

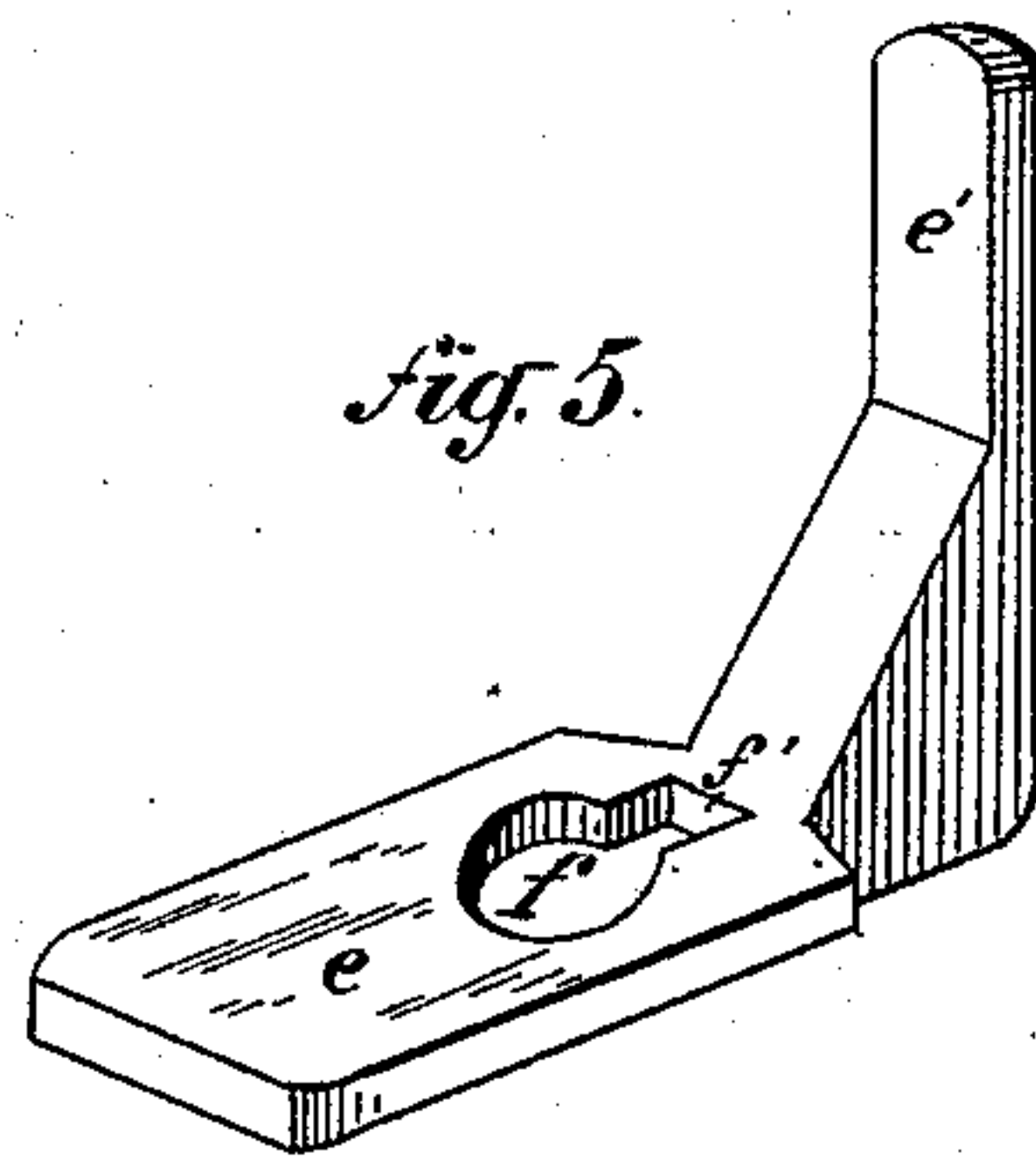
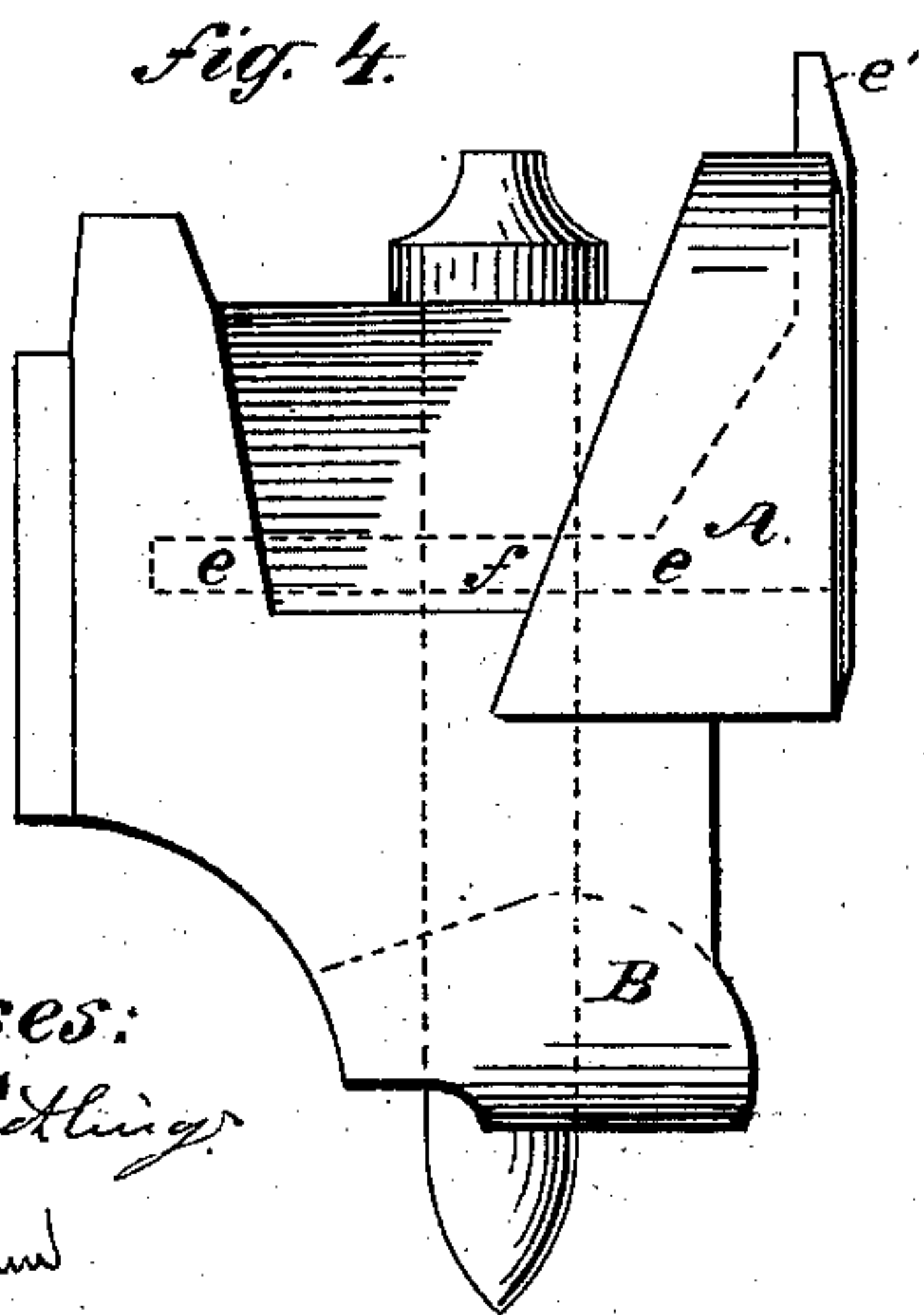
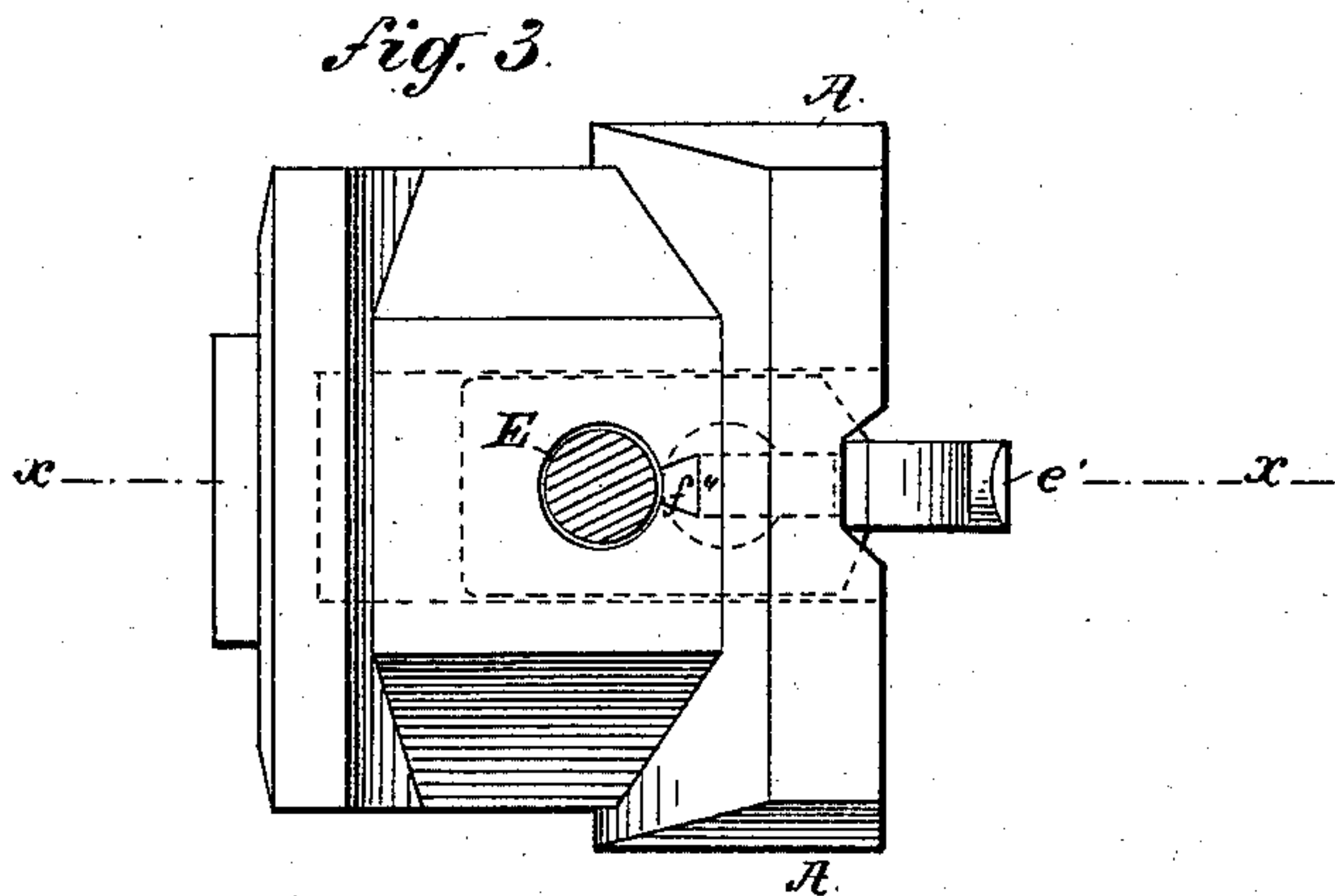
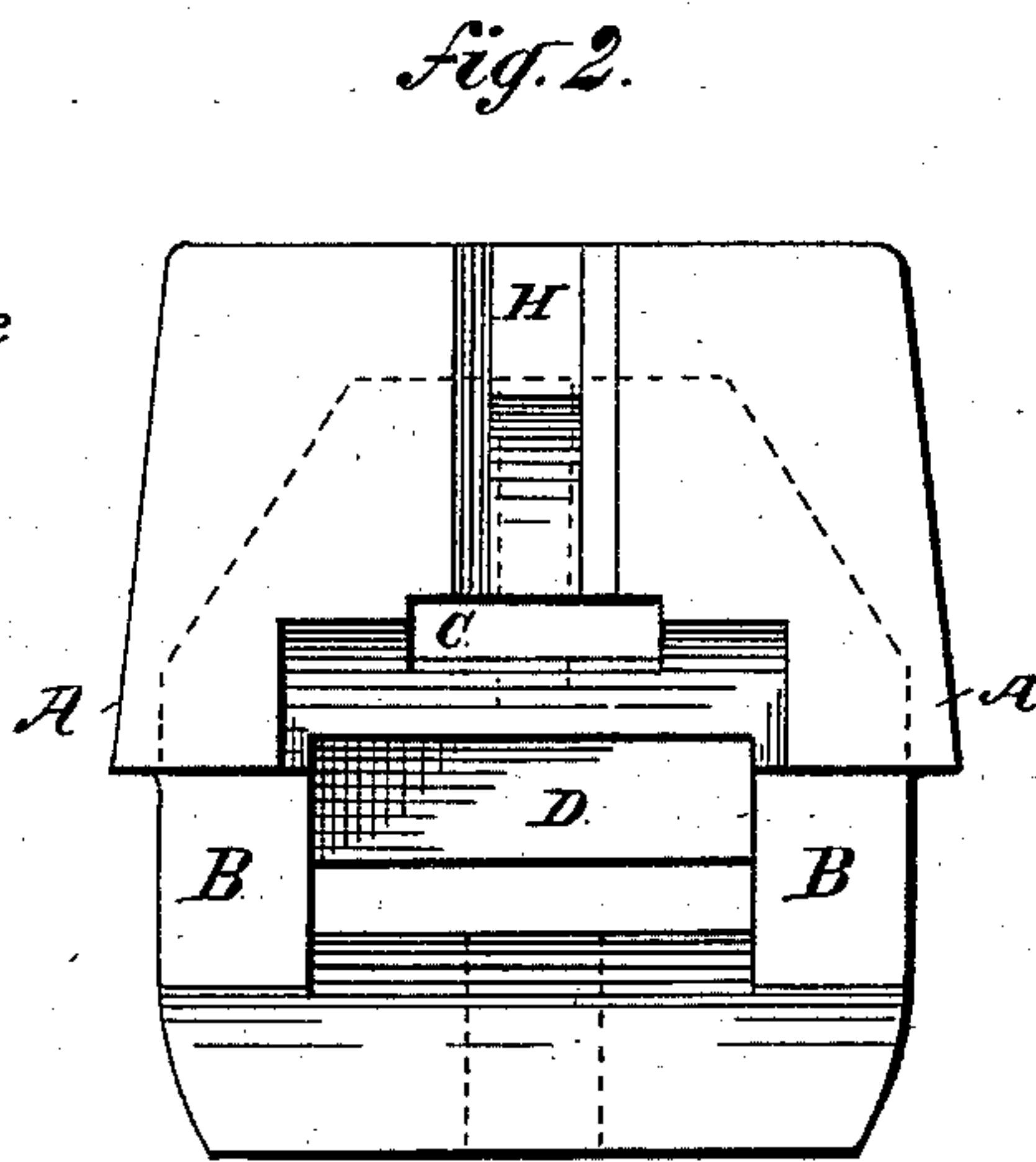
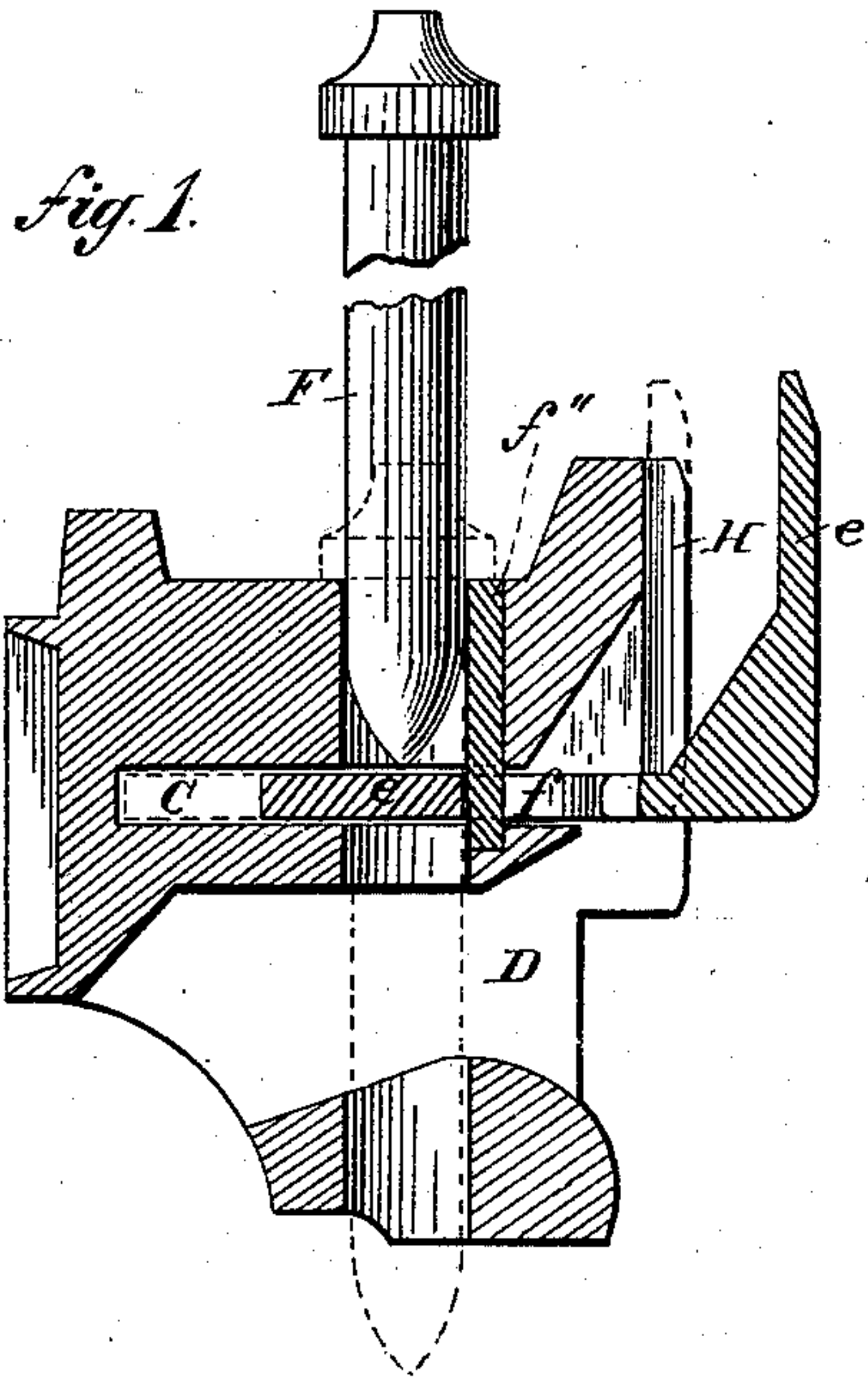
(No Model.)

M. L. WHITNEY.

CAR COUPLING.

No. 316,926.

Patented Apr. 28, 1885.



Witnesses:  
Henry G. Eickling  
J. H. Benjamin

Inventor  
Marcus L. Whitney  
by Edwin M. Fox  
att'y.



# UNITED STATES PATENT OFFICE.

MARCUS L. WHITNEY, OF HAWLEY, PENNSYLVANIA.

## CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 316,926, dated April 28, 1885.

Application filed April 25, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, MARCUS L. WHITNEY, a citizen of the United States, and a resident of the town of Hawley, county of Wayne, and State of Pennsylvania, have invented certain new and useful Improvements in Car-Couplers, of which the following is a full and true specification.

My invention relates to the art of coupling; and it consists of certain new and useful improvements of that part of the coupler known in mechanics as the "draw-bar head."

The object of my invention is to construct a strong and simple coupler by so improving the draw-bar head that by its use the coupling of cars—particularly freight-cars—may be accomplished with more ease and certainty, and without danger of accident to the brakemen, by mechanism so simple as to be operated by the most unskilled hand.

Previous to my invention the lips of the draw-bar head were made of equal length, and when the couplers were brought together in the act of locking both lips of the coupler were brought in contact with the corresponding lips of the other coupler, leaving no space for the hand of the brakeman, and, as it was necessary to guide the locking-link into the mouth of the draw-bar head, serious accidents frequently happened the brakemen in having their hands crushed between the two lower lips of the couplers. This danger was greatly increased by the necessity of dropping the locking-pin almost simultaneously with the coming together of the two draw-bar heads, thereby requiring the use of both hands at once and a proportionate division of attention. These objections and difficulties I overcome, first, by making the lower lip of the draw-bar head shorter than the upper lip, so that when two heads are brought together the lower lips will not be in contact, but sufficiently far apart to allow room for the hand of the brakeman while guiding the link into the mouth; and, second, by supporting the lower end of the locking-pin upon a movable plane provided with a circular opening near its front end sufficiently large to allow the pin to drop through when the plane is slid backward far enough to bring its circular opening beneath the end of the pin, the plane being pushed back by its outer end or handle coming in contact with the opposite draw-bar head,

which must occur before the two heads come in contact, all of which will more fully appear by the detailed description of my invention hereinafter given, and by reference to the drawings hereto annexed and made a part hereof, in which similar letters of reference refer to similar parts, and in which—

Figure 1 is a vertical sectional view through the line *x x* of Fig. 3, showing the plane supporting the locking-pin. Fig. 2 is a front view with the plane removed. Fig. 3 is a top view. Fig. 4 is a side elevation, and Fig. 5 is a perspective view of the movable plane.

My improved draw-head may be cast with the draw-bar, as is now generally done, or separately and securely attached thereto. The former I regard as the better plan.

My improvements consist of a cast or wrought iron draw-bar head, having its lower lip, B, about one and a half inch shorter than its upper lip, A, and provided with a horizontal slot, C, deep enough for the purposes herein described, the mouth D, large enough to admit the drawing-link, and the continuous perpendicular round channel E, large enough to freely admit the locking-pin F. In the slot C is placed the horizontal plane *e*, as shown in Fig. 1. This plane is provided with the circular opening *f*, and, being shorter than the slot, can be moved backward and forward therein, as shown. It is also provided with a handle, *e'*, which, when pushed back, is sunk into the vertical groove H, deeper at its bottom end to admit the triangular lower part of the handle, as shown. This plane, when drawn out, as shown in Fig. 1, forms a support for holding up the locking-pin F. When the face of the draw-bar head of another car comes in contact with the handle *e'* of the plane, the latter is forced back till the handle is pressed into the groove H, when the circular hole *f* of the plane will be directly under the locking-pin F, and the latter, being released, will fall through the plane and pass down through the entire length of the continuous perpendicular channel E by its own weight, as shown by the dotted lines, Figs. 1 and 4, thereby securely locking the link in the mouth of the head without manual aid. The plane is prevented from coming all the way out of the slot by means of a key, *f''*, Fig. 3, or in any other convenient way.

It will be observed that I show the outer end



of the underlip curved inwardly. That shape is of course not essential, but if adopted will be found to facilitate the introduction of the link into the mouth of the head. It will also  
5 be observed that I show the upper lip thicker than any other part of the head, which I think is proper, for the reasons that it gives a much larger bearing-space to the front of the head, besides imparting great strength to that part  
10 which most needs strength. That shape, however, is no part of my invention.

The groove H is made larger and deeper than the handle of the plane, so that the latter may not be mashed between the two heads, and  
15 I also remark that in my judgment the triangular handle of the plane may, if desired, be substituted by making the base of that triangle (the continuation of the plane) a little longer, and providing it with a ring or other suitable contrivance for drawing it out, thereby  
20 dispensing with the perpendicular handle *e'*, though I do not think such a substitution would be found so convenient in practice or so durable as the construction I have shown, and which  
25 I deem the best for the purposes described.

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

1. In a car-coupler, the combination, with upper lip, A, provided with the groove H, and  
30 projecting beyond the short lower lip, B, and the slot C, adapted to receive plane *e*, having the handle *e'*, of the channel E, adapted to receive the pin F, all substantially as described.

2. In a device for coupling cars, the draw-  
35 bar head having the long upper lip and short under lip, the mouth D, slot C, and channel E, substantially as described, adapted to be used in combination with the horizontal plane and locking-pin, substantially as herein set  
40 forth.

Signed at Honesdale, in the county of Wayne and State of Pennsylvania, this 16th day of April, A. D. 1884.

MARCUS L. WHITNEY.

Witnesses:

GEORGE H. WHITNEY,  
BERNARD RILEY.