

(No Model.)

2 Sheets—Sheet 1.

W. H. WALKER.
HAME AND DRAFT EYE.

No. 367,479.

Patented Aug. 2, 1887.

Fig. 1.

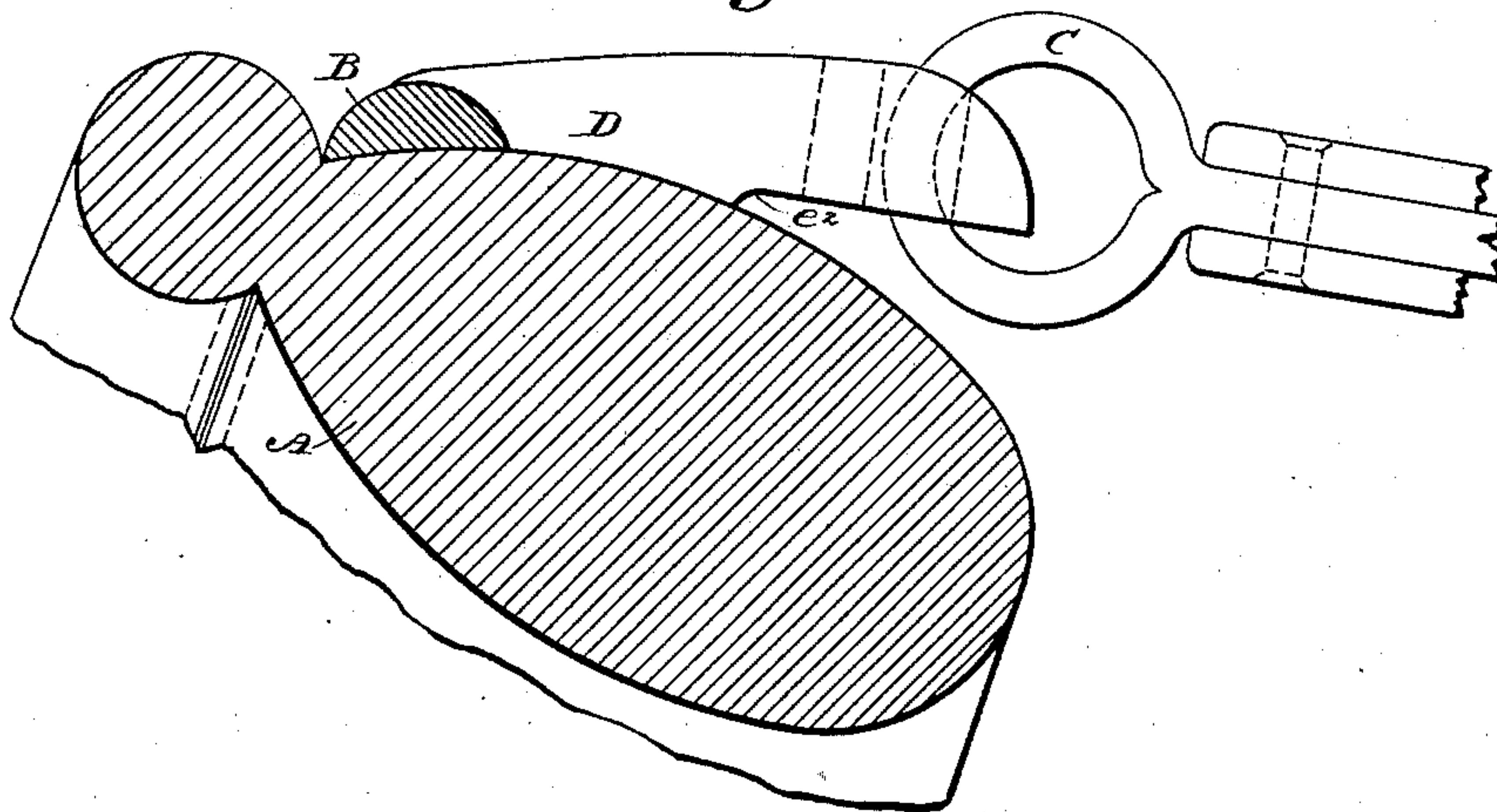


Fig. 2.

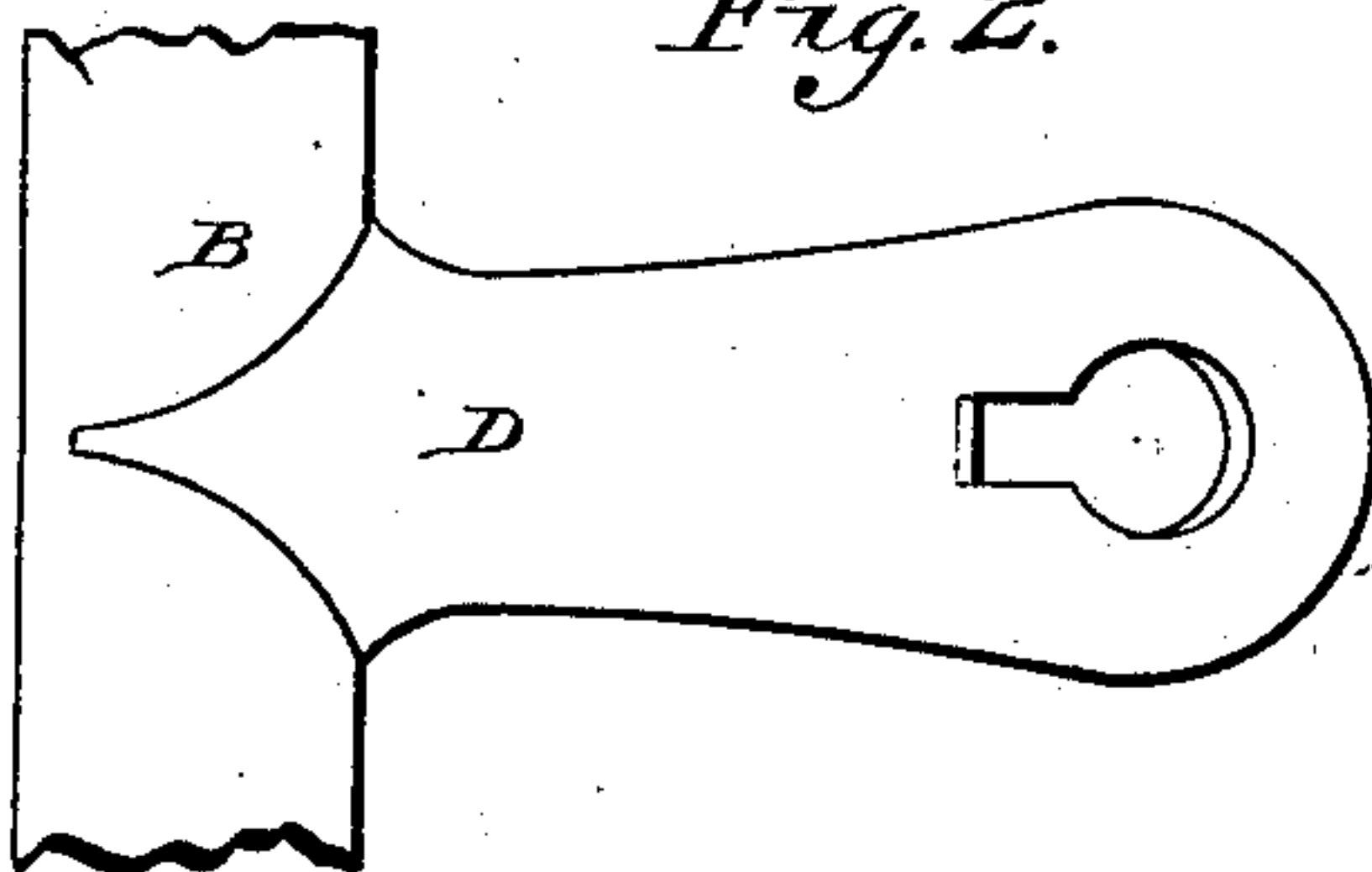


Fig. 5.

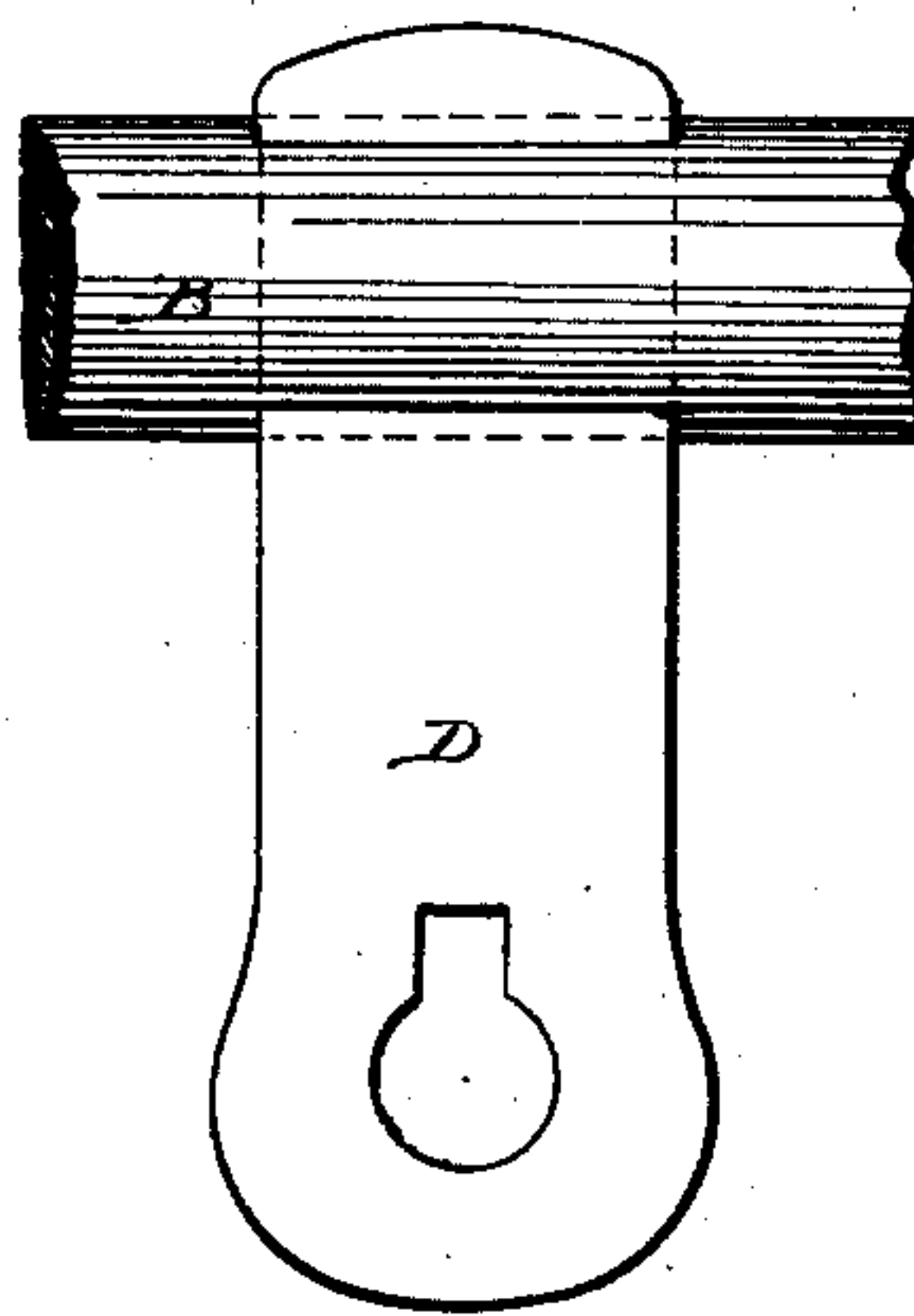


Fig. 3.

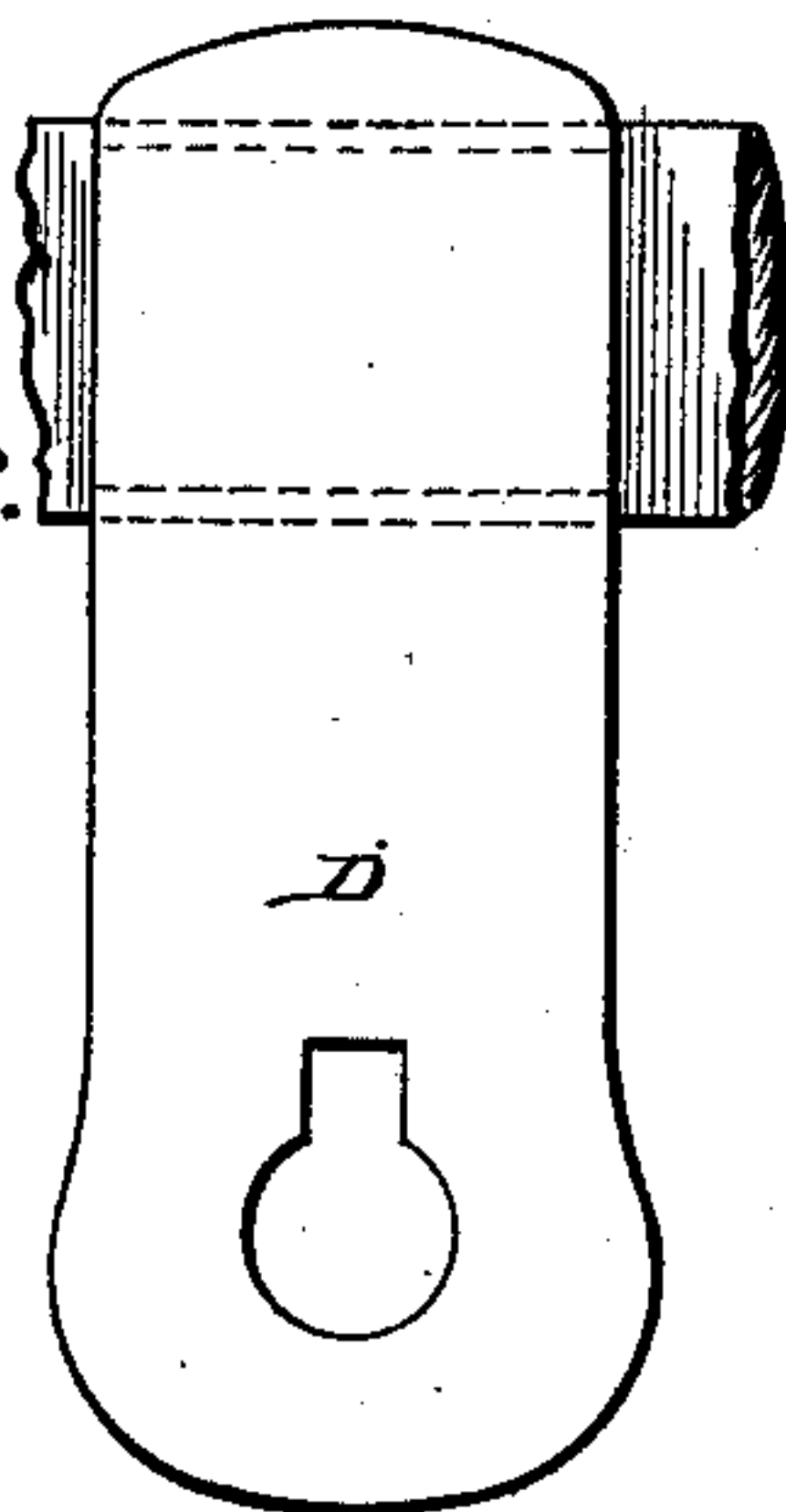
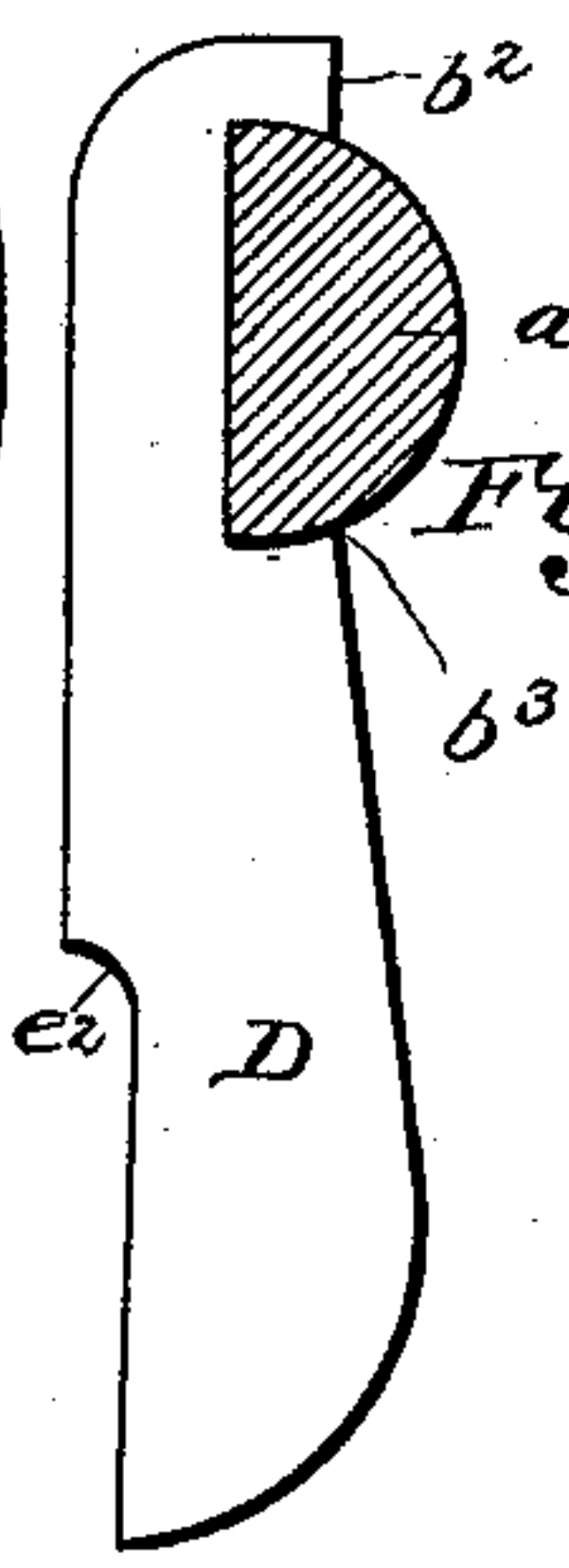


Fig. 4.



Witnesses

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Fig. 6.

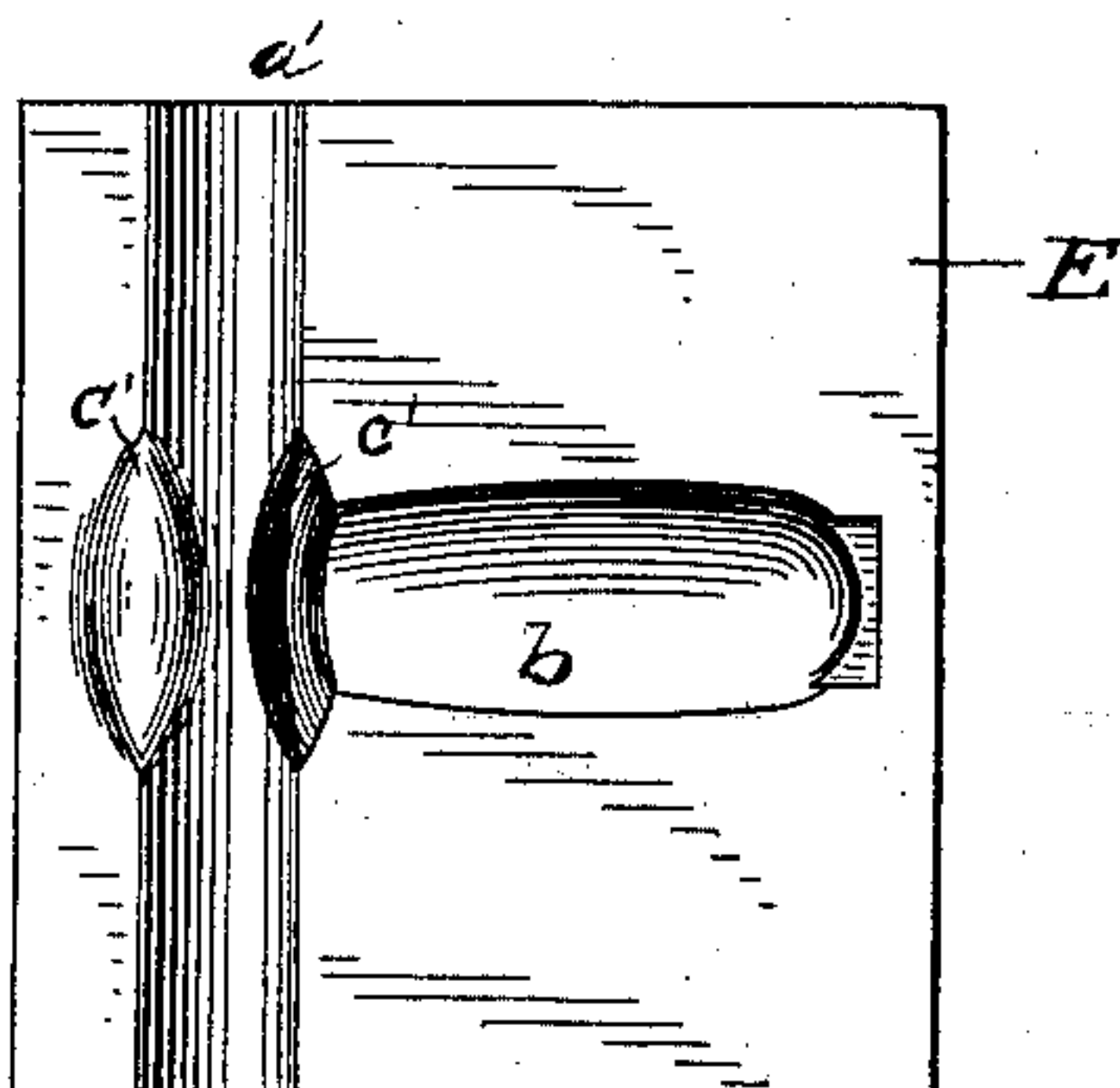
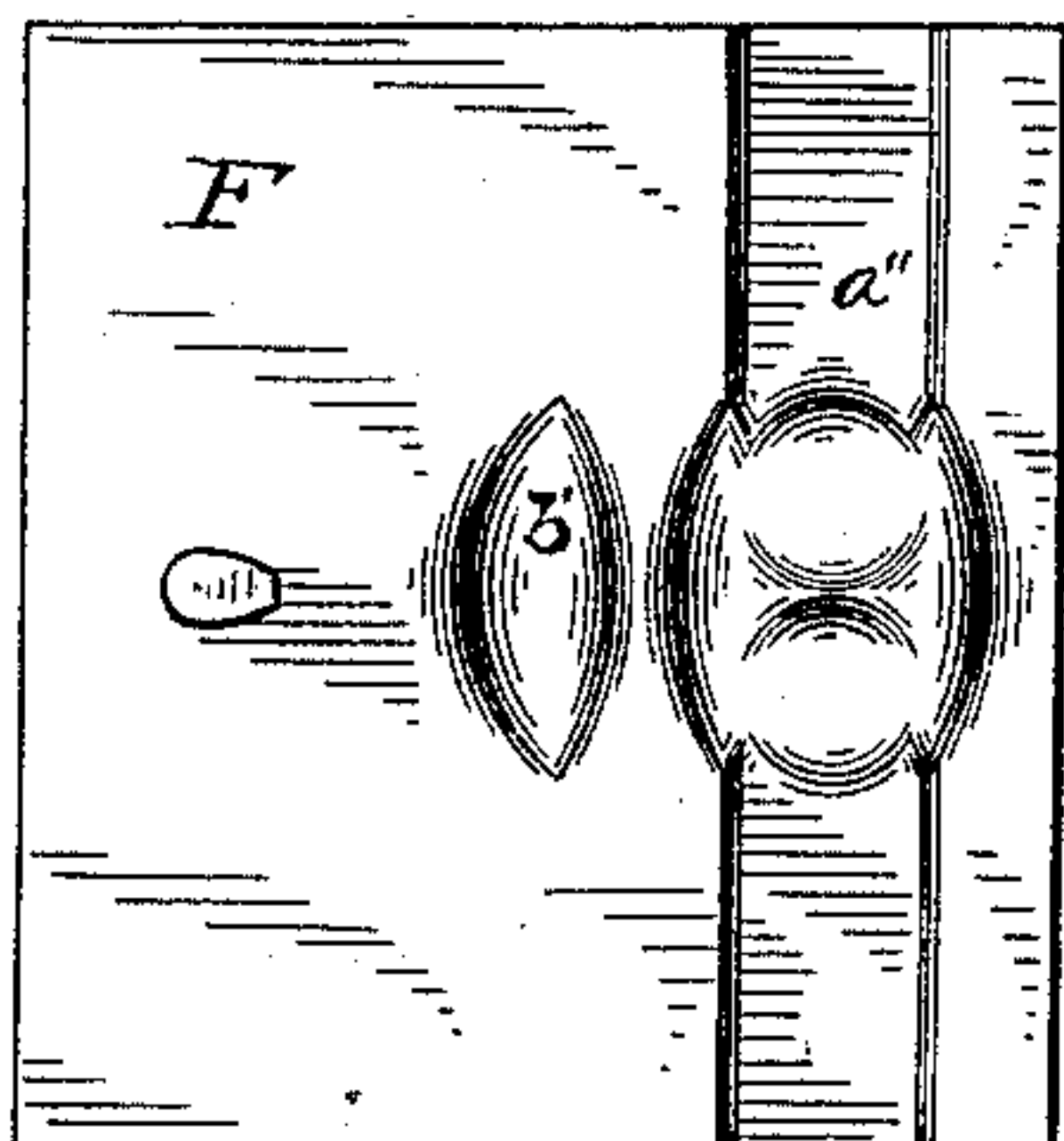


Fig. 7.

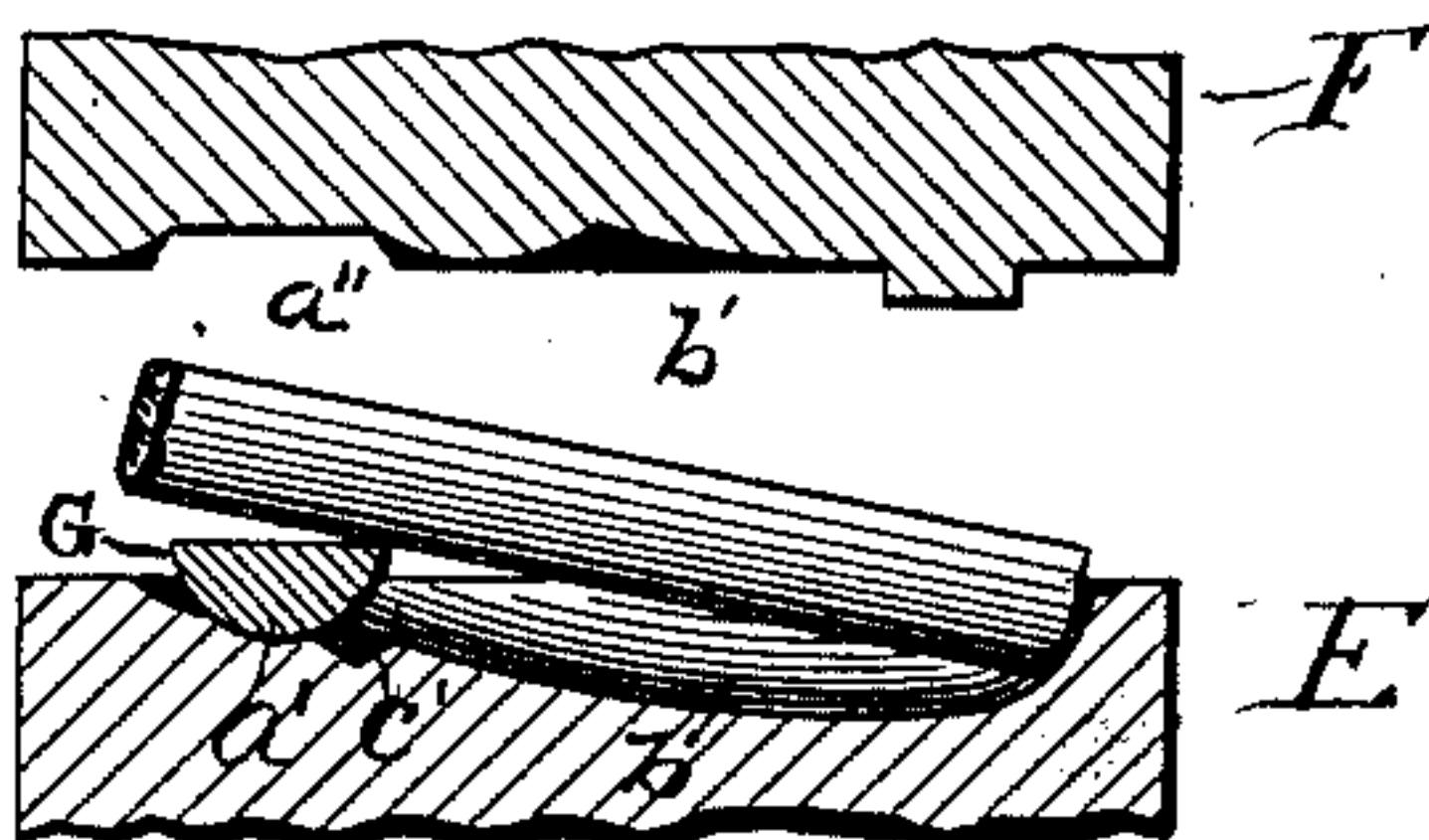


Fig. 8.

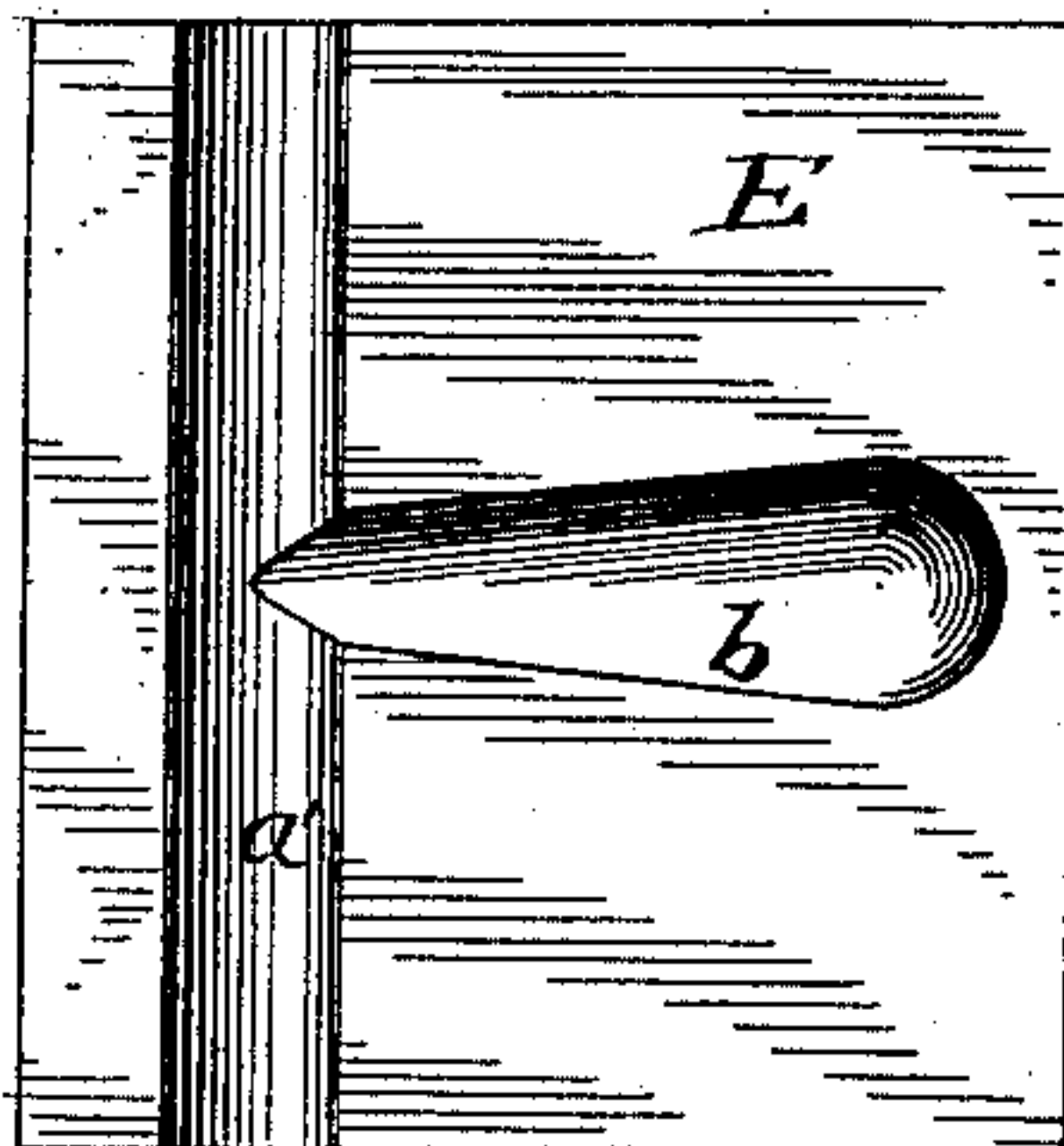
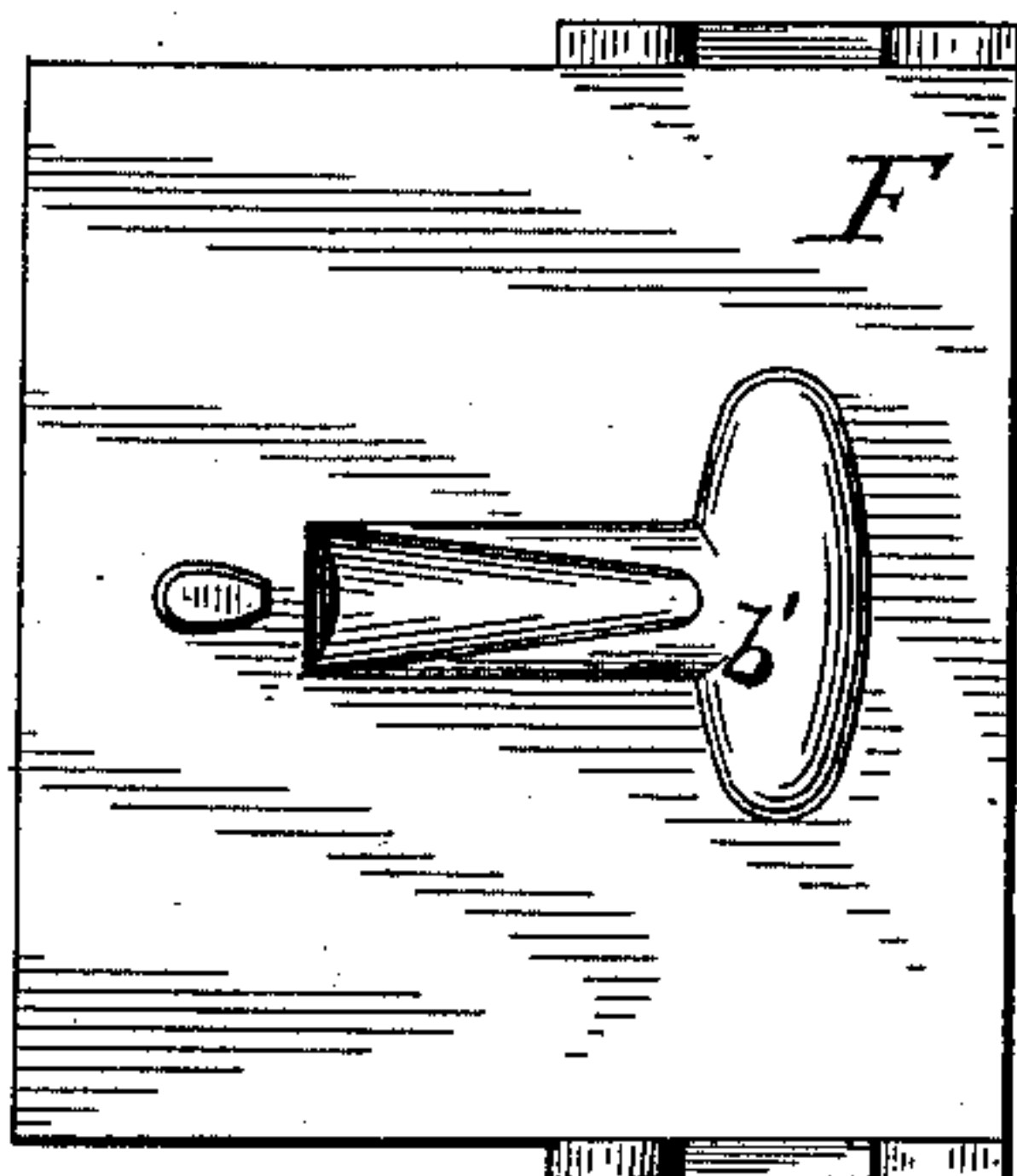
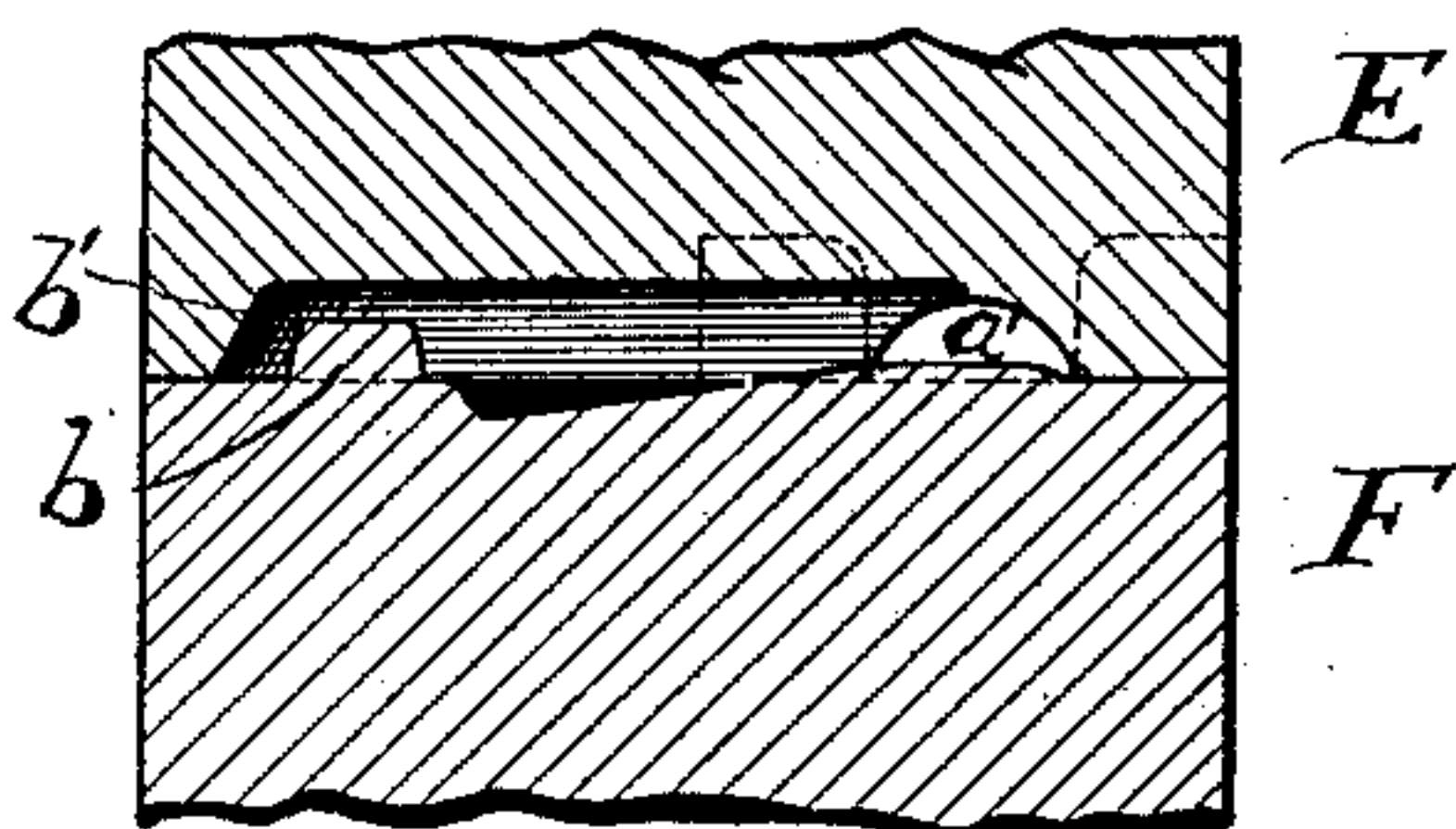


Fig. 9.



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UNITED STATES PATENT OFFICE.

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HAME AND DRAFT-EYE.

SPECIFICATION forming part of Letters Patent No. 367,479, dated August 2, 1887.

Application filed January 10, 1887. Serial No. 223,847. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. WALKER, a citizen of the United States, residing at Milford, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Hames and Draft-Eyes; 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 of reference marked thereon, which form a part of this specification.

Prior to my present invention the method usually employed for uniting the body of a hame and the piece of stock in which the draft-eye is formed has been to place the rounded upper surface of the hame-body upon the draft-eye piece and form a weld-joint, by the hammer or otherwise. This method is attended with numerous disadvantages. Thus during the welding operation the seam is hidden from the workman, and he is therefore unable to guard against dirt, scale, and other foreign matters thereat, which render the joint rough, requiring thereafter an excessive coat of japan or plating metal to hide the deformity. Furthermore, the weld-joint thus made is found to be uncertain and weak, so that the draft-eye piece frequently breaks off from the body portion.

To obviate these defects in the method of making the weld-joint, and by one and the same operation to secure a construction offering superior advantages in guarding against abrasion of the harness-collar by the trace-clip, is the object of my invention.

It consists, therefore, in the peculiarities of method and structure hereinafter described, and particularly pointed out in the claims.

Referring to the accompanying drawings, illustrative of my invention, Figure 1, Sheet 1, represents a transverse section of a collar and a hame having the draft-eye attached thereto in accordance with my invention. Fig. 2, Sheet 1, represents a plan view of the draft-eye and hame, the latter being in part broken away. Figs. 3, 4, and 5, Sheet 1, represent, respectively, a front, side, and rear elevation of the improved configuration of the draft-eye incident to my invention. Figs. 6 and 7, Sheet

2, represent, respectively, plan views of the two forming-dies and a central section taken through the same; and Figs. 8 and 9, Sheet 2, represent like views of the welding and finishing dies.

Similar letters of reference indicate similar parts throughout the several views.

A indicates a collar, B the body of the hame, C the trace-clip, and D the draft-eye. The latter is formed from the stock, and at the same time united to the hame-body, preferably by means of the forming-dies illustrated in Figs. 6 and 7. The lower die, E, is provided with the groove a' , of contour corresponding to the rounded surface of the hame-body.

At right angles to the groove a' is situated the groove b , of form corresponding to that desired for the rounded surface of the draft-eye. Additional depressions, $c' c'$, are provided for permitting the stock from which the draft-eye is formed to lap well over the rounded hame-body, as hereinafter more particularly specified. The upper die, F, is provided with a groove, a'' , corresponding to the flat surface of the hame-body, and with an additional depression, b' , at right angles to the groove a'' .

In carrying out the forming and swaging operation in accordance with my invention, the hame-body is laid flat side upward in the groove a' . The draft-eye stock G is then raised to a red heat, and the end or portion thereof to be secured to the body is laid across the latter, convex side downward, as illustrated in Fig. 7. A heavy blow is then imparted to it by the upper die, whereupon the stock fills the grooves $b b'$, and at the same time the cold metal of the hame-body causes a depression in the heated stock, the latter at the same time passing over and lapping the rounded sides of the body by entering the depressions $c' c'$. As the heated stock is thus forced over the cold hame-body it becomes immediately chilled at the point of contact and contracts, thereby firmly gripping the hame-body, and thus holding the two parts firmly in position preparatory to taking the welding heat. The parts B and D thus united are then heated to a welding heat, and are then welded and reduced to the desired form in a drop-press between the welding-dies shown in Figs. 8 and 9, whose faces are fashioned to correspond with that of the completed article.

It will be noted that I have shown the welding-dies as reversed with respect to the forming-dies—that is, the draft-eye at the bottom and the hame-body on top. I prefer this arrangement, for the reason that it permits the workman a favorable opportunity to see and remove from the joint scales, dirt, or the like, if there be any, thereby insuring as perfect a weld as possible.

The forming or shaping of the draft-eye and of its trace-clip aperture is preferably only partly effected in the first set of dies, and is completed in the welding-dies. After the forming operation in the first set of dies the article will present the appearance shown on Sheet 1, Figs. 3, 4, and 5, the end of the draft-eye extending across the flat side of the hame-body and the shoulders b^2 b^3 lapping over the convex surface of the same. After the welding operation the article will have the appearance shown in Figs. 1 and 2. So far as I am aware I am the first one to weld the end of the draft-eye to the flat surface of the hame-body, thereby securing a lap-joint over the convex surface of the latter, which is practically inseparable, and I desire to be understood as broadly claiming this feature as of my invention.

It will be observed that my improved draft-eye is provided with an offset, e^2 , which prevents the trace-clip C from rubbing against and abrading the collar. I consider this an important feature of my improvement. In some instances, if desirable, I contemplate, instead of forming this offset in the manner already described, riveting or otherwise securing it to the draft-eye proper.

I make no claim herein to the dies described and shown, as dies of a similar character are described and claimed in another pending application, filed July 1, 1887, by me, No. 243,080, but retain herein the drawing and description of said dies in order to make the invention claimed better understood.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The process herein set forth of uniting a draft-eye to a hame-body having a lower flat surface and a rounded upper surface, which consists, first, in heating the draft-eye to a red heat, laying it across the flat surface of the cold hame-body, then forcing the hame-body into the draft-eye stock, thereby forming a chilled lap-joint between the two, and finally raising both said joined parts to a welding heat and welding the same, substantially as described.

2. The process of simultaneously forming a draft-eye and welding the same to a hame-body having a lower flat surface and a rounded upper surface, which consists, first, in treating the draft-eye stock to a red heat, laying it across the flat surface of the cold hame-body, then forcing the hame-body into the draft-eye stock, thereby forming a chilled lap-joint between the two, at the same time partially shaping the draft-eye and forming an offset thereon, as described, and finally raising both said joined parts to a welding heat and simultaneously welding the said parts and completing the shaping and forming of the draft-eye, substantially as described.

3. The combination of a hame and a draft-eye secured and welded to the flat side thereof, as described, for the purpose set forth.

4. The combination of a hame and a draft-eye having at the outer end thereof an offset, as e^2 , said draft-eye being welded to the flat side of said hame, as described, for the purposes set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of December, 1886.

WILLIAM H. WALKER.

Witnesses:

OLIVER DRAKE,
WM. L. CORWIN.