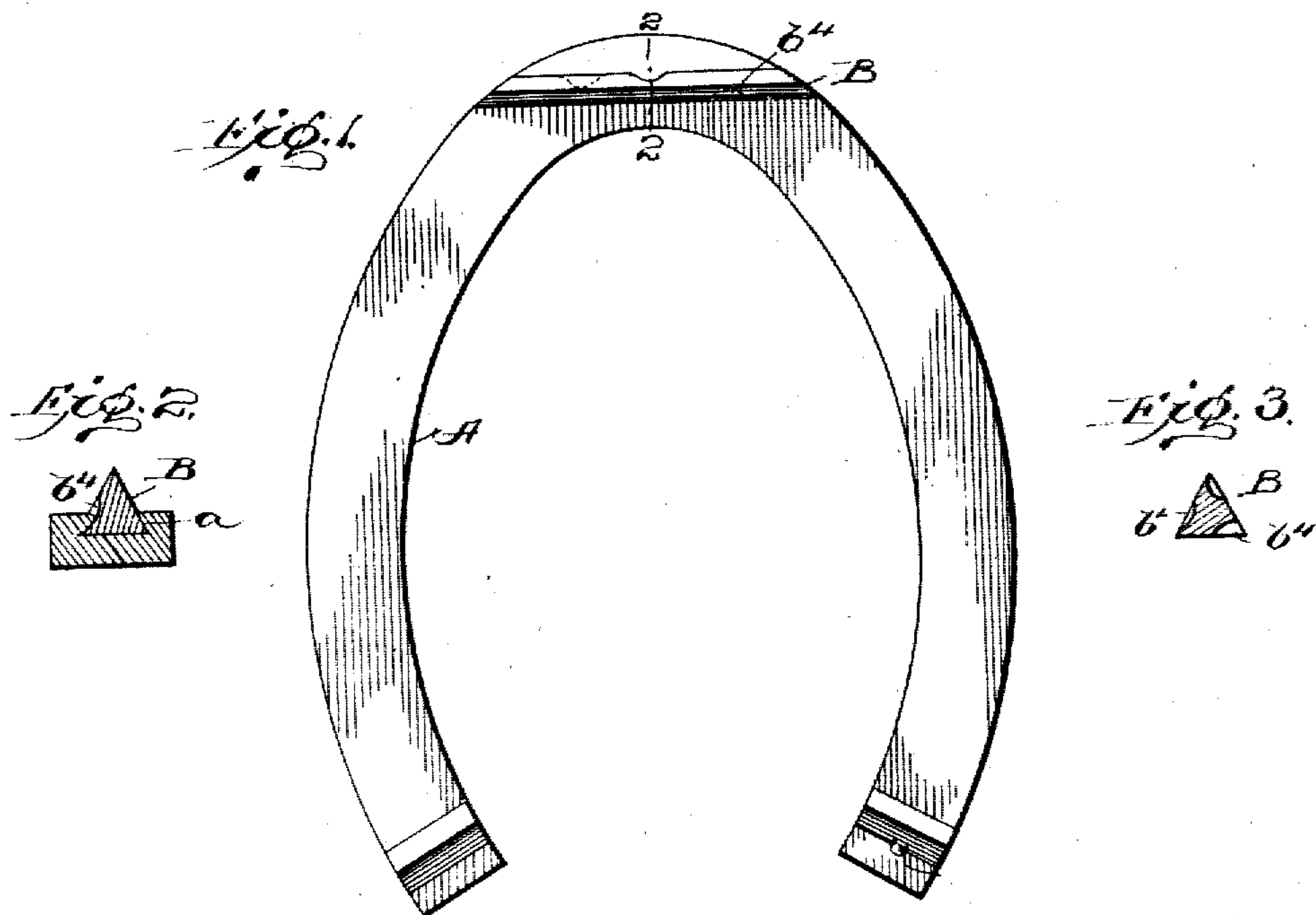


No. 822,737.

PATENTED JUNE 5, 1906.

W. J. HARRIS.  
HORSESHOE.

APPLICATION FILED OCT. 25, 1904.



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Witnesses  
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# UNITED STATES PATENT OFFICE.

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## HORSESHOE.

No. 822,737.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed October 25, 1904. Serial No. 229,952.

*To all whom it may concern:*

Be it known that I, WILLIAM J. HARRIS, a citizen of the United States of America, and a resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Horseshoes, of which the following is a specification.

My invention relates to certain new and useful improvements in horseshoes, and it especially relates to means for removably securing thereto calks.

For this purpose it consists in dovetailed grooves formed at proper points in the sole or bottom of the shoe and adapted to receive correspondingly-shaped calks, and to means for securing the calks therein, and to the construction of the calks themselves, whereby they may be, when worn, removed and shifted or turned, whereby the life of the calks is lengthened, and whereby, owing to the removable nature of the calks, calks of desired contour may be fastened to the shoe, as may be desired from time to time, all without removing the shoe from the foot; and it further consists in the construction, arrangement, and combination of the several parts of which it is composed, as will be hereinafter more fully described and claimed.

Referring to the accompanying drawings, in which corresponding parts are designated by similar marks of reference, Figure 1 is an inverted plan view of the horseshoe having my invention applied thereto. Fig. 2 is a section on lines 2-2 of Fig. 1. Fig. 3 is a detailed sectional view illustrating one form of calk.

The horseshoe A may be of any approved shape and made in any desired manner, except that for the purpose of carrying out the purpose of this invention I form in the lower surface thereof, at the points to which it is desired to secure calks, dovetail grooves *a*, which are wider at the bottom than at the top and which by preference and for ease in forming have both of their ends extending to side walls of the shoe. In the accompanying drawings I have shown these grooves located at the toe and heel of the shoe to receive toe and heel calks, which are the points at which calks are commonly located, the toe-groove extending from the outer wall of the shoe on one side of the toe to the outer wall of the shoe on the other side of the toe, while the heel-grooves extend across the heels of the shoe from the outer to the inner walls thereof.

The calks are formed of suitable metallic pieces having their lower parts adapted and shaped to conform to the grooves *a*, in which they are to be incased. By preference I make the calks B (see Figs. 2 and 3) with a cross-section in the form of an equilateral triangle, any side of which may form the base and be received within a groove *a* of the shoe, so that should the angle opposite to any such base side become dull the calk can be removed and turned around, so as to present a fresh angle at the point of the calk.

The fastening device for the calks consists of a depression *b* in the side of the calk near one edge, into which the malleable metal of the shoe is adapted to be forced to prevent movement of the calk in the groove. By preference each side of the calk, as is shown in Figs. 2 and 3, is provided with one or more of these depressions, the depressions being symmetrically arranged on each face—that is to say, being adjacent on each face to the successive edges and being spaced lengthwise on the calks at different points, so that whatever edge of the calk may be placed upwardly a depression will be on one of its sides adjacent to its base, so that if when the calk is turned to bring successive edges as the edge of the calk the depressions to be clamped will be at different points along the length of the groove, thus permitting the lip which may have been forced down a depression to be cut out when it is desired to turn the calk without impairing the ability to refasten the calk in place when turned.

It will be seen that all forms of my invention provide for a calk that may be removed and replaced without the use of special tools, so that the life of the shoe itself is prolonged, and that this is irrespective of the form of fastening that may be employed, and any of the forms herein shown are applicable with the equilateral cross-section described, such cross-section permitting the repeated use of the calk, and that the tapered form of calk provides a feature of safety which is of great importance.

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

1. The combination with a horseshoe having a dovetailed groove in the lower face thereof, of a calk removably secured in the said groove, the calk having an equilateral cross-section, with depressions symmetrically disposed upon each of its faces, spaced at differ-



ent points along its length, into which depressions the metal of the shoe may be forced, substantially as described.

2. The combination with a horseshoe having a dovetailed groove in the lower face thereof, of a calk removably secured in the said groove, the calk having depressions symmetrically disposed upon each of its faces, spaced at different points along its length,

into which depressions the metal of the shoe may be forced, substantially as described.

Signed at Washington, District of Columbia, this 21st day of October, 1904.

WILLIAM J. HARRIS.

Witnesses:

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