

No. 632,576.

Patented Sept. 5, 1899.

H. N. KILLSON.  
HORSESHOE AND CALK.  
(Application filed Mar. 10, 1898.)

(No Model.)

Fig. 1.

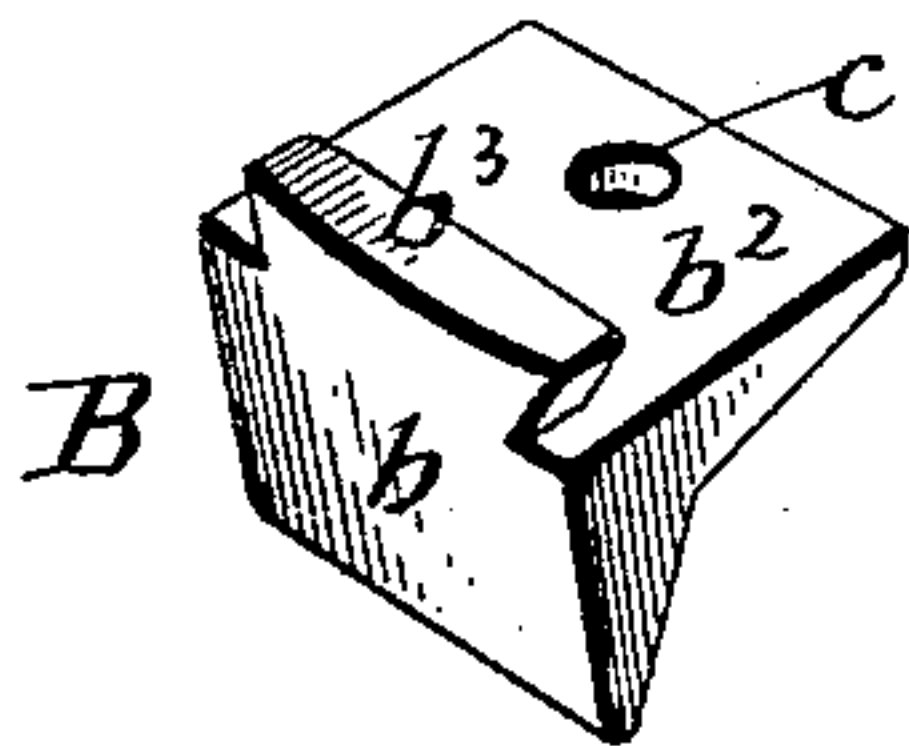


Fig. 2.

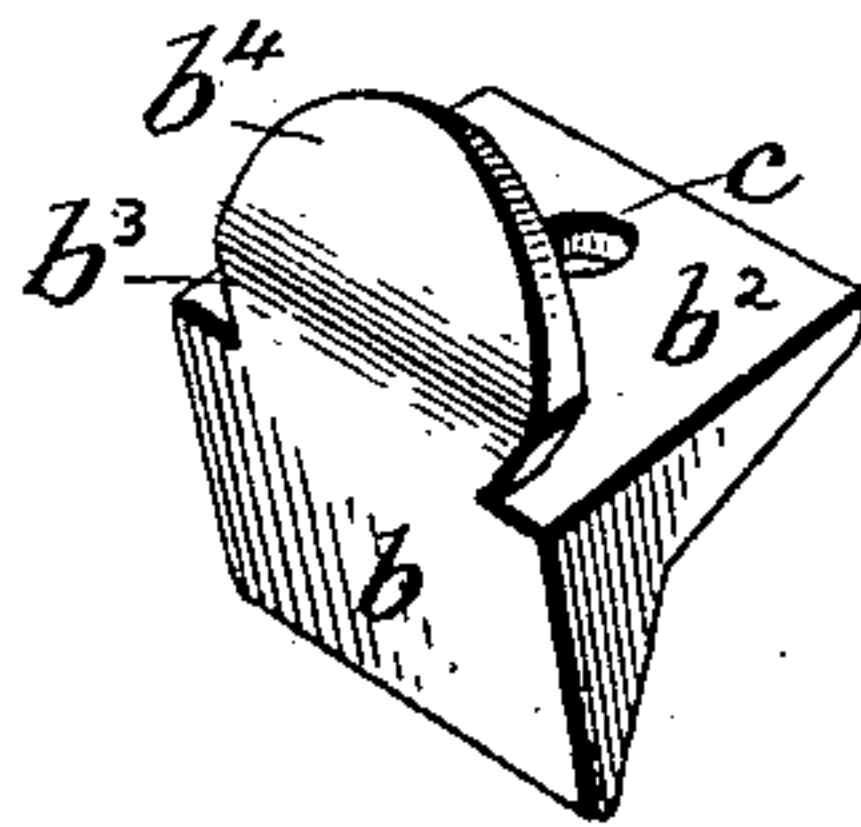


Fig. 3.

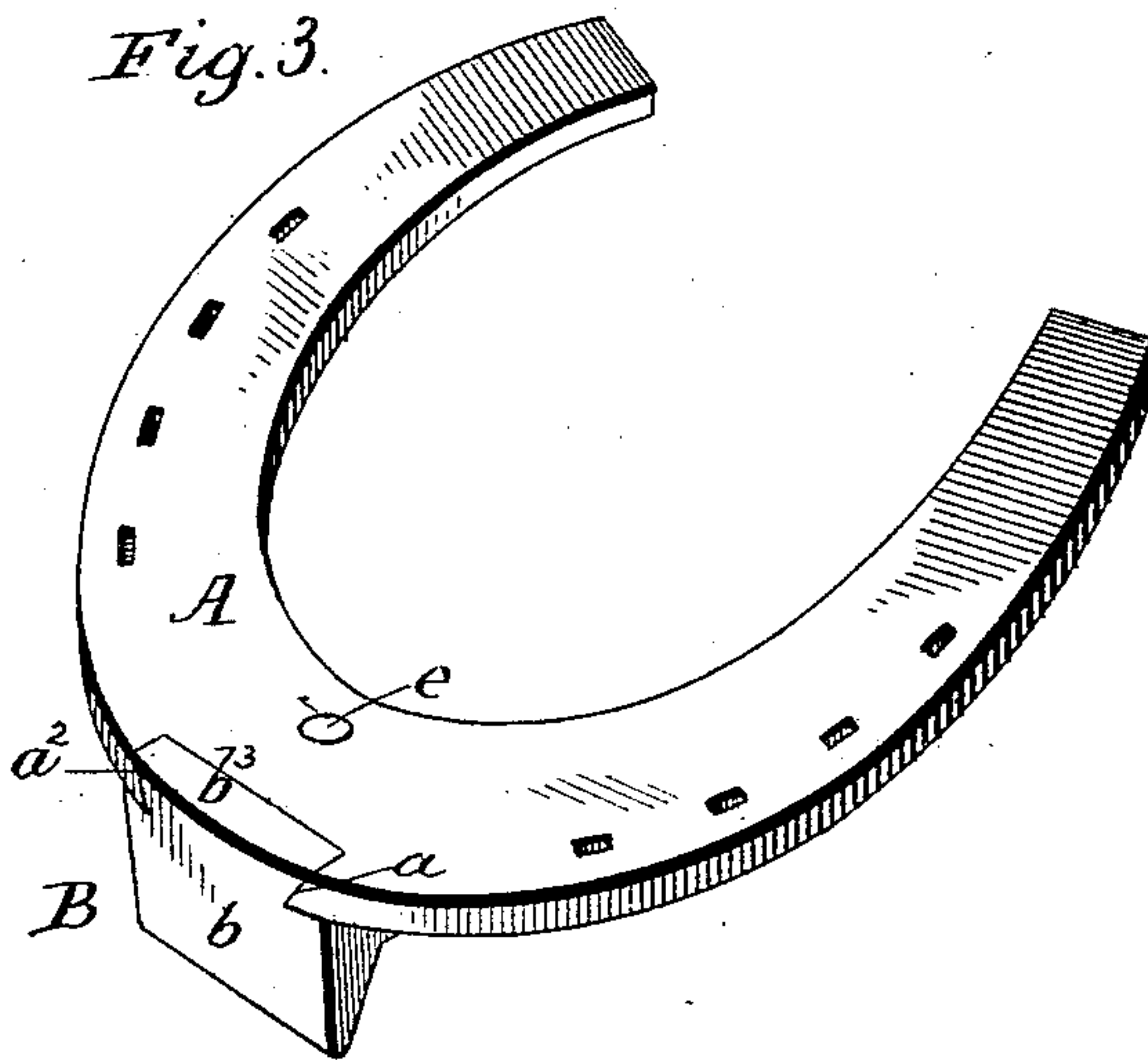
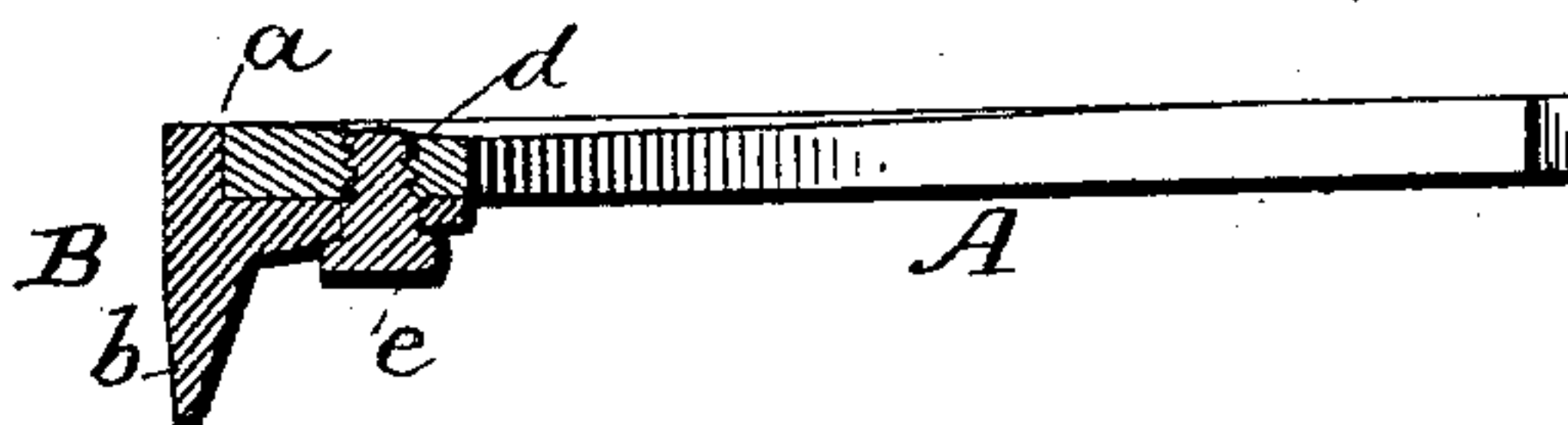


Fig. 4.



WITNESSES

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# UNITED STATES PATENT OFFICE.

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## HORSESHOE AND CALK.

SPECIFICATION forming part of Letters Patent No. 632,576, dated September 5, 1899.

Application filed March 10, 1899. Serial No. 708,536. (No model.)

*To all whom it may concern:*

Be it known that I, HORATIO N. KILLSON, a citizen of the United States, residing at Elroy, in the county of Juneau and State of Wisconsin, have invented certain new and useful Improvements in Horseshoes and Calks, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to removable calks and horseshoe therefor; and the objects of my invention are to provide a toe-calk of simple and comparatively inexpensive construction which may be attached to and detached from the shoe without removing the shoe from the hoof of a horse, said calk being also adapted to be provided with a toe-cap integral therewith for use as an abutment against a portion of the front of the hoof. I attain these objects by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a toe-calk constructed in accordance with my invention. Fig. 2 is a perspective view of a slightly-modified form of the calk in which the dovetailed retaining-tenon is made vertically larger to constitute a toe-cap for the shoe. Fig. 3 is a perspective view of a horseshoe provided with a toe-calk constructed and secured to the shoe in accordance with my invention. Fig. 4 is a longitudinal central section of the shoe and calk.

In said drawings, A represents a horseshoe of any desired form, in the front edge of which a groove  $a$  is cut that extends vertically throughout the body of the shoe. The rear edge of said groove is vertical; but the side edges  $a^2$  are beveled, so that the upper portion of the groove along the upper top face of the shoe is wider than the lower portion, but each side of the groove is parallel with the long axis of the shoe.

The calk B consists of an angular body, the front part  $b$  of which constitutes the acute wearing portion of the calk, and the top  $b^2$  constitutes a shelf to support the shoe and provides means to connect the calk with said shoe, said shelf being substantially at right angles to the front of the part  $b$ . On the top of the front portion of the shelf and over the wearing portion of the calk there is a dove-

tailed tenon  $b^3$ , integral therewith, the narrowest portion of which rests upon the shelf  $b^2$ . The upper part of its front face is substantially equal to the width of the front face of the wearing portion, but of less thickness fore and aft than the thickest part of the wearing portion  $b$ , so that the curved front of the shoe will be weakened as little as possible by the groove  $a$ , cut into the toe of the shoe. The length of the dovetailed tenon  $b^3$  in a vertical direction is equal to the thickness of the shoe, in the groove  $a$  of which it is to be inserted and seated by pushing it therein from the front of the shoe in the direction of its long axis. To securely retain the calk attached to the shoe, there is a perforation  $c$ , made vertically through the shelf  $b^2$  of the calk, and a corresponding perforation  $d$  in the long axis of the body of the shoe, but said perforation  $d$  is screw-tapped. A stout screw or a short bolt  $e$  is made to pass through the perforation  $c$ , and its threaded portion is made to enter into engagement with the screw-tapped perforation  $d$  in the shoe, and these parts remain solidly united until the wearing portion of the calk has been worn out and it is desired to rebuild or to sharpen the same calk or to fasten a new one in position.

In Fig. 2 the vertical dovetailed tenon  $b^3$  has on top thereof and integral therewith an arched cap  $b^4$ , which constitutes a toe-cap, which is generally made on the front of horseshoes to form a front stop for the hoof of a horse and relieve the fastening-nails from strain.

I am aware that the top of toe-calks has been provided with a dovetailed tenon extended the whole length of the shelf; but said tenon extends only through the lower half of the shoe. I am also aware that the dovetailed tenon of toe-calks has been made to pass through the rear edge of the arched front of the shoe and has been provided with a toe-cap and that heel-calks have been provided with a narrow dovetailed tenon of a width equal to half the width of each of said heels and inserted into grooves in said heels; but the insertion of calks from the rear is objectionable, because the striking (stumbling) blow of the shoe of a horse while trotting is in a forward direction and the whole jar is



upon the fastening-screw, which therefore soon becomes loosened.

Having now fully described my invention, I claim—

5 1. The combination of a horseshoe having throughout the front thereof a groove having beveled sides parallel with the long axis of the shoe, and an angular toe-calk having on its top shelf a dovetailed tenon part way of  
10 said shelf, and substantially of the same thickness and the same width as the face of the wearing portion of the calk, the height of said tenon being the same as the thickness of the shoe, and inserted therein from the front,  
15 with a screw uniting said calk and shoe, substantially as described.

2. An angular toe-calk having a vertical wearing portion and a perforated horizontal shelf, and upon said shelf, over the wearing  
20 portion, a dovetailed tenon having a thick-

ness and a width substantially the same as that of said wearing portion, and extended part way of said shelf, the top of said tenon having its sides parallel with the sides of the shelf, substantially as described. 25

3. An angular toe-calk having a vertical wearing portion and a perforated horizontal shelf, and upon said shelf, over the wearing portion, a dovetailed tenon having a thickness and a width substantially the same as  
30 that of said wearing portion and extended only part way of said shelf, and on top of said tenon an arched toe-cap, substantially as described.

In testimony whereof I affix my signature 35 in presence of two witnesses.

HORATIO N. KILLSON.

Witnesses:

JOHN H. MUTCH,  
L. S. MARSH.