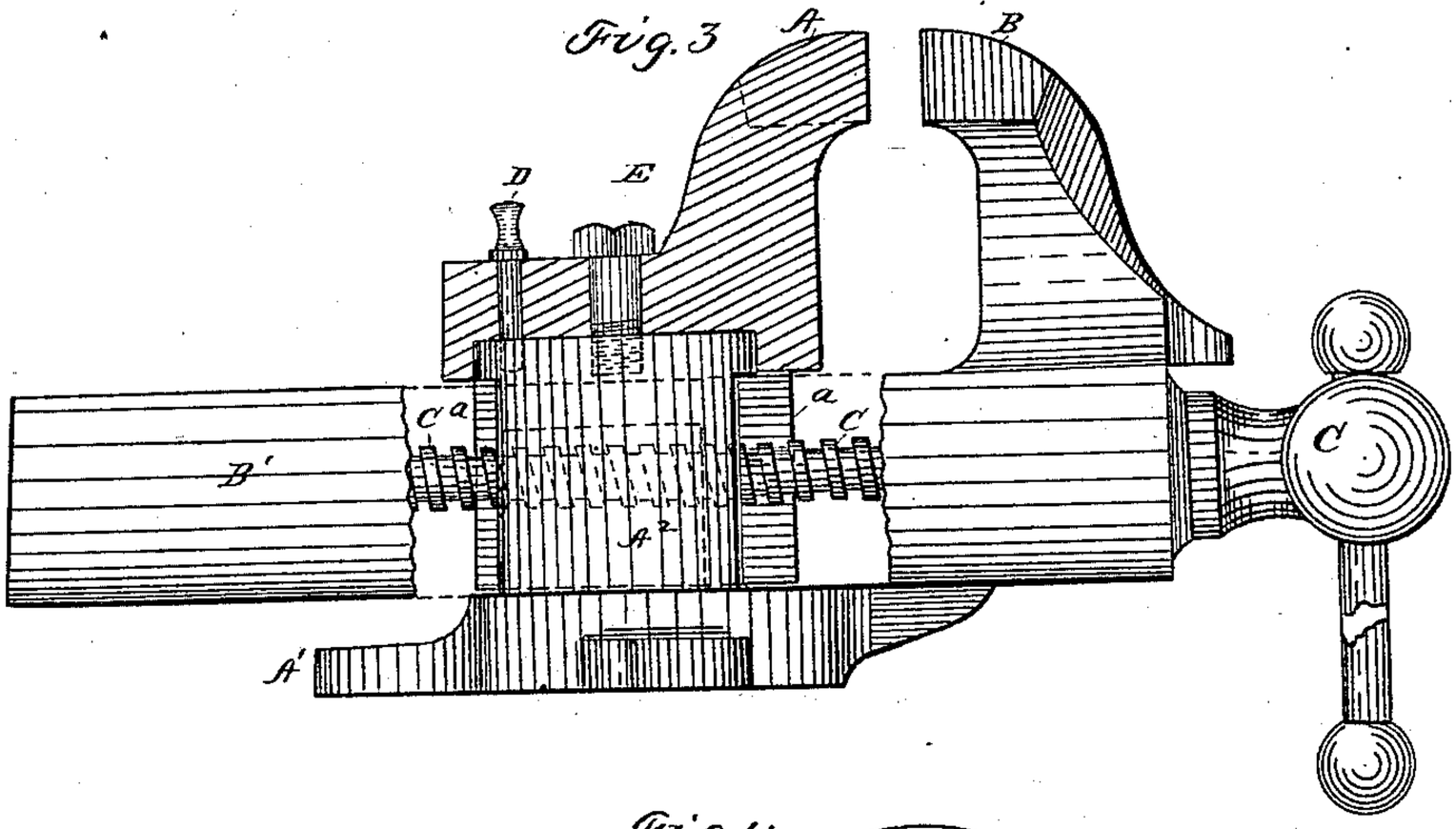


Fig. 4

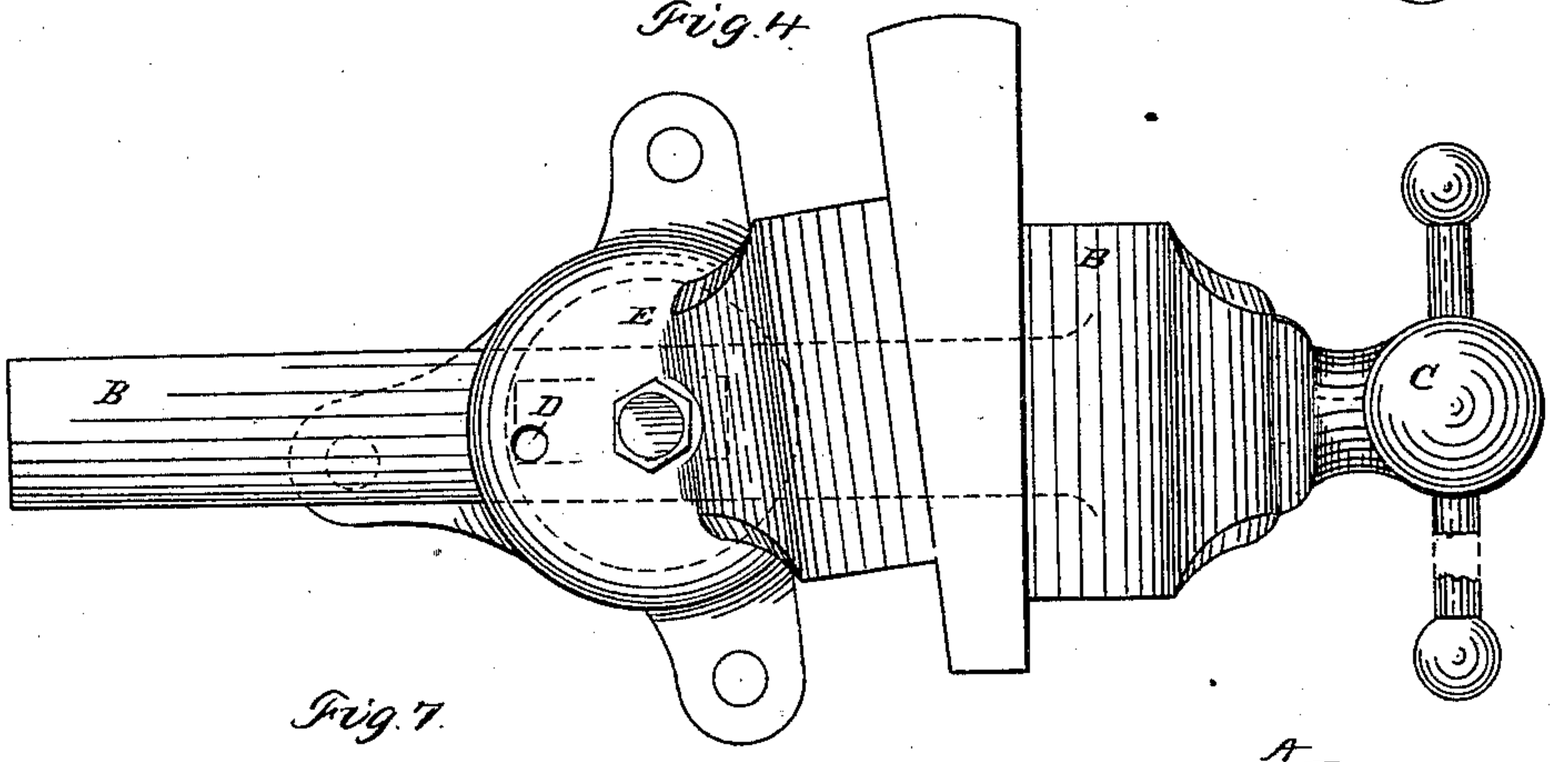


Fig. 7.

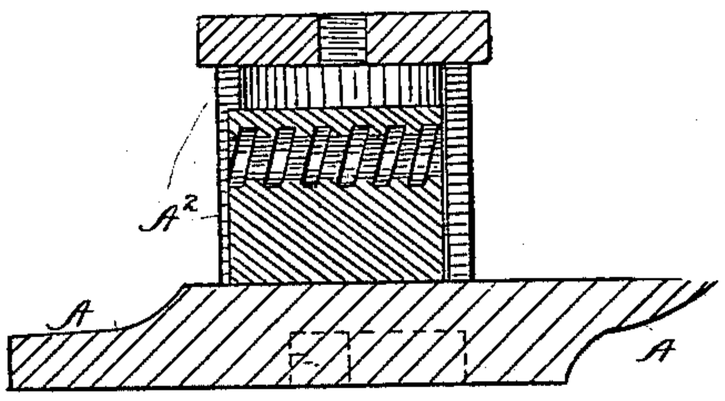
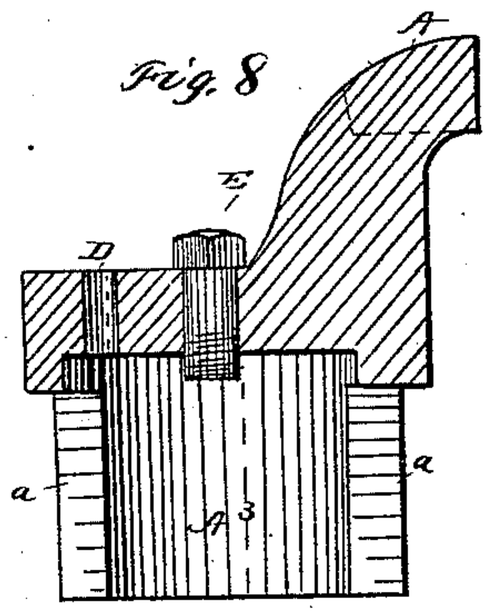


Fig. 8



Witnesses.
W. R. Edelen
Robt. H. Porter,

Inventor
James O. Barrett
Per Hullock & Hullred.
Attys.

(No Model.) 3 Sheets—Sheet 3.

J. O. BARRETT.

VISE.

No. 284,997. Patented Sept. 18, 1883.

Fig. 9

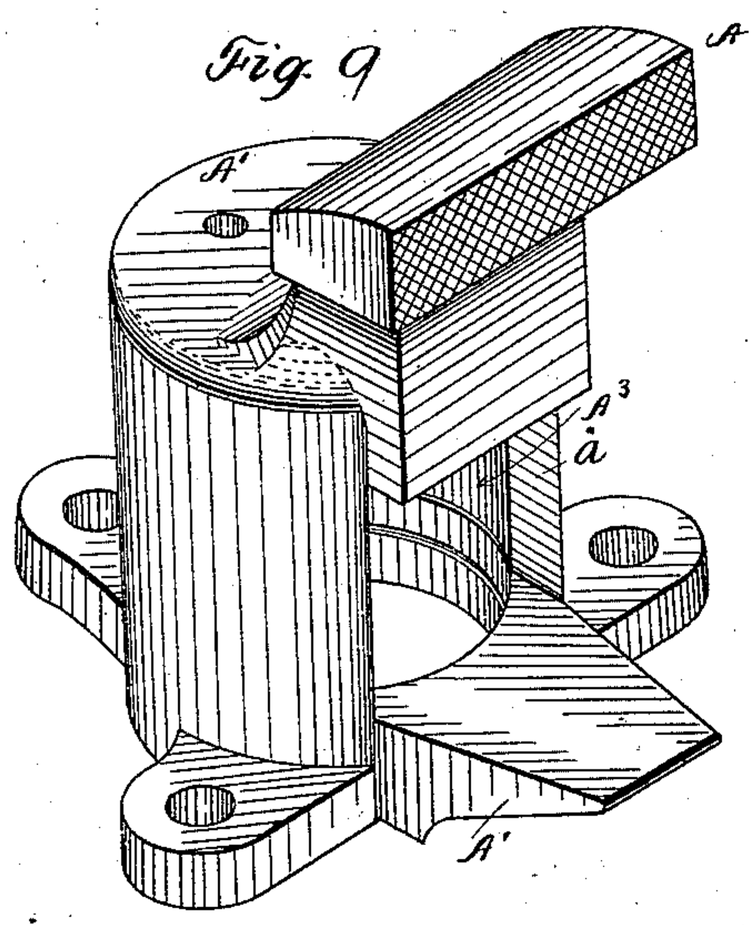


Fig. 10

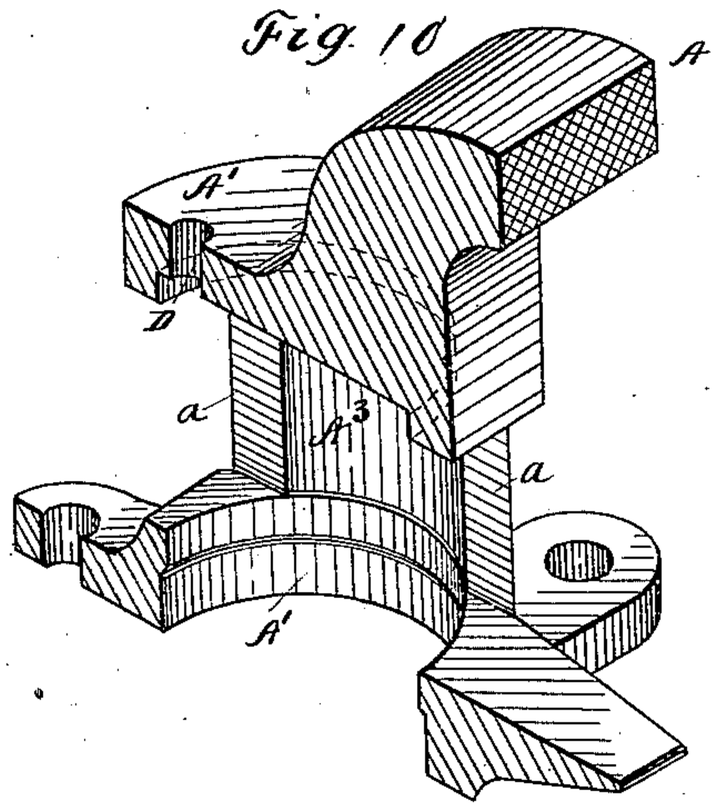


Fig. 13

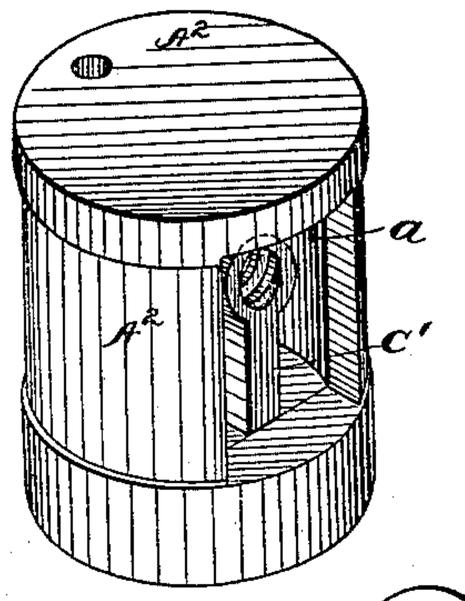


Fig. 11

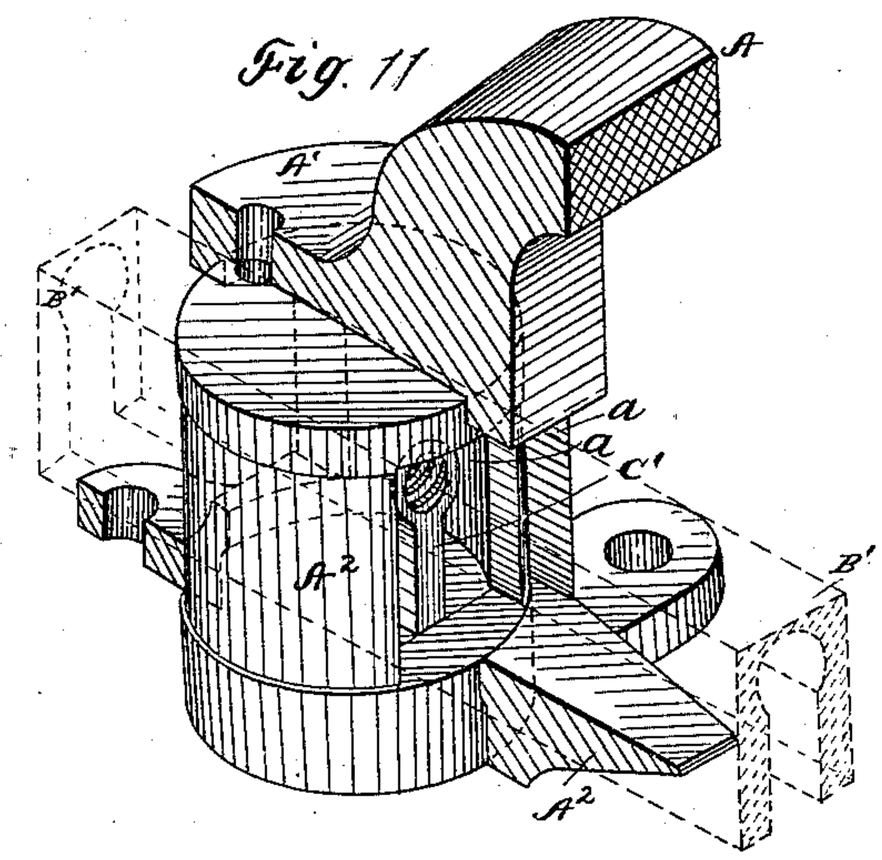
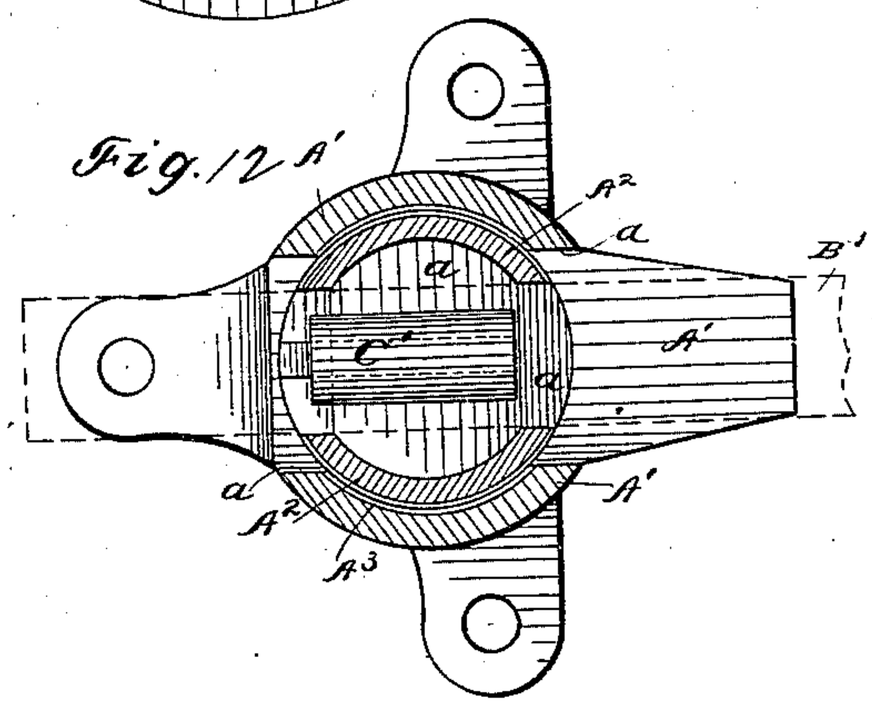


Fig. 12



Witnesses
W. R. Edelen
Wm. A. Haseltine

Inventor.
James O. Barrett.
Per. Haseltine & Haseltine
Att's.

UNITED STATES PATENT OFFICE.

JAMES O. BARRETT, OF ERIE, PENNSYLVANIA.

VISE.

SPECIFICATION forming part of Letters Patent No. 284,997, dated September 18, 1883.

Application filed May 28, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES O. BARRETT, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Vises; and I do hereby 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.

This invention relates to vises; and it consists in providing new and improved means for making one of the jaws pivotal, so that it can be thrown at an angle to the other jaw, and thus enable the jaws to evenly grip a wedge-shaped piece of metal or other object.

I am aware that one or the other of the jaws of vises has been made pivotal for the above-named purpose. My invention therefore consists, wholly, in the construction by which I accomplish the said result.

In the accompanying drawings I show two alternative constructions. By one the movable or traversing jaw is made pivotal, and by the other the fixed or stationary jaw is made pivotal.

The accompanying drawings show my invention as follows:

Figure 1 is a combined side elevation and vertical longitudinal section of the construction wherein the traveling jaw is made pivotal. Fig. 2 is a top or plan view of the same. Fig. 3 is a like view to Fig. 1, showing the construction wherein the fixed jaw is made pivotal. Fig. 4 is a like view to Fig. 2 of the construction shown in Fig. 3. Figs. 5, 6, 7 and 8 are detail views, and will be explained fully hereinafter. Fig. 9 is a perspective of the fixed jaw of my improved automatic adjustable vise. Fig. 10 is a sectional perspective of the fixed jaw. Fig. 11 is the same view shown in Fig. 10, with swivel-studs, as shown in Fig. 13, inserted within said figure, and also showing the vise-box B′ in dotted lines. Fig. 12 is a horizontal section through cylindrical portion of the fixed jaw and swivel-stud, and the vise-box B′ shown in dotted lines. Fig. 13 is a perspective of the swivel-stud which contains the nut.

The parts are designated by letters as follows: A is the fixed jaw, and A′ is its standard or base. B is the traveling jaw, and B′ its beam. C is the screw, and C′ its nut. A^2 is a swivel-block, which carries the nut C′, and is socketed in a circular socket, A^3, in the base A′. *a* is the slot through the base, and *a′* is the slot through the swivel-block, said slots being for the passage of the beam B′. D is a pin for holding the jaw, which is pivoted from turning when it is not desired to turn.

The movable or traveling jaw and its beam are constructed as usual in vises of this description.

The fixed or bench jaw A and its base A′ are the only part of the vise in which I change the construction. In the two constructions here shown, this part is constructed somewhat differently, as will be seen in Figs. 5, 6, 7 and 8. Figs. 5 and 6 show the construction when the traveling jaw is pivoted, and Figs. 6 and 7 where the bench-jaw is pivoted. Fig. 5 is a vertical section, and shows the foot, base, and jaw all of one piece of metal, and having a central circular socket, A^3, cored out of it and opening out at the bottom, and also having a slot, *a*, through it for the beam B′. This central socket receives the swivel-block A^2. In Figs. 7 and 8 the base A′ has the swivel-block cast solid on it, and the upper or shaft part of the base or standard, in which are the cavity A^3 and the jaw A, forms another piece of metal, (see Fig. 8,) which sets or caps over the piece shown in Fig. 7, as will be seen in Fig. 3.

When the traveling jaw is made to turn, the pivot-block A^2 forms a pivot for the beam B′ in the socket A^3, and when the bench-jaw A is made to turn, as in the construction shown on Sheet 2 of the drawings, the pivot-block A^2 is stationary and allows the jaw to turn upon it. In either case the nut C′ is within the swivel or pivot block A^2, and the pivot-block is within the shaft of the standard. The slot *a* through this shaft is wide enough to permit the beam to swing within it, or it to swing or turn without being obstructed by the beam.

I am aware of the construction shown in patent to Fraser, July 17, 1855, No. 13,256, in which the movable jaw is pivoted with the nut of the screw which moves said jaw, and I do not therefore claim, broadly, such an arrangement of parts; but the construction I here show is different from that shown by Fraser, and the pivotal bearings are much

better calculated to stand the strain which is incident to the use of a vise.

The office of the screw E in the construction shown in Figs. 3 and 4 is to hold the pivoted jaw A firmly down upon the swivel-block. This screw may not always be necessary; but it insures strength in the joint, and so far is desirable.

What I claim as new is—

1. In a vise, one of the jaws of which is pivoted, the combination, substantially as shown, with said jaw, of a pivot-block forming the joint of said jaw, which is slotted to receive the beam of the traveling jaw, substantially as shown.

2. In a vise, the combination, substantially as shown, of the fixed jaw and standard A A′, containing the pivot-block A^2, and the traveling jaw B and screw C, with its nut C′, within said pivot-block.

3. In a vise, the combination, substantially as shown, of the bench-jaw and its standard A A′, containing the pivot-block A^2, the traveling jaw B, passing through said pivot-block, and the screw C, having its nut C′ also in said pivot-block.

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

JAMES O. BARRETT.

Witnesses:

JNO. K. HALLOCK,

ROBT. H. PORTER.