

(No Model.)

W. WILDT.
ENGRAVER'S TOOL.

No. 297,213.

Patented Apr. 22, 1884.

Fig. 4.

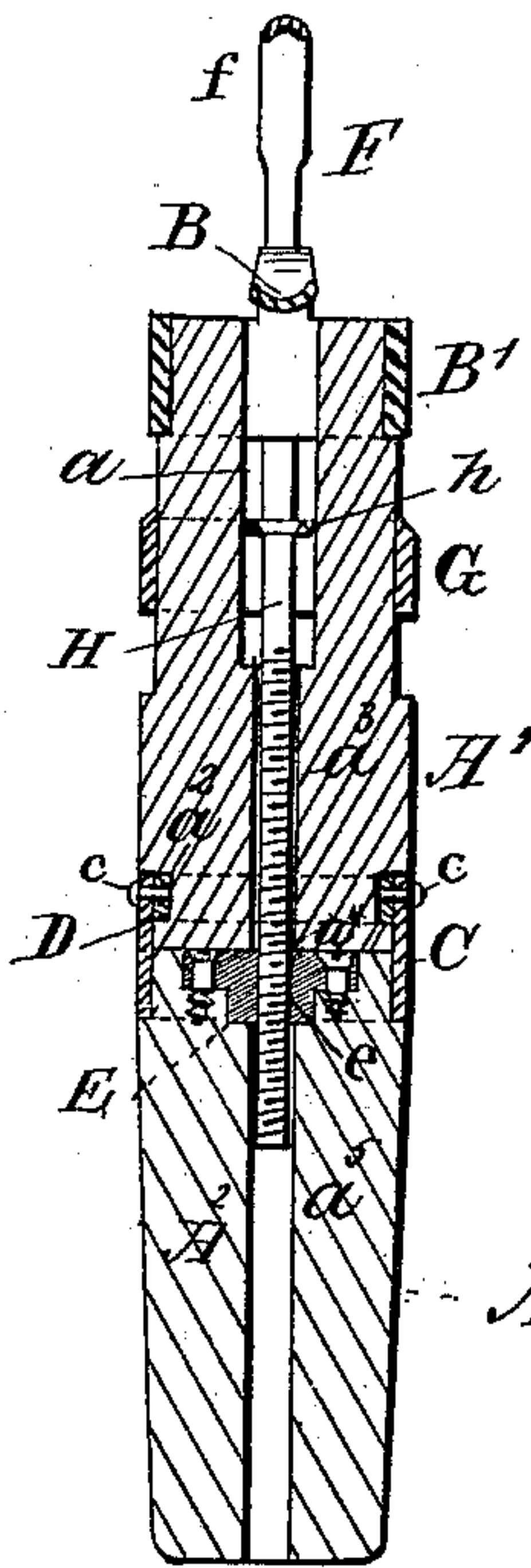


Fig. 1.

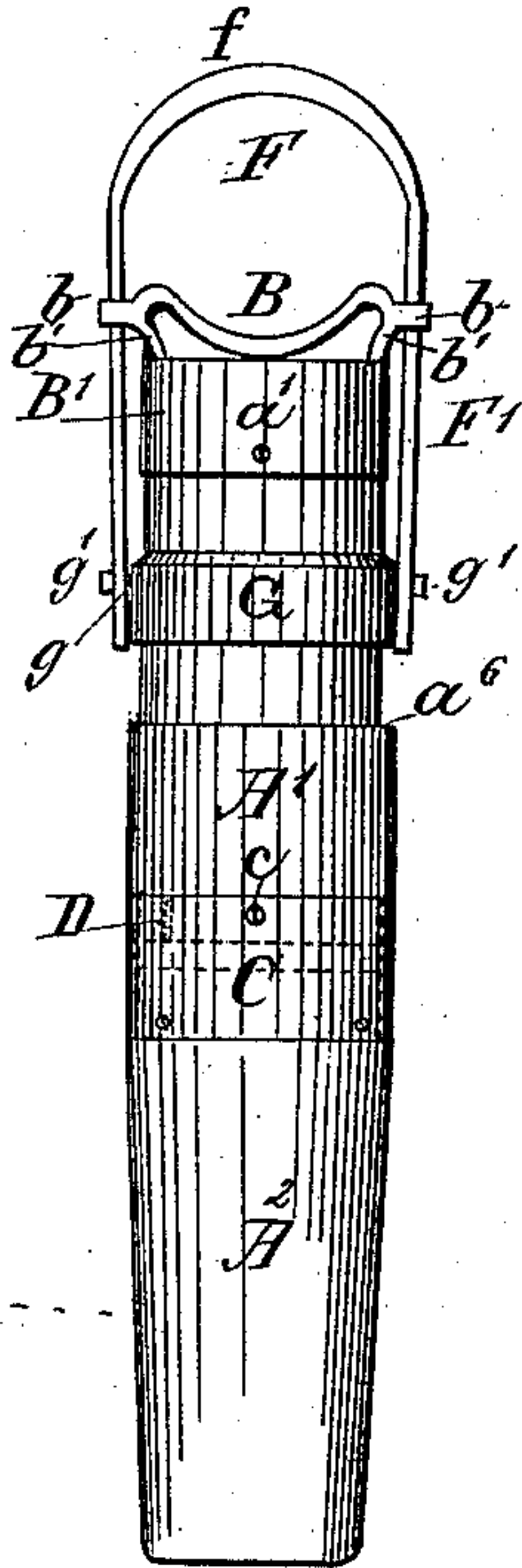


Fig. 2.

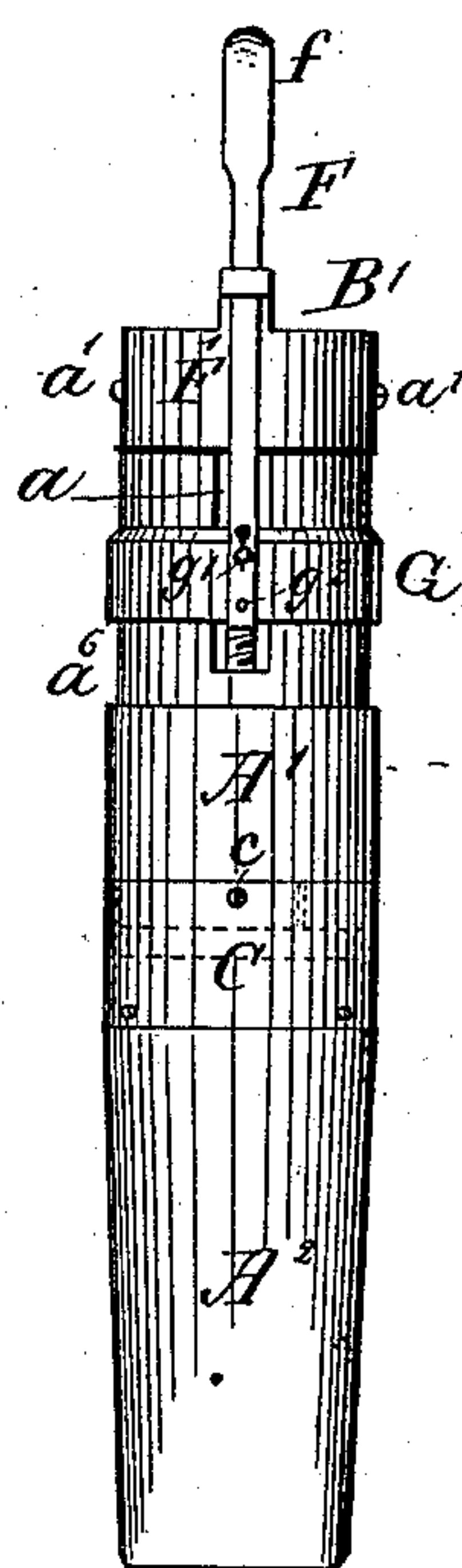


Fig. 3.

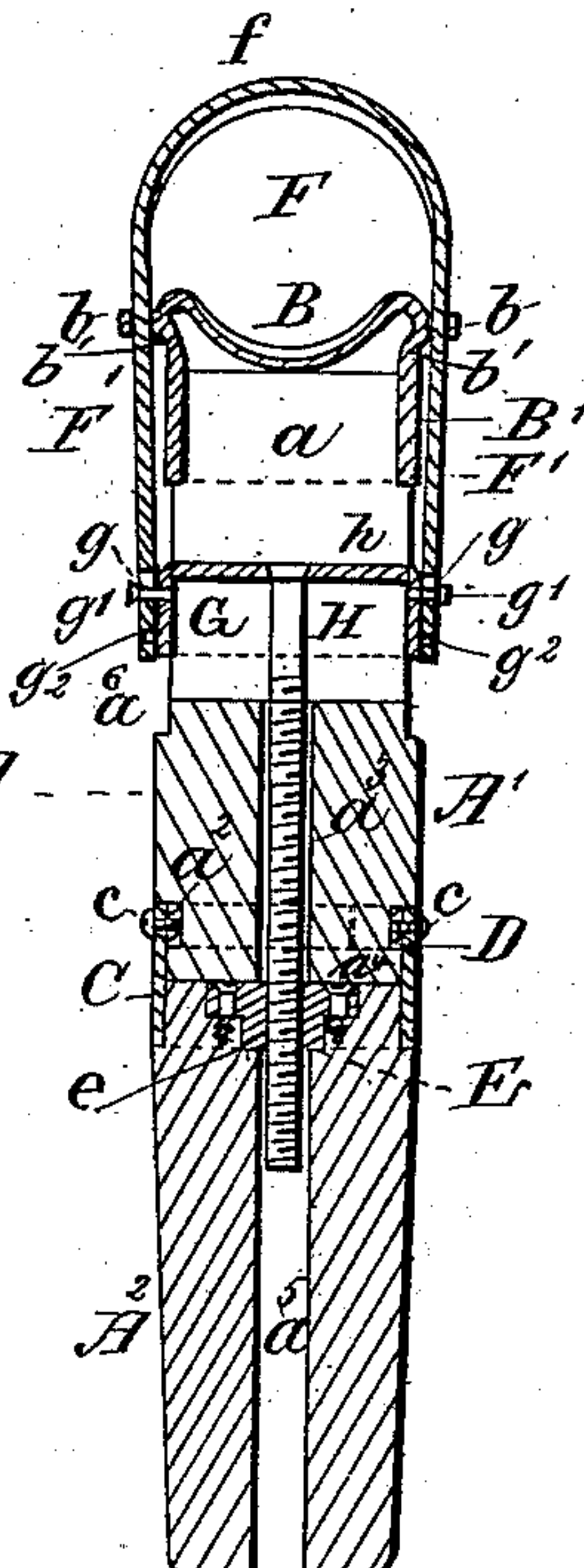


Fig. 5.

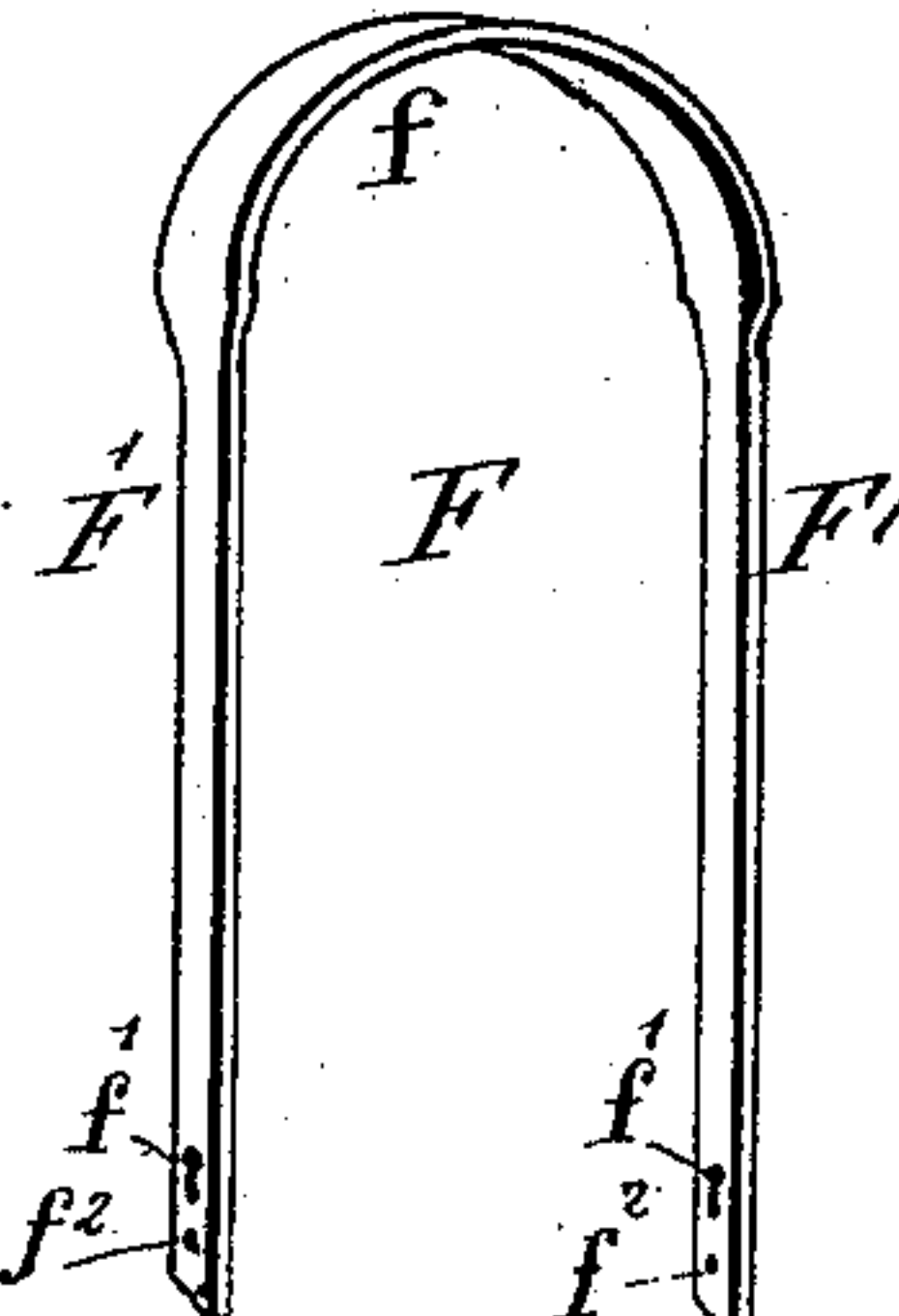


Fig. 7.

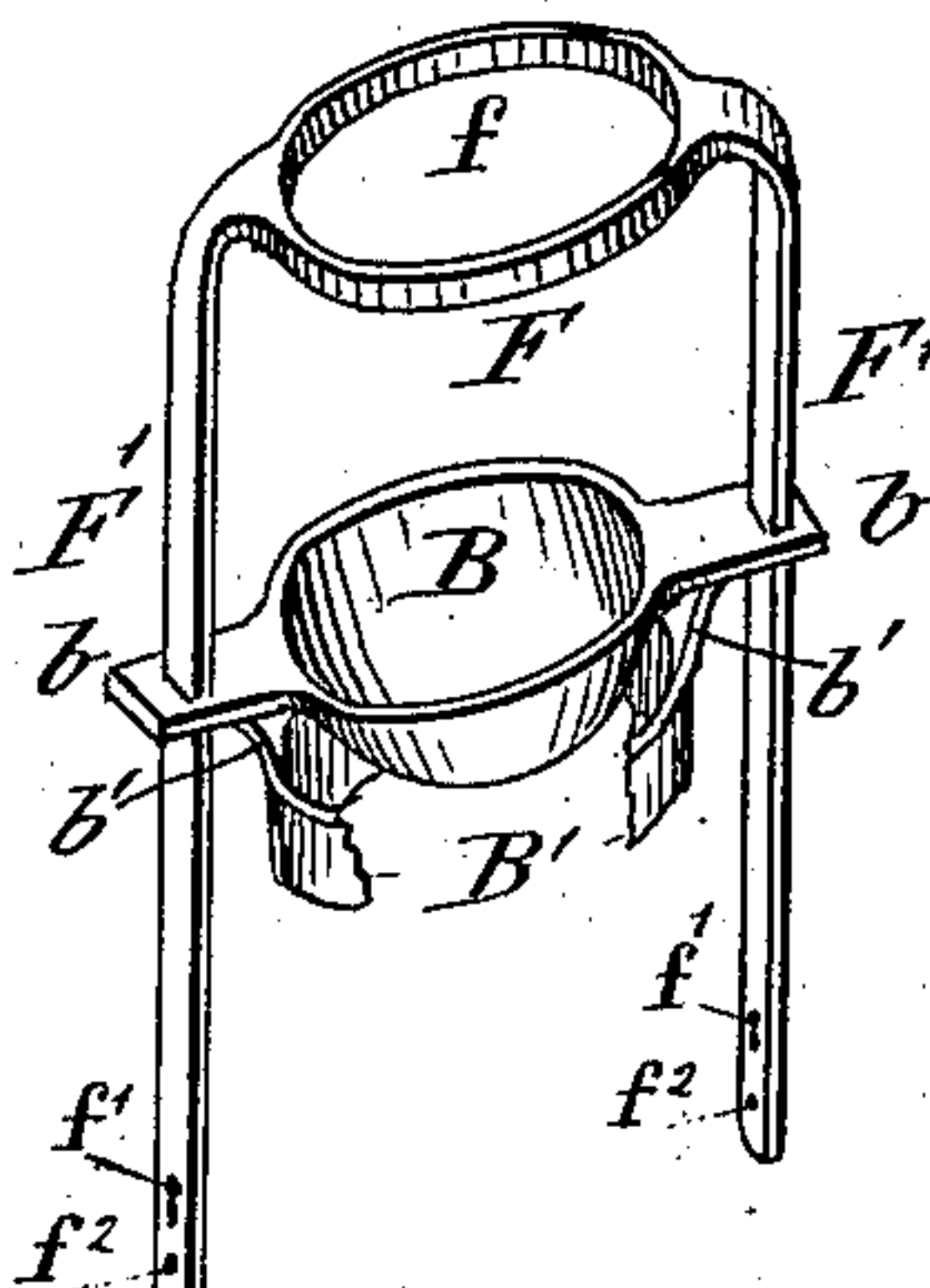


Fig. 8.

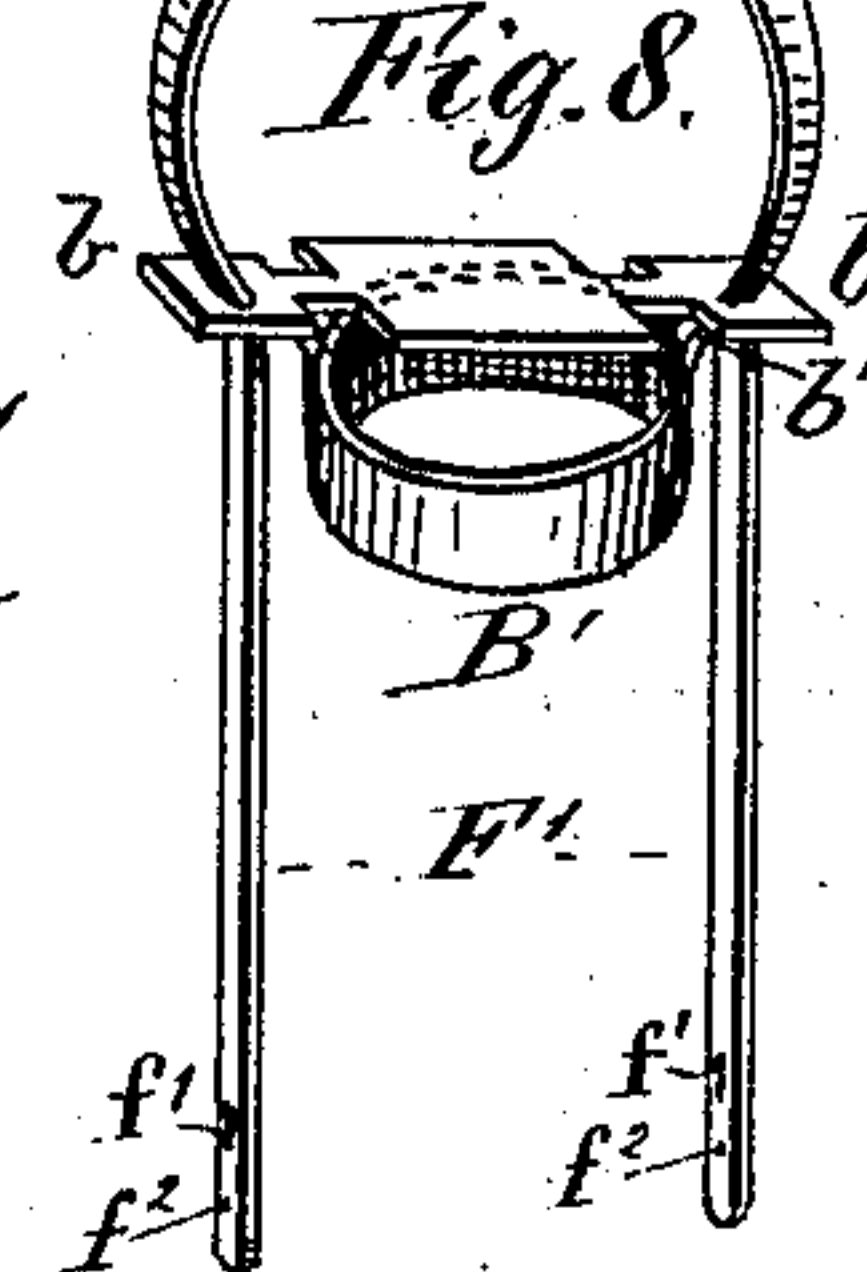
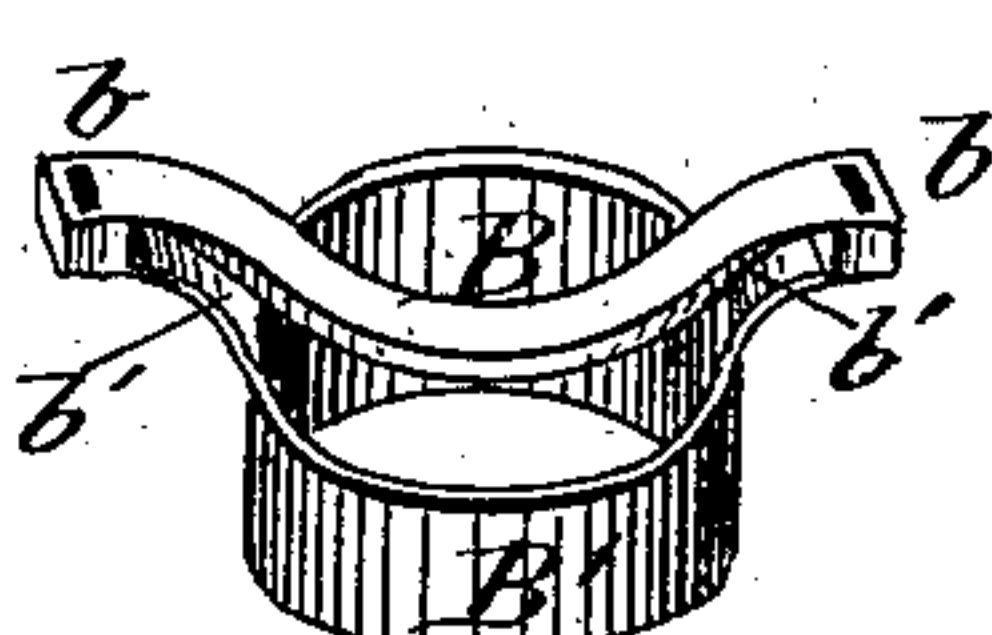


Fig. 6.



Witnesses
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UNITED STATES PATENT OFFICE.

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ENGRAVER'S TOOL.

SPECIFICATION forming part of Letters Patent No. 297,213, dated April 22, 1884.

Application filed January 28, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WILDT, a citizen of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Engravers' Tools; 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in engraver's tools, and more especially to that class whereby objects of small dimensions may be more conveniently held for the purpose of engraving the same.

The object of this invention is to provide a convenient adjustable tool in which are employed a stationary rest or table and a loop or arms for holding the object firmly on said table or rest, said parts being made detachable for the purpose of substituting a loop or arms or a rest, or both, of different form, to adapt the tool for use in holding articles of various configurations, as hereinafter more fully described, and as shown in the accompanying drawings, in which—

Figures 1 and 2 illustrate my improved tool by vertical front and side elevations, respectively. Figs. 3 and 4 illustrate the same by vertical sections taken at right angles to each other on a line with the vertical axis of the tool. Figs. 5 and 6 are detached isometrical views, showing one form of the interchangeable stationary support or table and adjustable retaining or holding device, respectively, for holding cylindrical objects, shown in Figs. 1, 2, 3, and 4. Fig. 7 is a like view, showing the like devices for holding spherical objects. Fig. 8 also shows by a detached isometrical view still another form of said interchangeable devices.

In these drawings, A indicates the stock-handle of the tool, which is formed of two parts or sections, A' A², connected together in such manner as to rotate one upon the other. The part or section A' of the stock or handle

is slotted transversely, the slot *a* extending downward for a certain distance, and the length thereof determines the extent of the vertical movement of the adjustable retaining or holding device where the tool consists of a stationary support or rest and a retaining or holding device adapted for adjustment relatively to and above said stationary support on a line with the longitudinal axis of the handle or stock of the tool.

Upon the upper end of the part A' is detachably secured in any convenient manner—as, for instance, by means of set-screws *a'*—a thimble or sleeve, B'. This thimble, if desired, may be secured to the part A' of the holder by screwing the same thereon, or by means of a bayonet or other interlocking joint, to adapt the same for ready removal and substitution of another, for purposes which will be presently described.

The thimble B' is provided with a support or rest, B, corresponding to or nearly corresponding to the form of the object to be held by the tool, as shown in Fig. 1. The support or rest B is made in the form of a segment of a circle both longitudinally and in cross-section, as shown in Fig. 4, the parts being more especially adapted for cylindrical objects—such as rings—to afford means for more conveniently handling the object, as well as to afford easy access to the interior periphery thereof. At its opposite ends the support or rest B is secured to the sleeve or thimble B' by means of arms *b'*, and at said points said support or rest is provided with slotted guide-bearings or lugs *b*.

It is obvious that, instead of forming or attaching the bearings *b* to the support B, these may be formed on or attached to the thimble B' and perform the same function.

At or near the lower end of the part A' of the stock or handle is formed an annular groove, *a*², for the reception of a split ring, D, by means of which the two parts of said stock or handle are rotatably connected with each other. The part A' has also an axial perforation or passage, *a*³, extending from its lower end to the slot *a* thereof.

The part A² is provided at its upper end with a sleeve, C, secured thereto in any suit-

able manner, to form a socket, a^1 , as shown in Figs. 3 and 4, for the reception of the lower grooved end of the part A' of the handle. The sleeve C is secured by means of screws c to the split ring D , above referred to, and for the purpose stated. Any other suitable joint or connection of this class may be used, though it is evident that the connection described is a very simple and inexpensive one, and readily made, while it answers all the purposes for which it is intended.

The section A^2 of the stock or handle has an axial perforation or passage, a^3 , extending from end to end thereof, and at its upper end, which forms the bottom of the socket a^1 , is arranged within a suitable recess or countersink or bearing, E , provided with a central screw-threaded opening or passage, e . This bearing may be made in the form shown in Figs. 3 and 4; or it may be a simple plate or block of metal secured to the part A^2 by means of two screws, and provided with a screw-threaded perforation registering with the axial passages of both sections of the stock or handle.

G indicates a sleeve fitted to and arranged to slide vertically on the part A' of the handle between the sleeve or thimble B' and an annular shoulder or offset, a^6 , formed on the part A' of the handle, the two limiting the extent of movement of the sleeve in either direction. The sleeve G has on its opposite sides a pin or stud, g , terminating in a button, g' , and below the pins g , and in the same vertical planes, the sleeve is provided with a pin, g^2 . Centrally across the sleeve is attached a cross-bar, h , that extends across the slot a and moves with the sleeve. To the center of the cross-bar h is rigidly attached an actuating screw-rod, H , that passes through the axial passage a^3 and works in the screw-threaded bearing E of the section A^2 of the handle A , so that when either the part A' or A^2 is rotated in one direction the sleeve G is moved upward on the section A' , and when rotated in a reverse direction said sleeve is moved downward on said section A' of the handle or stock.

It is obvious that if the movable holding or retaining device of the tool is connected with the sleeve said part can be moved toward or from the stationary support or rest B . This movable holding or retaining device, which serves to hold the object on the support, may be rigidly secured to the sleeve G , in which case it is obvious that but one form of support and retaining device can be used, especially if the thimble or sleeve B' is permanently attached to the part A' of the stock or handle. Even in case said sleeve is removably secured to part A' , as above set forth, it would be necessary, when it is desired to substitute one set of holding devices for another, to remove therewith the sleeve G and screw H . To avoid this I connect the movable part of said devices with the sleeve G in such manner that it may be readily detached therefrom and another one applied either in combination with the same

stationary support or rest, or by removing both and substituting others of the desired form.

As shown in Figs. 1, 2, and 3, the adjustable holding device F is designed for use, with the support B , for holding cylindrical objects, and more especially rings and like cylindrical objects, and is composed of a piece of spring metal bent into U shape, the segmental portion f of which has its inner face of segmental form in cross-section, or concave, thus forming a groove like the groove in the support or rest B , in which the ring or other like object is securely held.

The legs F' of the holding device F are provided near their lower extremities with a hole, f^2 , for the reception of the pins g^2 , and above said holes with a slot, f' , terminating at its upper end in a circular hole, forming a button-hole. In this manner, if it is desired to attach the part F to the sleeve G , the legs thereof are passed through the slots in the guide bearings or lugs b of the stationary support or rest B , then over the buttons g' of the pins g , and drawn upward until said pins lie in the end of the slots, when the ends of the legs will be in a position for the pins g^2 to pass through the holes f^2 , thus securing the part F firmly in place. To remove the said part F , the lower ends of the legs are lifted off the pins g^2 , and the said part F is then pushed down until the buttons g' on pins g lie in the circular hole at the ends of the slots f' , when the legs may be readily detached and drawn out of the bearing-lugs of the support or rest B . These pins not only serve to securely lock the part F to the sleeve G , but they also serve to hold said part against vertical movement when operated by the screw H .

It is obvious that if the pins g^2 were not employed there would be a lost motion corresponding with the length of the slot in the legs of part F , and if the pins g were dispensed with the said parts would be liable to become detached.

Any other method of attaching the legs of the part F to the sleeve G , so that they may be readily detached, may, however, be employed—as, for instance, a hollow interiorly screw-threaded stud, in conjunction with a button having a screw-threaded shank—may be employed, or other analogous fastening devices. The sleeve G may be dispensed with and the legs F' of the part F may be secured directly to the cross-bar h .

It is obvious that by means of the described construction, in a very short time, either one or both parts B and F may be readily removed and corresponding parts of other form substituted—as, for instance, the devices shown in Fig. 7, whereby a spherical object may be conveniently held, or the devices shown in Fig. 8, whereby objects of other form may be securely connected with the stock or handle; or any other desired form of holding devices may be employed—forms which, from what has been said, will readily suggest themselves

to the engraver or manufacturer of such tools, according to the object or article to be held thereby, and an assortment of such devices may be provided for each stock or handle.

5 The operation of the tool will be readily understood from what has been said and by an inspection of the drawings, and further description thereof is deemed superfluous.

10 Having now described my invention, I would have it understood that I do not desire to claim, broadly, an engraver's tool of the class described, as I am aware that such tools are in use to which cylindrical objects or objects of other form may be secured; but

15 What I do claim is—

1. An engraver's tool composed of a stock or handle made in two sections, arranged for rotation one upon the other, and in combination therewith of holding devices consisting of a stationary support or table and a retaining device secured to and adjustable upon one of the handle-sections for securing the object to said stationary support, said adjustable holding device being made detachable from the handle section, and a screw connected with said holding device and operated from either one or the other handle-section, for the purposes specified.

2. An engraver's tool composed of a stock or handle made in two sections, arranged for rotation one upon the other, and in combination therewith of a stationary support or table detachably connected with said handle or stock for supporting the object, a retaining device secured to and adjustable upon one of the handle-sections for securing the object to or holding the same on said support or table, said holding device being likewise made detachable from the handle or stock, and a screw-rod connected with the adjustable holding device and operated from one or the other handle-section, for the purposes specified.

3. An engraver's tool composed of a stock or handle made in two sections, arranged to rotate one upon the other, and in combination therewith of interchangeable stationary supports or rests, interchangeable retaining or holding devices for securing the object to said supports or rests, and a screw connected with the interchangeable holding devices, for operating the same by the rotation of either handle-section, for the purpose specified.

4. The handle A, composed of the section A', provided with the annular groove a^2 , and the section A², provided with the sleeve C, and in combination therewith of the split ring D and suitable devices for rigidly connecting the sleeve C with said ring, as described, for the purpose specified.

5. The combination, with the handle-section A', having slot a and an axial passage, a^3 , the handle-section A², having a like passage, and a threaded bearing, E, said sections being rotatable one on the other, of the sleeve G, arranged to slide on section A', and the

screw-rod H rigidly connected to sleeve G, and operating in bearing E, whereby said sleeve may be adjusted vertically by the rotation of either handle-section, as described, for the purpose specified.

6. The combination, with the two-part handle A, constructed for operation as described, a stationary support or table secured to the upper end thereof, and a retaining or holding device secured to and adjustable vertically on the upper handle-section and above said stationary support, of the sleeve G, connected with the holding device, and screw-rod H, rigidly connected to the retaining or holding device, said parts being arranged for co-operation as described, for the purposes specified.

7. The combination, with the two-part handle A, constructed for operation as described, an interchangeable stationary support or table adapted to be secured to the upper end of said handle, and an interchangeable retaining or holding device adapted for vertical adjustment above said stationary support, of the sleeve G, detachably connected with the adjustable holding device, and the screw-rod H, rigidly connected with the sleeve G, said parts being arranged for co-operation as described, for the purpose specified.

8. The combination, with the two-part handle A, constructed for operation as described, the stationary segmental and grooved support B, secured to the upper end of said handle, and the U-shaped retaining or holding device F, having its segmental portion f grooved also, said device being adjustable vertically above the stationary support, of the sleeve G, connected to said holding device F, and the screw-rod H, connected with and operating the sleeve G, said parts being arranged for co-operation as described, for the purposes specified.

9. The combination, with the vertically-adjustable retaining or holding device, the legs or arms of which are provided with apertures $f' f^2$, as described, of the sleeve G, provided with pins $g g^2$, substantially as described, for the purpose specified.

10. The combination, with the two-part handle A, constructed for operation as described, the stationary support or table B, secured to the end thereof, the slotted guide bearings or lugs b , and the retaining or holding device F, the legs F' of which move in and are guided by said lugs b , of the sleeve G, connected with said legs F', and the screw-rod H, connected with sleeve G, said parts being arranged for co-operation as described, for the purpose specified.

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

WM. WILDT.

Witnesses:

C. T. LOEHR,
F. KERHE.