

(No Model.)

2 Sheets—Sheet 1.

A. E. BROCKETT.
PORTABLE VISE.

No. 575,686.

Patented Jan. 26, 1897.

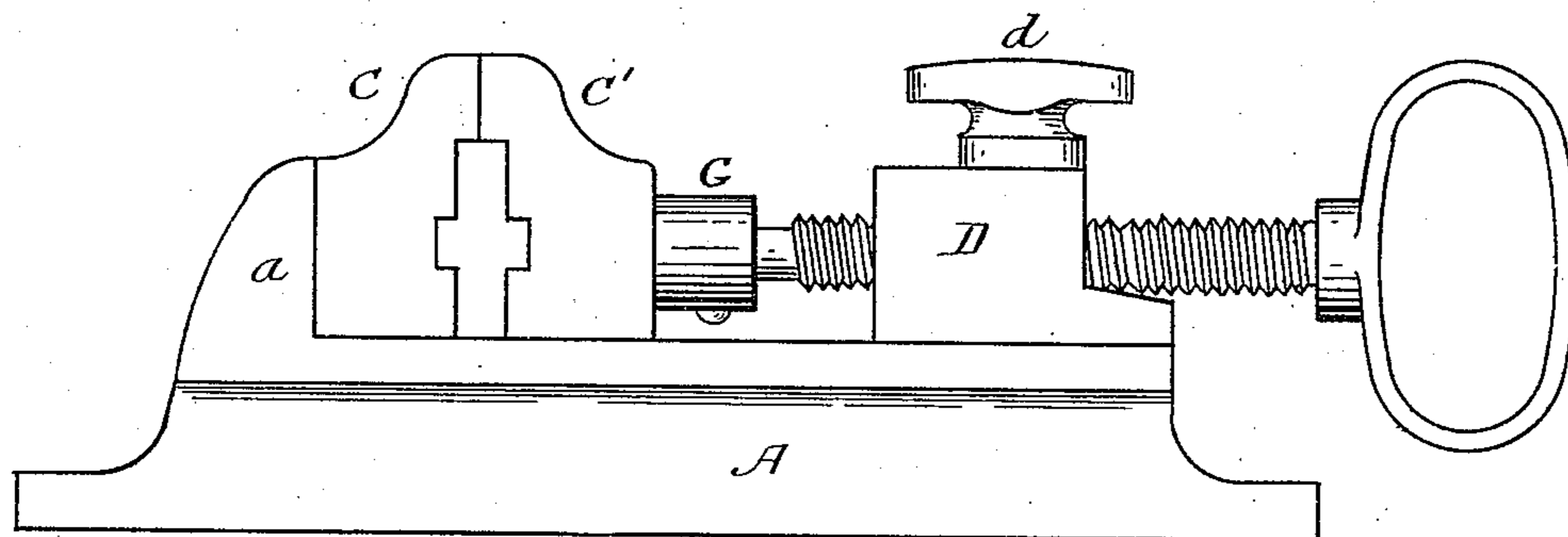


Fig. 1.

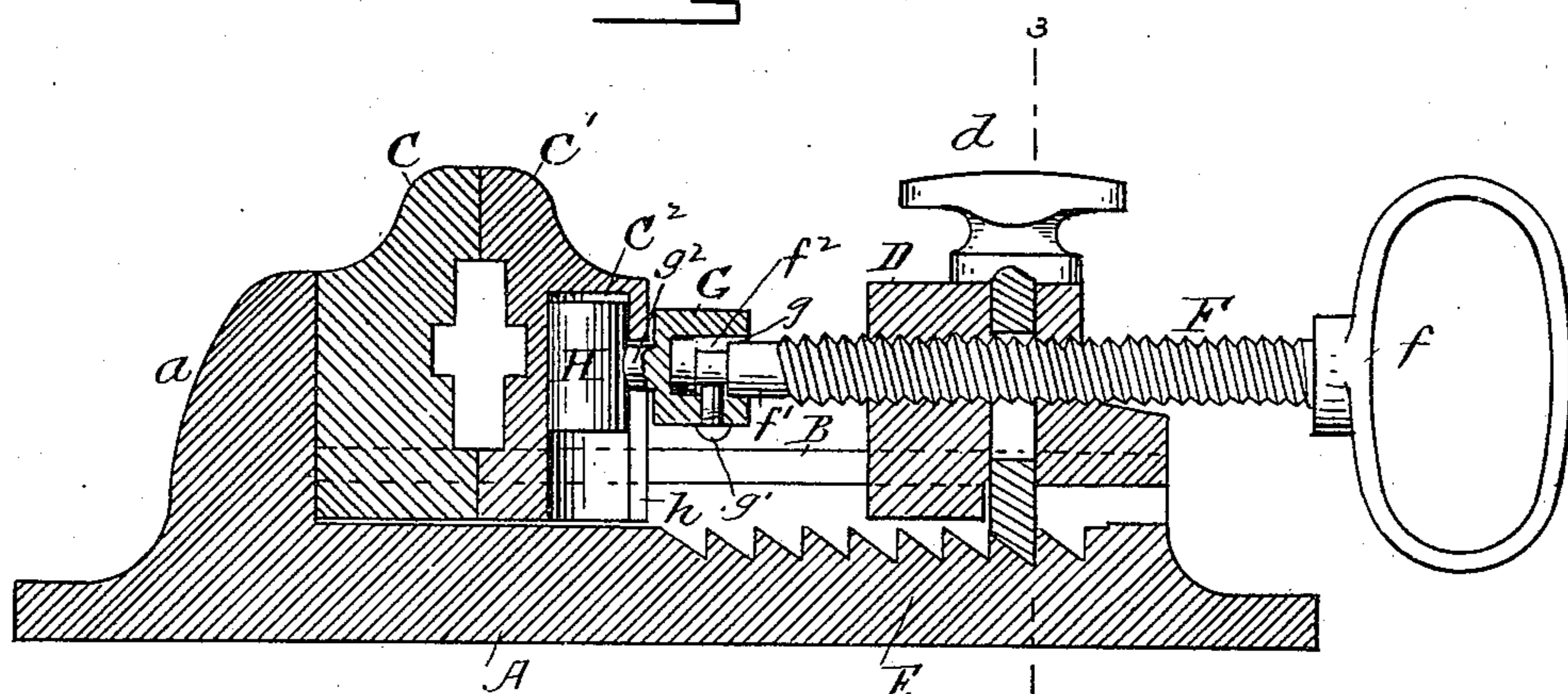


Fig. 2.

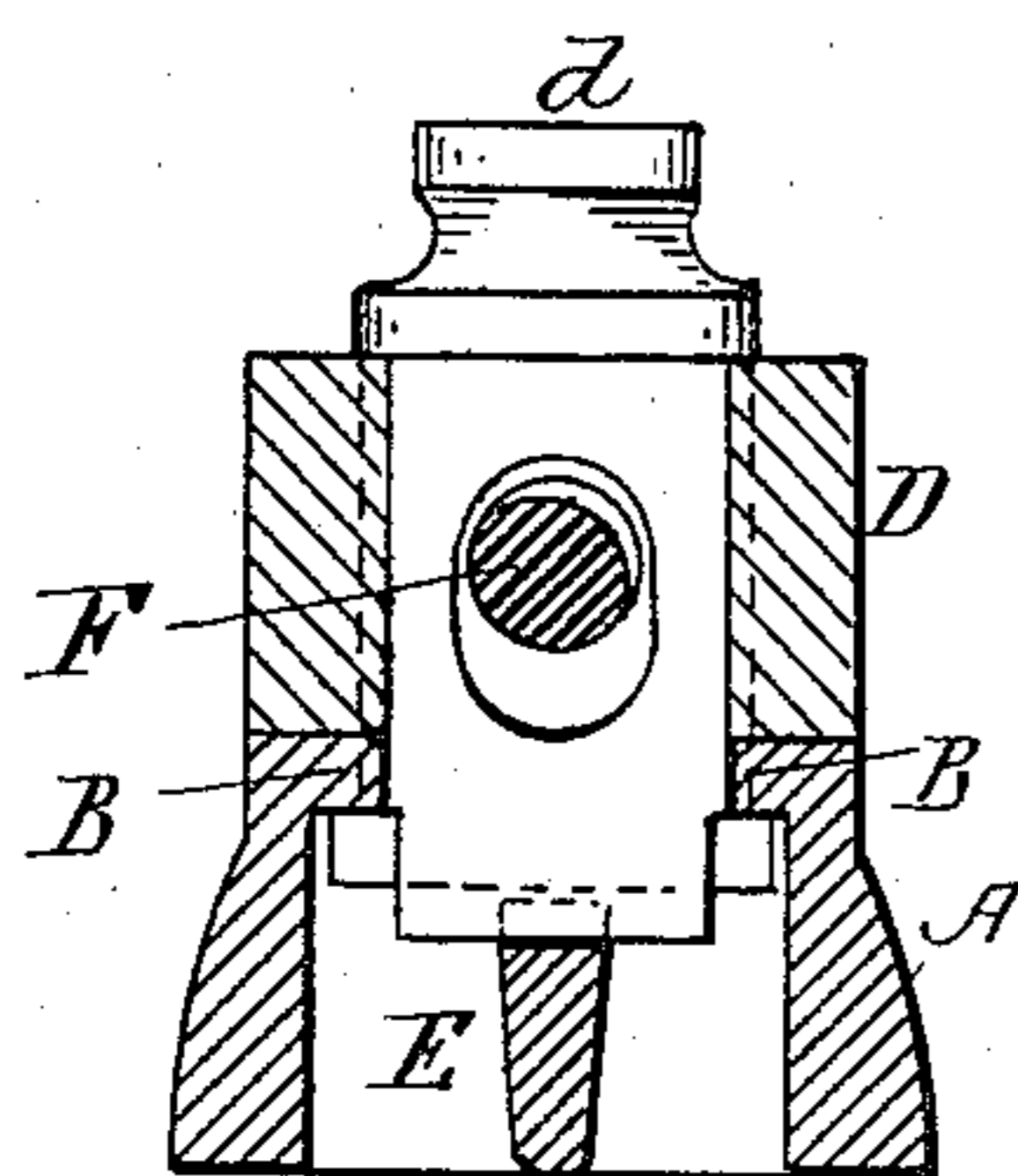


Fig. 3.

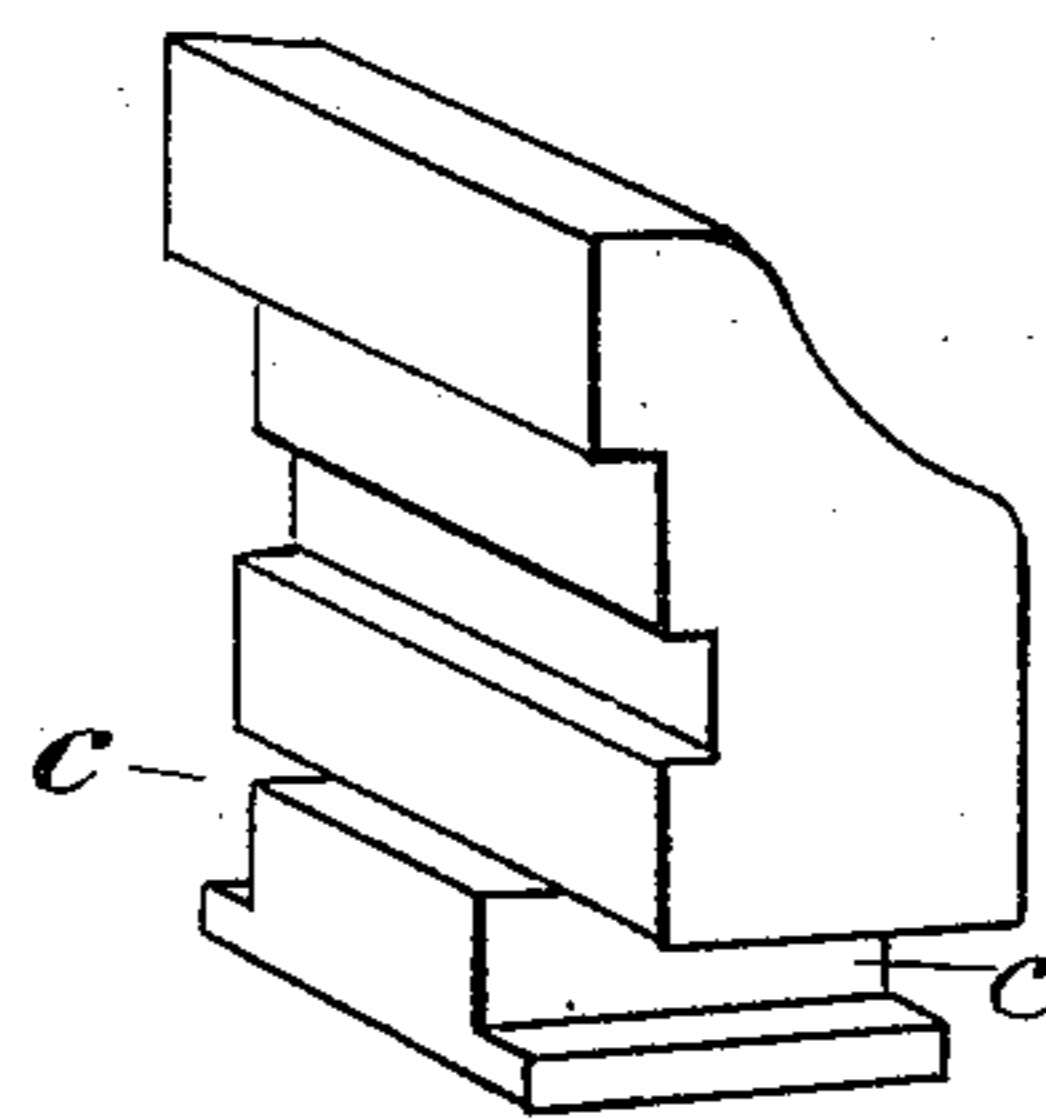


Fig. 4.

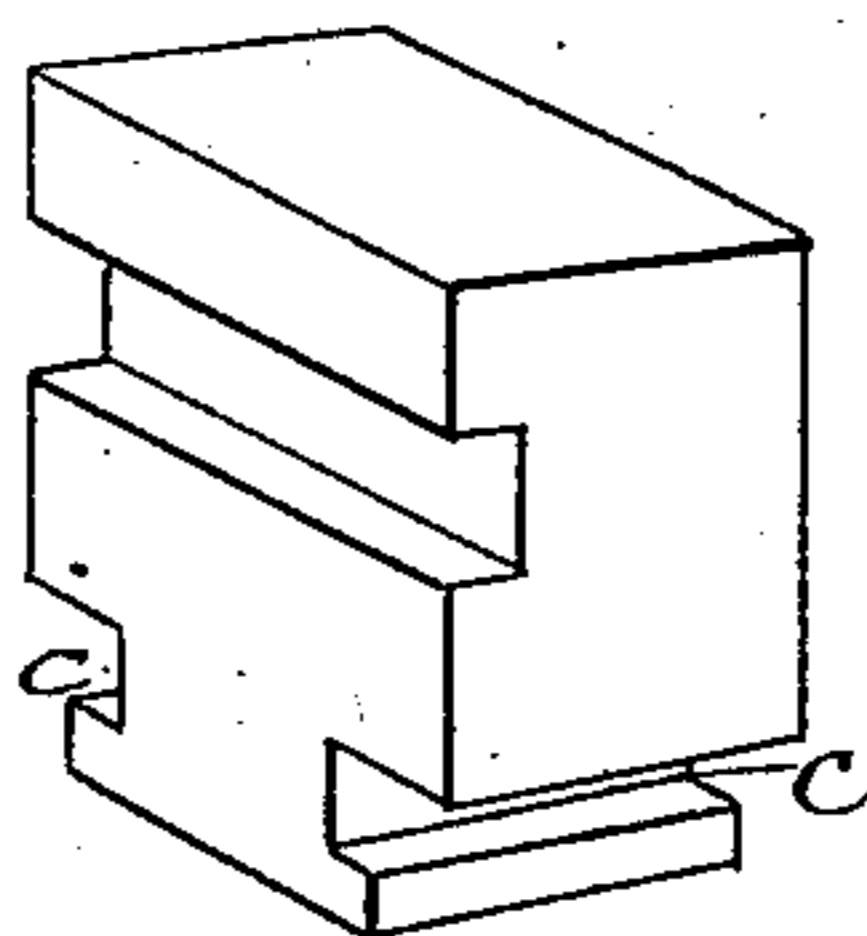


Fig. 5.

WITNESSES

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J. H. O. G. Brown
his attorney

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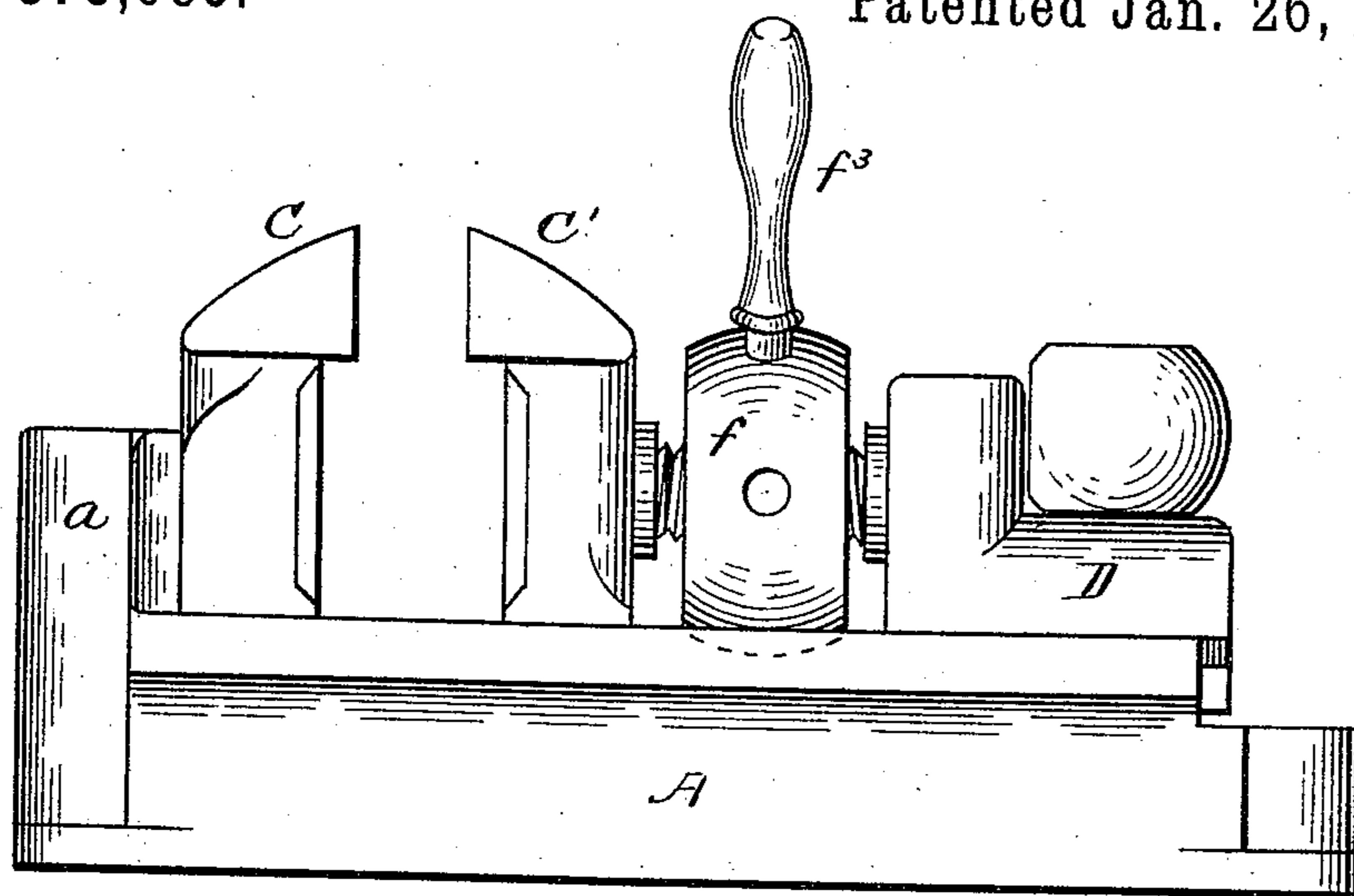


Fig. 6.

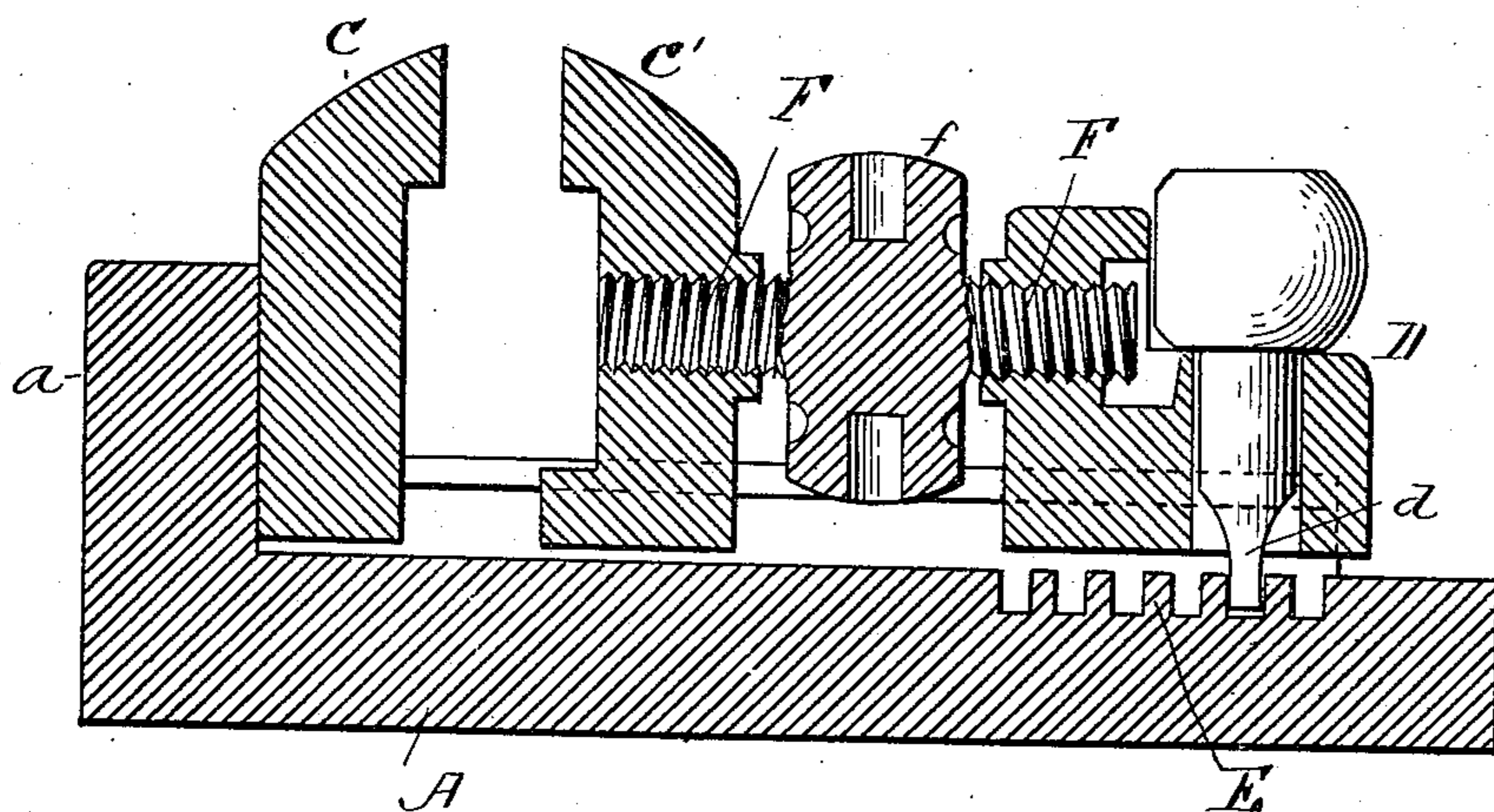


Fig. 7.

WITNESSES

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UNITED STATES PATENT OFFICE.

ATWATER E. BROCKETT, OF EVERETT, MASSACHUSETTS, ASSIGNOR OF
ONE-HALF TO WILLIAM G. NIXON, OF BRAINTREE, MASSACHUSETTS.

PORTABLE VISE.

SPECIFICATION forming part of Letters Patent No. 575,686, dated January 26, 1897.

Application filed April 6, 1896. Serial No. 586,331. (No model.)

To all whom it may concern:

Be it known that I, ATWATER E. BROCKETT, of Everett, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Portable Vises, of which the following is a specification.

My improvement is intended to supply a vise which may be portable and in which jaws of a variety of kinds may be easily substituted, according to the kind of work to be done, the position of the jaws being easy of rough as well as accurate adjustment to the work; and for this purpose my device consists, generally speaking, in a bed provided with ways in which the jaws may slide and which are open at one end in order that the jaws may be removed, and provided also with a post adjustable thereon and carrying a screw by means of which the jaws may be set up.

In the drawings, Figure 1 is a side elevation of a vise embodying my invention. Fig. 2 is a longitudinal section thereof. Fig. 3 is a cross-section on line 3 3 of Fig. 2, and Figs. 4 and 5 show jaws of different shapes which may be substituted for those shown in Figs. 1 and 2. Fig. 6 is an elevation, and Fig. 7 a section, of a modification.

A is the chambered bed, provided with the back rest *a* or other means for supporting a stationary vise-jaw, and ways B, which are attached to the side walls of the chamber.

C C' are vise-jaws, which are provided on each side near their base with grooves *c*. (See especially Figs. 4 and 5.) The chamber in the bed is open at the front end of the vise, so that these jaws may be easily and simply placed upon the ways and slid along into position.

D is a post, also suitably grooved so as to slide on the ways B. It is provided with a vertically-sliding pawl *d*, which is preferably weighted or adapted to engage with the rack E, forming part of the floor of the chamber in the bed-piece A. Through the post D and pawl *d* (which is slotted for the purpose) passes an adjusting-screw F, operated by a handle *f*, and connected at its front end with one of the vise-jaws C'. The method of connection which I prefer is by means of a key-piece, which is shown in the drawings, (see Fig. 2,) and may be described as follows.

G is a head socketed at *g*. The front end *f'* of the screw-shaft F sets into said socket and turns freely. A groove *f*² is provided about the periphery of the screw and near its front end, and a screw or pin *g'*, passing through the walls of the socket *g*, enters this groove and holds the screw F in the socket *g*, while allowing it to be turned freely.

H is a cylindrical key connected with said head G by a neck *g*². The jaw C' is provided with a socket C², having a vertical slot *h* in one of its walls sufficiently wide to allow the neck *g*² of said key-piece to slide freely therein. The socket C² is open at the bottom and is sufficiently large to allow the key H to slide freely therein.

The operation of my device is as follows: To set up the vise-jaws in order that they may properly hold a piece of work, the post D is moved forward until the work is gripped between the jaws C C'. During this movement of the post the pawl *d* rides over the teeth of the rack E, and when the adjustment is made the pawl *d* engages with the rack E, and any further adjustment of the jaw C' is made by turning the screw F. When it is desired to withdraw the work, the screw F may be turned in the opposite direction, or the pawl *d* being lifted the post D may be withdrawn, carrying with it the screw F and jaw C'. When it is desired to change the vise-jaws, the post D is withdrawn entirely from the ways B, the pawl *d* being lifted out of engagement with the rack. The jaw C' slides back with it, and on being removed from the ways it is lifted off from the piece H and another corresponding jaw with a differently-shaped face is put in its place upon the key-piece. The jaw C is also removed from the ways, and its mate is slid on the ways against the back-rest *a*, and the post D, with the new vise-jaw, is set into place as before.

In Figs. 6 and 7 I have shown a modification which contains the parts above referred to, but the mode of adjustment is slightly different. It will be noticed that the teeth of the rack E in this case are rectangular instead of angular, and the bottom of the pawl is also rectangular. The screw F is a right-and-left-handed screw, supported at one end in the post and at the other in the jaw C', operated

by a wheel *f* to clamp the jaw *C'* or withdraw it. This form of vise is especially useful to jewelers or in cases where the range of motion to be given to the movable jaw is short and it is desirable that the post, when once set, be kept practically stationary. *f*³ is a removable handle with which to turn the wheel *f*.

What I claim as my invention is—

10 1. A vise having a bed-block, at one end of which is a stationary jaw, said bed-block being chambered and provided with ways located therein and having a rack located in its floor, in combination with a movable jaw
15 and a movable post, said post being provided with a vertically-sliding pawl adapted to engage with said rack and carrying an adjusting-screw adapted to engage with and adjust said adjustable jaw, all as set forth.

2. In a vise having jaws, one stationary 20 and the other adjustable, an adjusting-screw adapted to engage with and adjust said adjustable jaw, means for connecting said screw with said adjustable jaw consisting of a key-
25 piece carrying a key adapted to lie in a suitable socket in said adjustable jaw, and a neck connecting said key with a head, said neck lying in a slot in the side of said socket and the end of said adjusting-screw engaging with
30 said head and adapted to be rotated in relation thereto, all as set forth.

In testimony whereof I have hereunto set my hand this 24th day of February, 1896.

ATWATER E. BROCKETT.

Witnesses:

GEORGE O. G. COALE,
EVA A. GUILD.