

(No Model.)

D. S. JAFFRAY.  
HORSESHOE.

No. 400,684.

Patented Apr. 2, 1889.

Fig. 1.

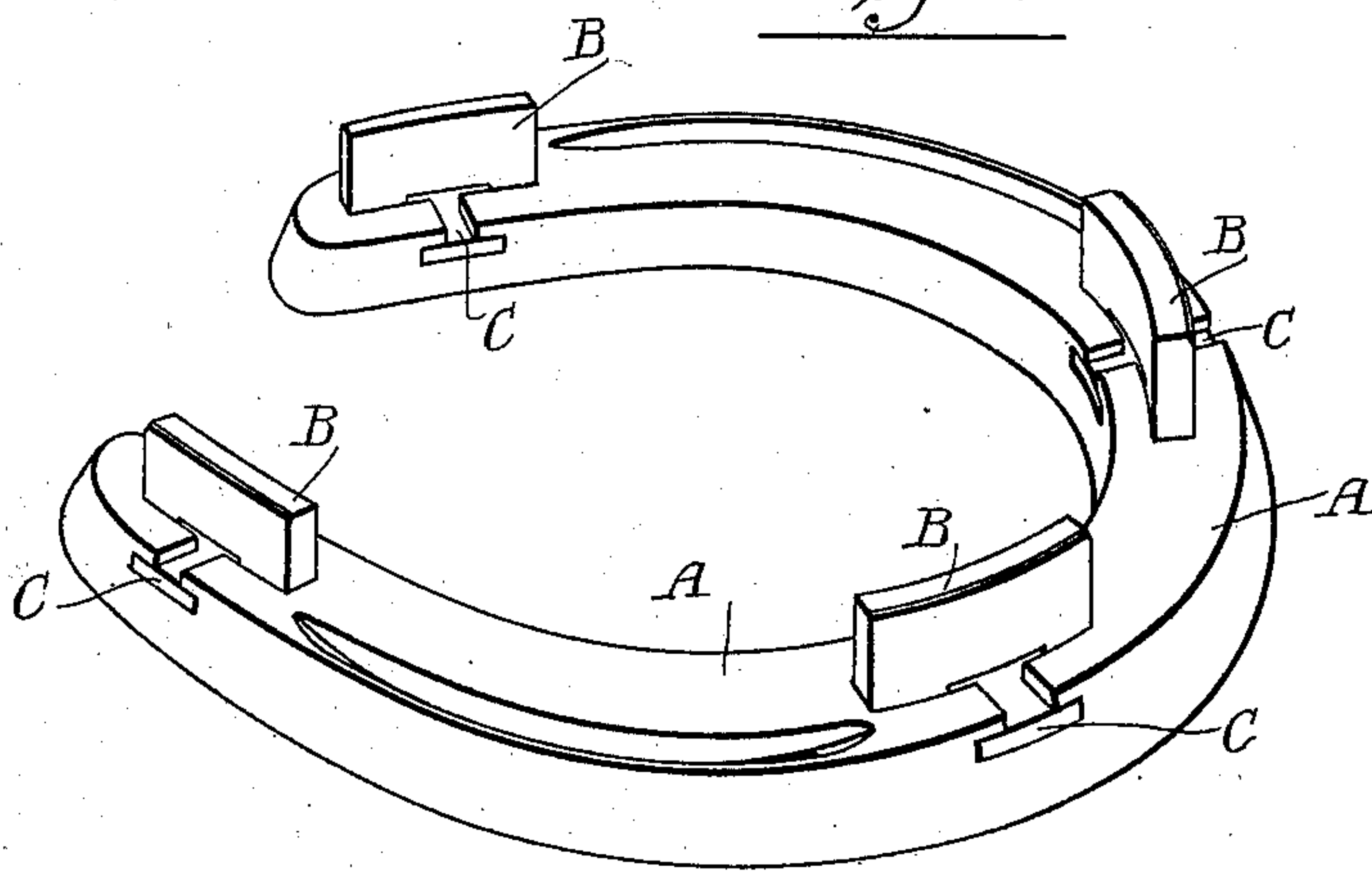


Fig. 2.

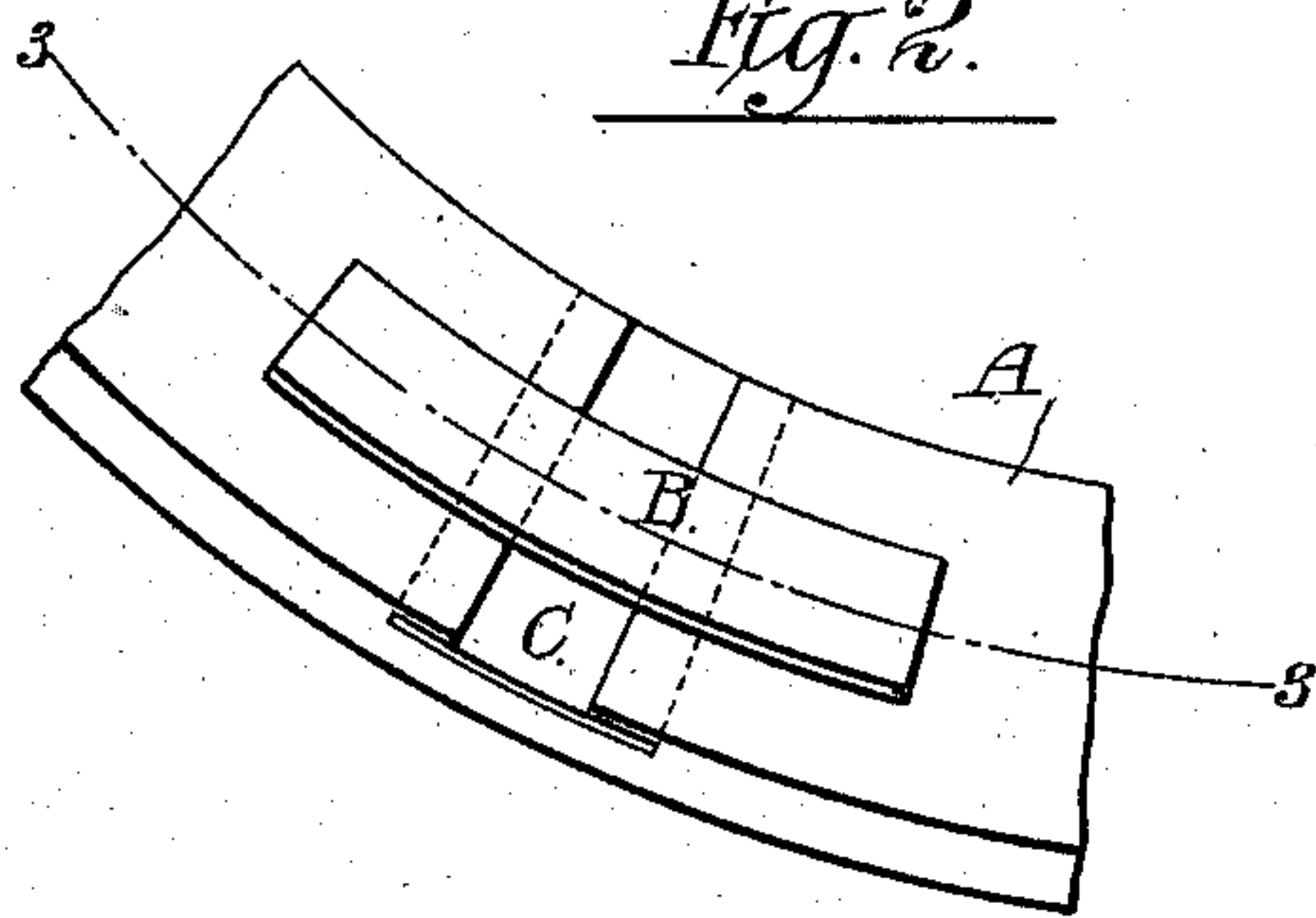


Fig. 3.

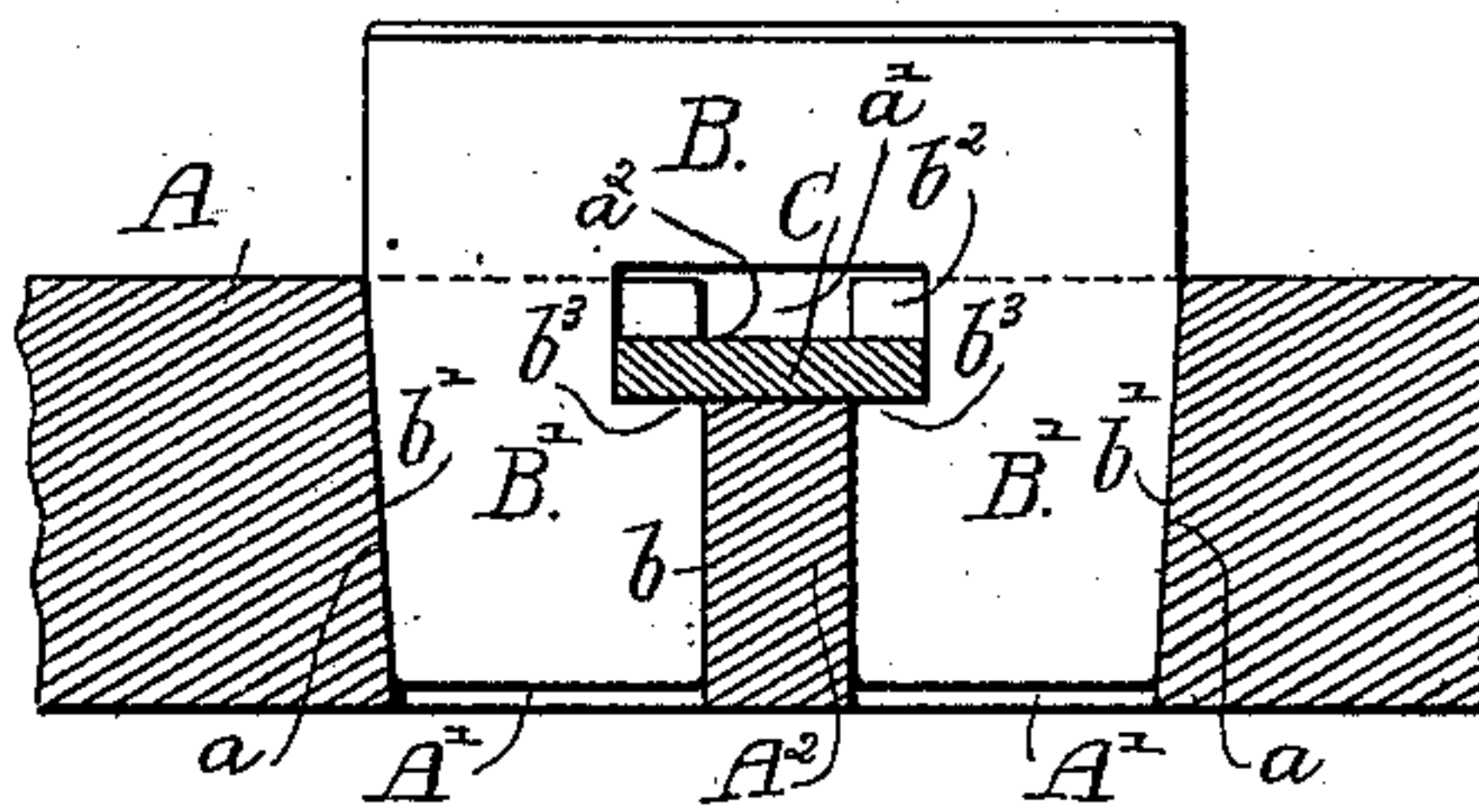


Fig. 4.

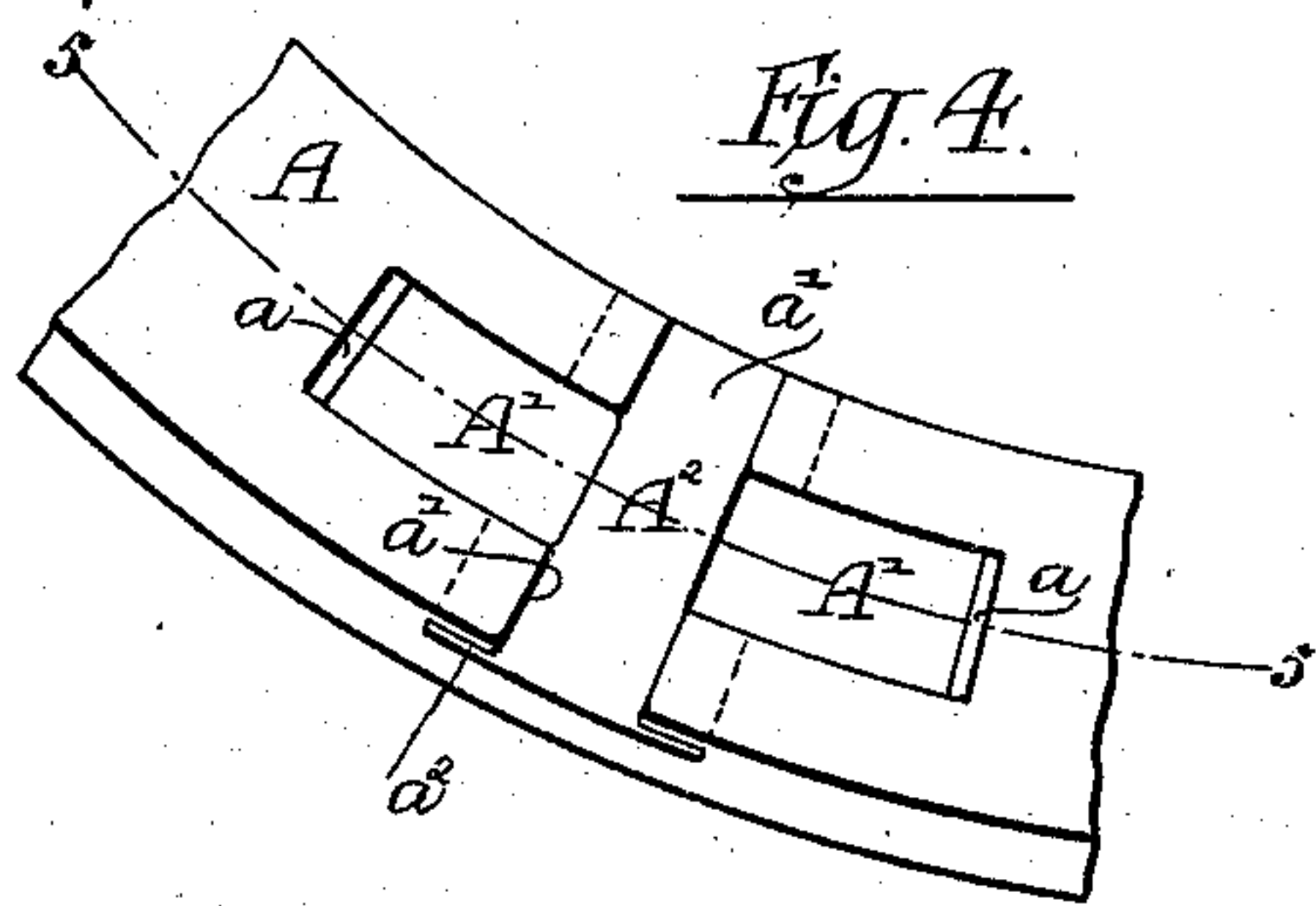


Fig. 5.

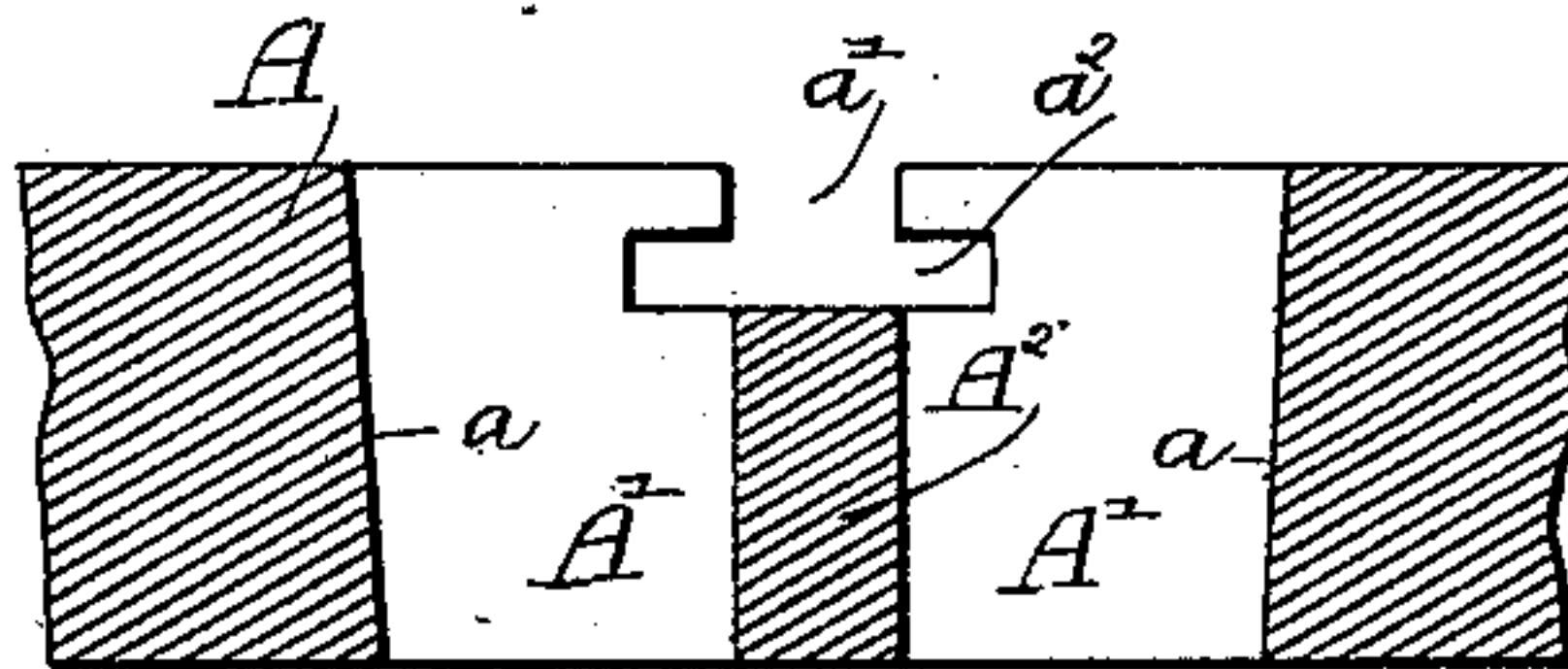


Fig. 6.

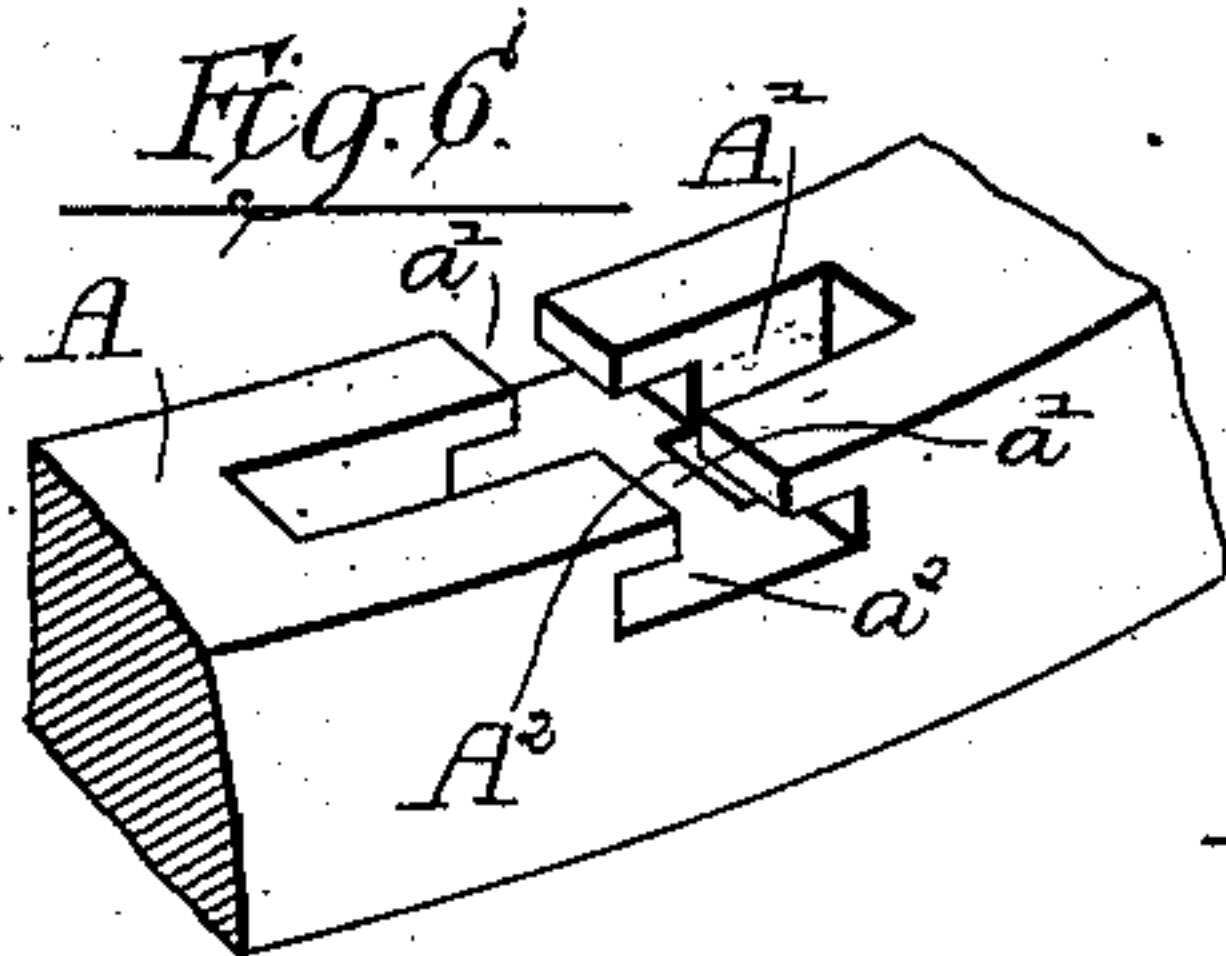


Fig. 8.

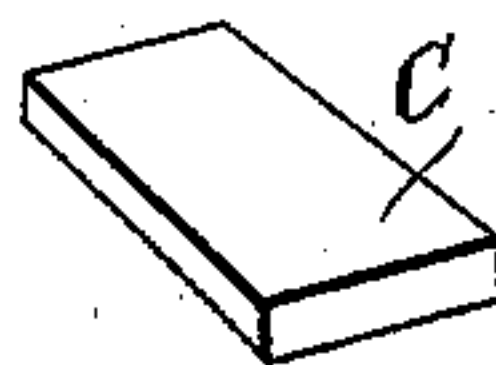
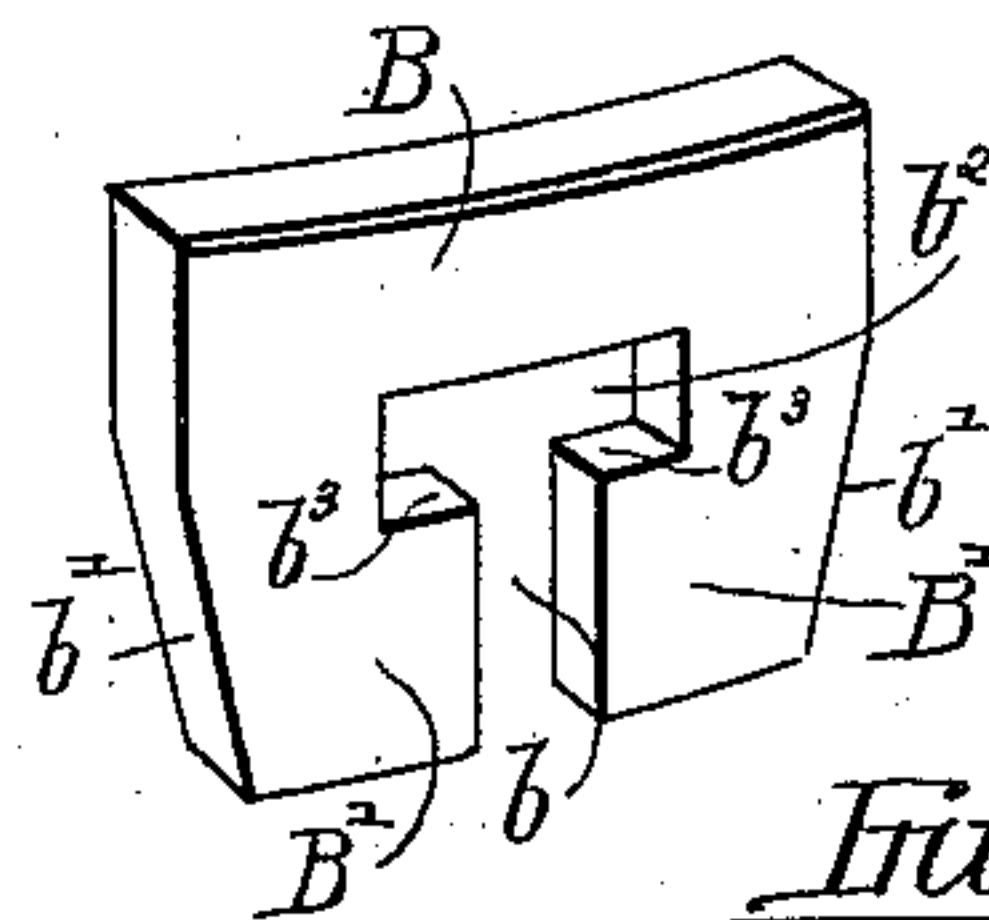


Fig. 7.



Witnesses:  
Louis H. Whitehead.  
Wm. J. Henning.

Inventor:  
David S. Jaffray.

By: Raym. Poole & Brown  
Attorneys.



# UNITED STATES PATENT OFFICE.

DAVID S. JAFFRAY, OF CHICAGO, ILLINOIS.

## HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 400,684, dated April 2, 1889.

Application filed May 14, 1888. Serial No. 273,782. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID S. JAFFRAY, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Horseshoes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to an improved means of detachably securing calks in horseshoes.

The invention consists in the matters hereinafter described, and pointed out in the appended claim.

In the accompanying drawings, illustrating the invention, Figure 1 is a perspective view of the horseshoe embodying the same. Fig. 2 is a fragmentary plan view of one of the calks and a part of the shoe. Fig. 3 is a section taken upon line 3 3 of Fig. 2, showing the calk in elevation. Fig. 4 is a plan view of the parts of the shoe with the calk removed. Fig. 5 is a sectional view taken upon line 5 5 of Fig. 4. Fig. 6 is a perspective view of the parts shown in Figs. 4 and 5. Fig. 7 is a perspective view of the calk removed from the shoe. Fig. 8 is a perspective view of the key for holding the calk in place.

As shown in said drawings, A is the shoe, and B B B B, are the calks. Said calks are of U shape or pronged, as clearly shown in Figs. 3 and 7, and the ends or prongs B' B' thereof are fitted in adjacent recesses or sockets A' A', formed in the shoe and preferably extending through the same. Said sockets are desirably slightly beveled at their outer edges, as indicated at  $a$   $a$ , while the outer margins of the prongs of each calk B are similarly beveled, as indicated at  $b'$   $b'$ . The prongs of the calks are thus given a tapered form, so that they may be fitted closely in the sockets A' A'. The calk B is provided at the inner end of the slot or opening  $b$  therein with a rectangular aperture or key-socket,  $b^2$ , considerably wider than said slot  $b'$ .

Within the horseshoe, adjacent to and between the recesses A' A', is located a key-socket,  $a^2$ , which is of about the same width as the key-socket  $b^2$  of the calk, and comes in

line with the latter when the prongs of the calks are inserted in the said sockets A' A'. A notch or slot,  $a'$ , is herein shown as extending from the key-socket  $a^2$  to the adjacent lower surface of the shoe, said slot being narrower than the key-socket.

C is the key which is inserted in the key-socket  $a^2$  of the shoe and through the key-seat  $b^2$  of the calk for the purpose of holding the calk in place. The key is desirably fitted closely in the recess  $a^2$ , which is made of the same width as the thickness of the key. The opening  $b^2$  of the calk is, however, desirably made considerably wider than the thickness of the key, as shown in Fig. 3, so that when the key is in place a space of considerable width is formed between the same and the inner margin of said key-socket  $b^2$ . The purpose of thus forming the said opening  $b^2$  is to afford a relatively large space or opening, into which a wedge or prying-tool may be inserted after the key is removed for forcing the calk out of the shoe, as necessary when renewing a worn-out calk. It will of course be understood that the calk is retained in place by engagement of the key C with the shoulders  $b^3$   $b^3$  of the calks. The key C is shown as made slightly tapering in shape, in order that it may be driven tightly in the socket  $a^2$ . In removing the calks from the shoe, the said keys may be easily driven out of their sockets, and the calk then removed by means of a wedge or prying-tool entering the space afforded in the shoe by the socket  $a^2$  and notch  $a'$ , and acting on the adjacent flat surface of the cross-bar A<sup>2</sup> between the sockets A' A'. It will be seen, however, that the main advantage arising from the use of the U-shaped calk and key will be obtained when the notch or opening  $a'$  is absent, and my invention is not limited to a construction embracing this feature, excepting as the same is herein claimed.

The device above described for securing the calks in place has the important advantage of enabling the calks to be quickly and easily removed and replaced, while at the same time affording a secure fastening, and one which can be easily and cheaply made. The flat U-shaped calks will commonly be cut or produced out of sheet metal, preferably steel, of



the required thickness, so that they can be cheaply and rapidly made in the exact shape desired. The calk will usually be inserted into the socket of the shoe such distance that  
5 the socket or opening  $b^2$  will be entirely below or within the surface of the shoe, thereby adding greatly to the strength of the calk and preventing possibility of the calk breaking off at a line with the key-seat.

10 I claim as my invention—

In combination with the horseshoe A, having the longitudinal recesses A' A' formed therein, the transverse slot  $a^2$  in said horseshoe, forming a key-socket and a U-shaped  
15 calk, B, the prongs thereof fitting the recesses

A' A' in the shoe, said calk having an opening,  $b^2$ , passing through it in line with the opening  $a^2$  of the horseshoe, the top of said opening being contracted by the shoulders  $b^3$ , and a key, as C, passing through said opening  $a^2 b^2$ , and bearing upon the shoulders  $b^3$  of the slot in the calk, whereby it is prevented from slipping out, substantially as described. 20

In testimony that I claim the foregoing as my invention I affix my signature in presence 25 of two witnesses.

DAVID S. JAFFRAY.

Witnesses:

C. CLARENCE POOLE,  
E. BERTINE ELLIAS.