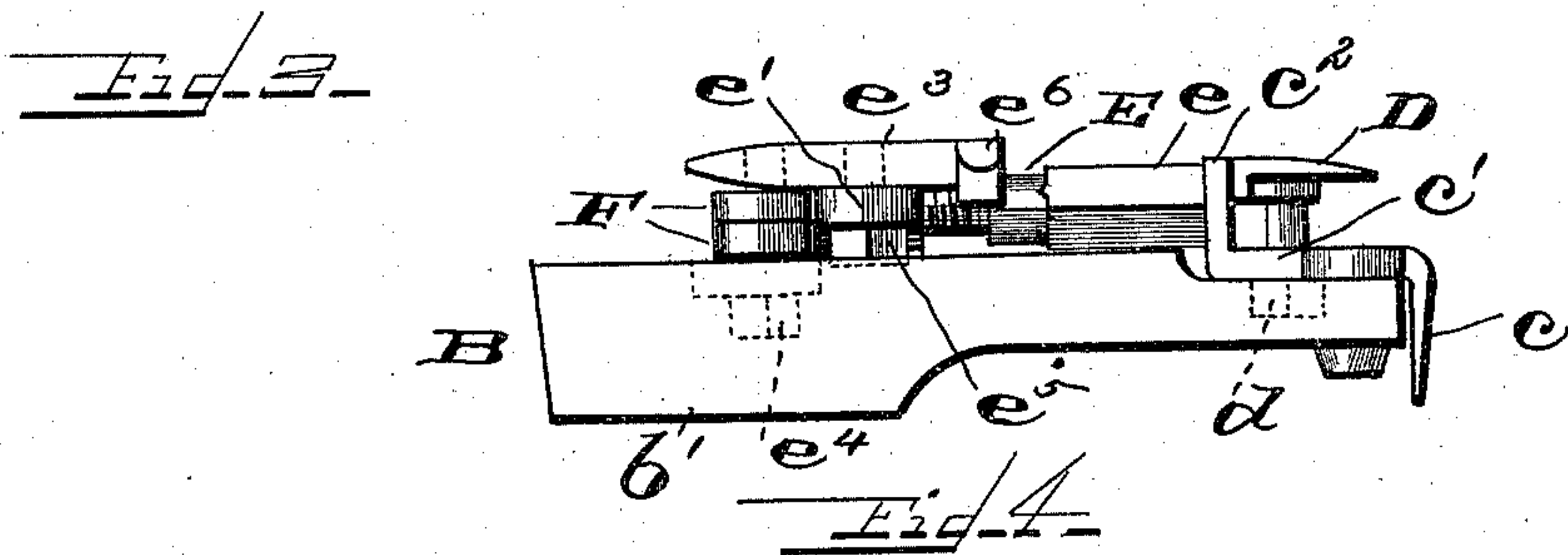
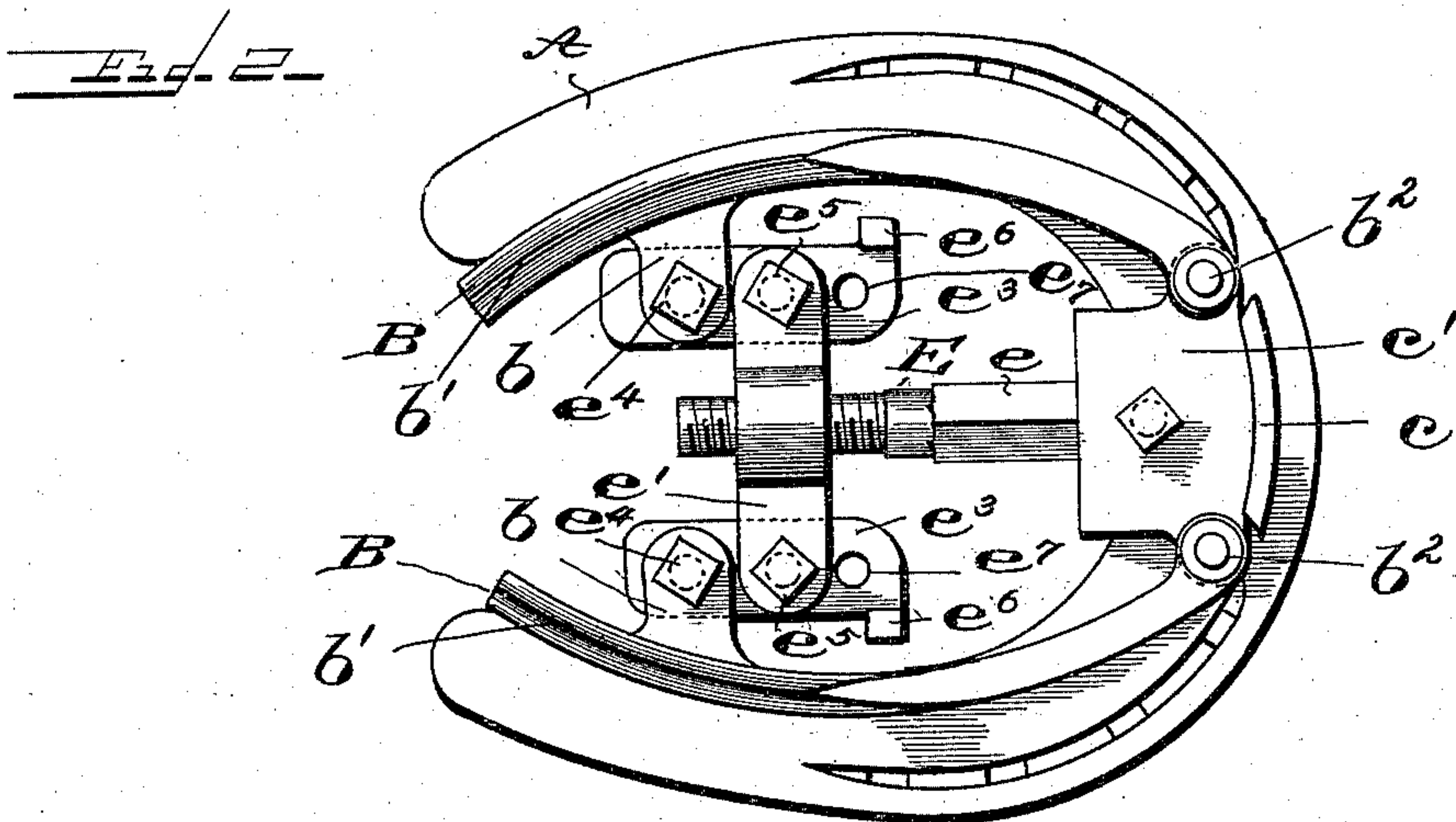
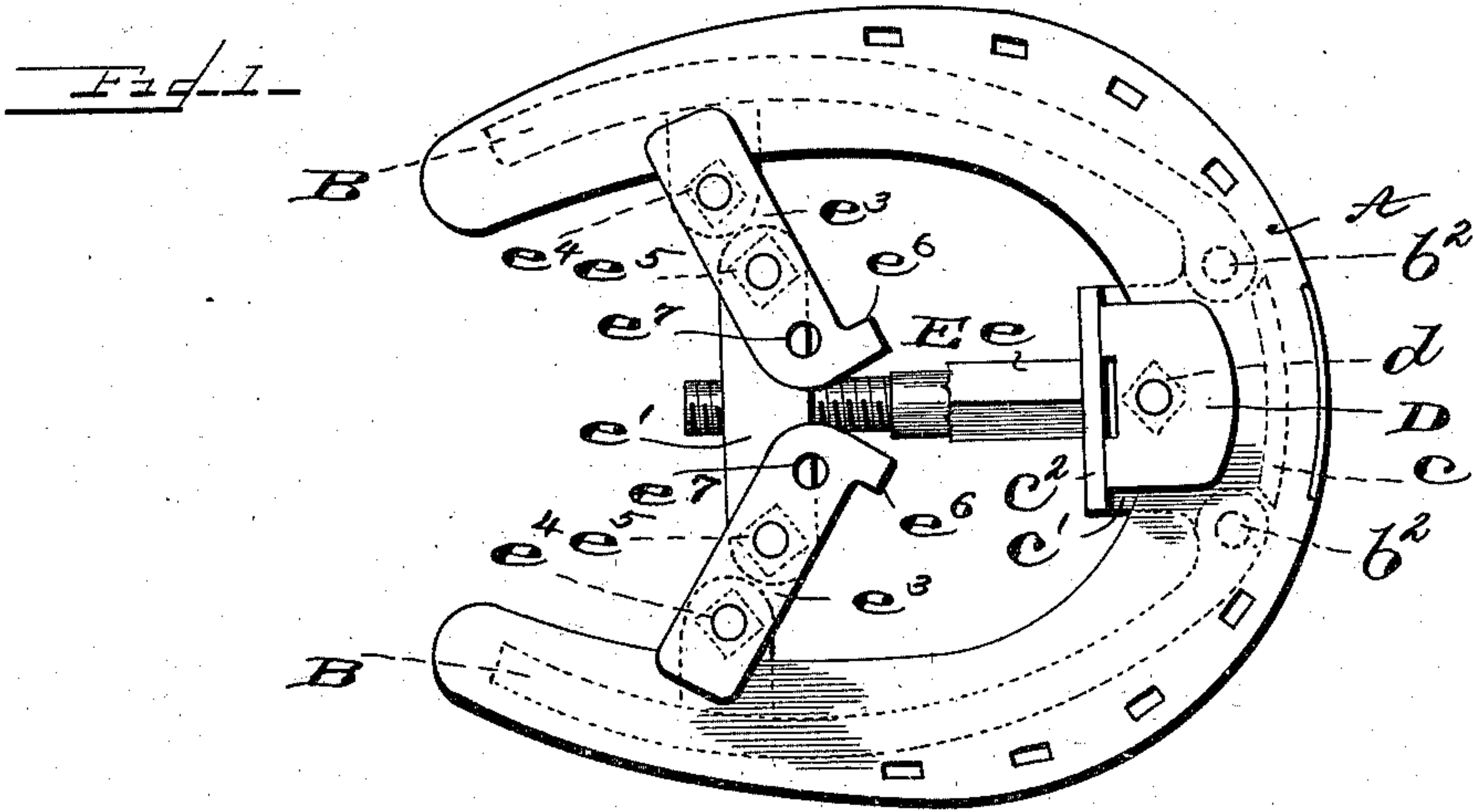


(No Model.)

H. SACHS.  
DETACHABLE CALK FOR HORSESHOES.

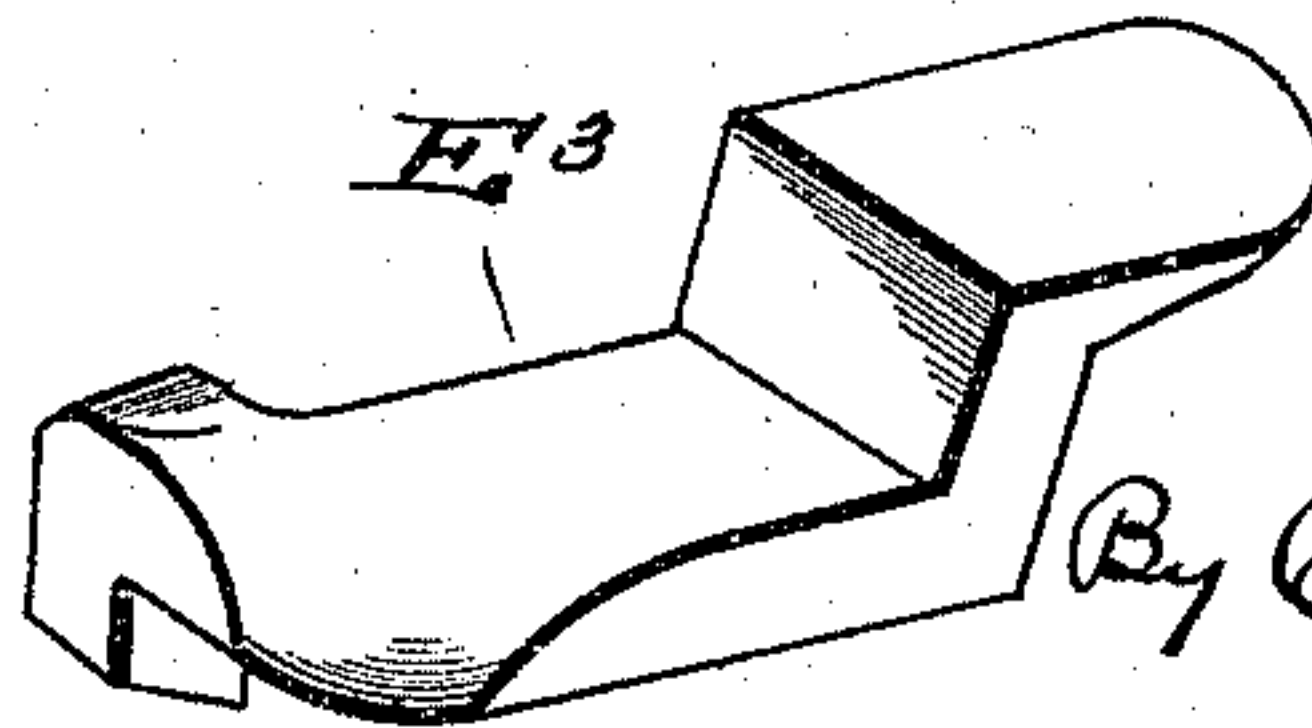
No. 558,847.

Patented Apr. 21, 1896.



WITNESSES

G. A. Pauberschmidt,  
August Donath.



INVENTOR

Henry Sachs,  
By Edwin S. Clarkson  
his atty



# UNITED STATES PATENT OFFICE.

HENRY SACHS, OF WASHINGTON, DISTRICT OF COLUMBIA.

## DETACHABLE CALK FOR HORSESHOES.

SPECIFICATION forming part of Letters Patent No. 558,847, dated April 21, 1896.

Application filed February 3, 1896. Serial No. 577,787. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY SACHS, a citizen of the United States, residing at Washington, District of Columbia, have invented certain new and useful Improvements in Detachable Calks for Horseshoes; 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.

My invention relates to improvements in that class of devices designed for attachment to horseshoes during the presence of ice or snow to prevent slipping.

The object of my invention is to produce a practical, cheap, and lasting device of this character, and one that may be readily applied to or taken from the shoe.

A further object is to adapt these devices to shoes of all sizes, be they thick or thin, wide or narrow.

My invention consists of two side members fashioned after a horseshoe, said members being provided with calks on their rear ends, a toe-calk with side and rear projections, the members being pivoted to the side projections of the toe-calk plate. Extending from each of the side members is a pivoted lever, the inner end of which is pivoted to a cross-head, said cross-head being mounted on a screw-threaded bolt, the head of said bolt being swiveled in the rear projection of the toe-calk plate. There are adjustable devices at the toe and heels to regulate the whole to thick or thin shoes.

In the drawings, Figure 1 is a top plan view of my invention attached to a horseshoe in a locked position. Fig. 2 is a bottom plan of the same with my improvement in an unlocked position. Fig. 3 is a side elevation of my invention detached. Fig. 4 is a modified form of lever.

A represents a horseshoe of any approved pattern. B represents the side members of my improved antislipping device, each of which is provided with a laterally-projecting lug b.

b' is the calk of each side member. It will be noticed that this calk is longer than the usual calk. The object of this is to make the calk last longer, from the fact that an ex-

tended sharp surface will stand more wear in proportion than a point will.

The toe-calk plate is of the double-L shape. c is the toe-calk, c' the body of said plate, and c<sup>2</sup> an upward extension of said plate. The side members B are pivoted to the toe-calk plate at b<sup>2</sup>.

D is a clamping-plate secured to the toe-calk plate by means of a threaded bolt d, said bolt passing through the toe-calk plate and provided with a head.

E is a screw-threaded bolt, the head of which is swiveled in the projection c<sup>2</sup> of the toe-calk plate. A portion of this bolt is squared, as at e, whereby it may be turned with a wrench.

e' is a cross-head having a screw-threaded opening in which the bolt E is adapted to work.

e<sup>3</sup> are levers, one end of which is pivoted, by means of the bolt e<sup>4</sup>, to the lateral projection b of the side members B, while the other end of said levers is pivoted to the cross-head e' by means of the bolts e<sup>5</sup>. The forward ends of said levers are provided with studs e<sup>6</sup>, which project downward. Thus when the levers are spread out straight across the shoe (as in very wide shoes) the studs e<sup>6</sup> come in contact with the cross-head, thereby limiting the backward movement of the same, for obvious reasons.

e<sup>7</sup> are additional pivot-openings, whereby the levers e<sup>3</sup> may be given a wider "throw" for extra-wide shoes. The rear ends of the levers e<sup>3</sup> are drawn out thinner than the main body in order that they may readily slide between the shoe and the hoof of a horse.

F are washers through which the bolt e<sup>4</sup> passes, said washers being between the lever e<sup>3</sup> and the side members B. If a shoe is very thin, as many washers are put in as are necessary. If, on the other hand, the shoe is very thick, the washers, save one, are removed. The clamp D is adjustable for the same purpose, as above described.

To apply the antislipping device, it is placed in the shoe as shown in Fig. 2. A wrench is then applied to the square portion of the bolt E, whereby the bolt is turned, thus forcing the cross-head e' back, and as this is forced back the levers e<sup>3</sup> turn outward and force the pointed end of the same between the hoof and



shoe, as seen in Fig. 1. After the device is properly adjusted, as above, the bolts  $e^4$  are turned and firmly clamp the shoe between the side members and the levers  $e^3$ . The bolt  $d$  is then turned until the clamp D is tight against the shoe. The clamp D is forced between the shoe and hoof at the same time with the pointed ends of levers  $e^3$  by the movement of the cross-head.

10 The washers serve a double purpose—*i. e.*, they are used for packing—in case of thin shoes. Further, when the levers  $e^3$  are being spread out the washers roll along the side of the shoe and act as antifriction-rollers, there-  
15 by preventing binding.

My invention is so constructed that it may be put on shoes which have light toes and heels just as readily as it can be put on shoes without toes and heels, as the whole device  
20 sets back from the outer edge of the shoe. There are no parts projecting beyond the shoe, thereby obviating the danger of the animal cutting its legs or interfering in traveling. Again, my improvement is so constructed  
25 that there is no danger of "contraction" of the foot, all pressure being outward.

Fig. 4 illustrates a different form of lever  $E^3$ , which is designed for very flat-footed horses.

30 What I claim, and desire to secure by Letters Patent, is—

1. In an antislipping device, the side members, a toe-calk plate, the side members being pivoted to said plate, a screw, the head of  
35 which is swiveled in the toe-calk plate, levers pivoted to the side members, the ends of which, when the levers are in a locked posi-

tion, extend over the side members, means for adjusting the levers and side members to shoes of different thicknesses, and means con- 40 necting the screw and levers.

2. In an antislipping device for horseshoes, the side members, the toe-calk plate, a clamping-plate on said toe-calk plate, levers piv- 45 oted to said side members, means for adjusting the clamping-plate and said levers to shoes of different thicknesses, a screw swiveled to the toe-calk plate, and means connecting the levers and screw.

3. In an antislipping device for horseshoes, 50 the side members, lugs extending laterally from the same near the heel, the double-L-shaped toe-calk plate, the side members being pivoted to said toe-calk plate, a screw, the head of which is swiveled in said toe-plate, a 55 squared portion formed on the screw, a cross-head having a screw-threaded opening in which the screw is adapted to work, levers pivoted to the laterally-extending lugs of the side members, downwardly-projecting studs 60 formed on the forward end of said levers, the rear ends of said levers being drawn out to a thin edge, washers secured between the side members and rear ends of said levers, a screw-threaded bolt passing through the toe-calk 65 plate, and a clamping-plate secured to said bolt.

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

HENRY SACHS.

Witnesses:

EDWIN S. CLARKSON,

GRACE M. FINLEY.