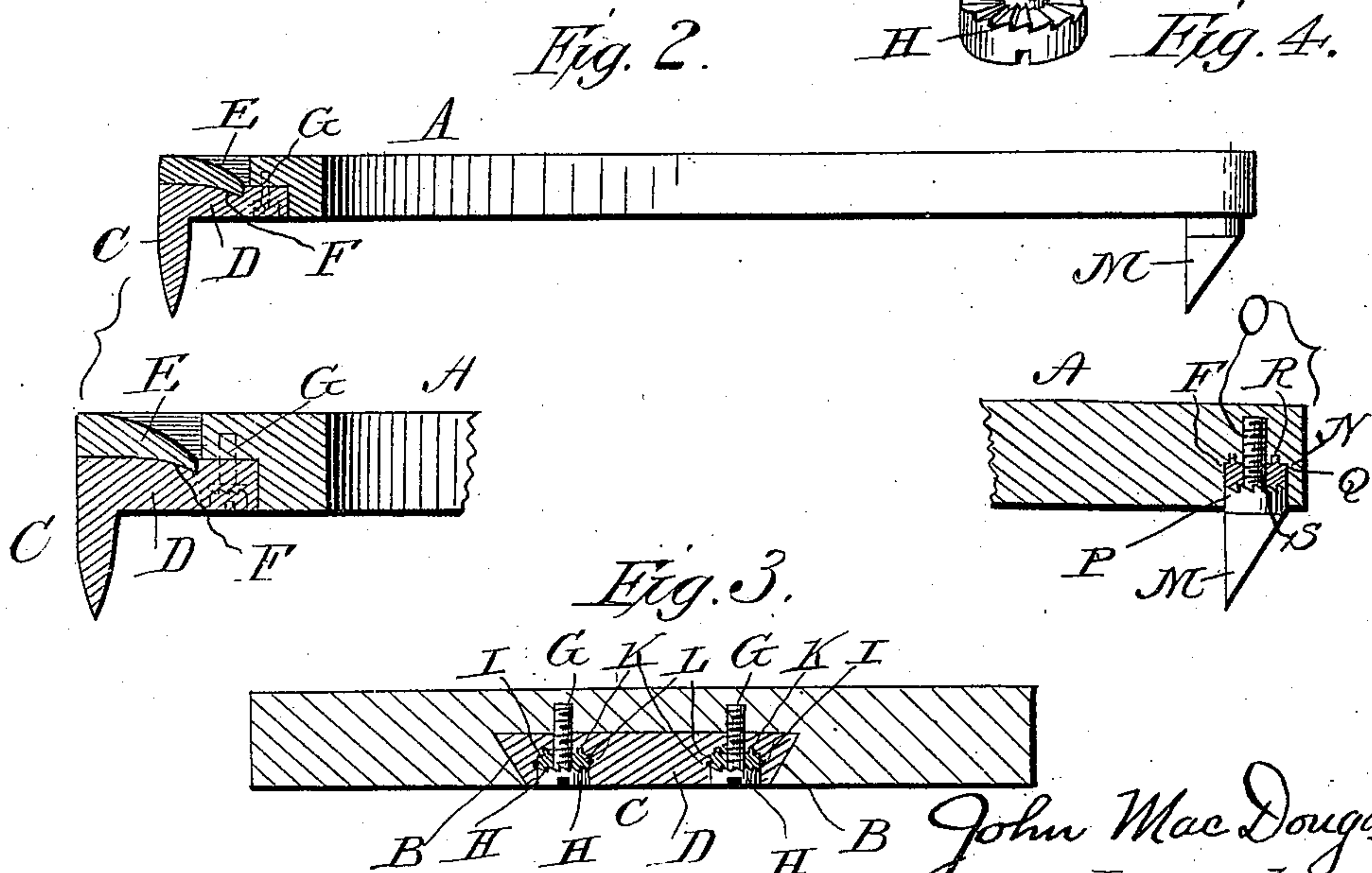
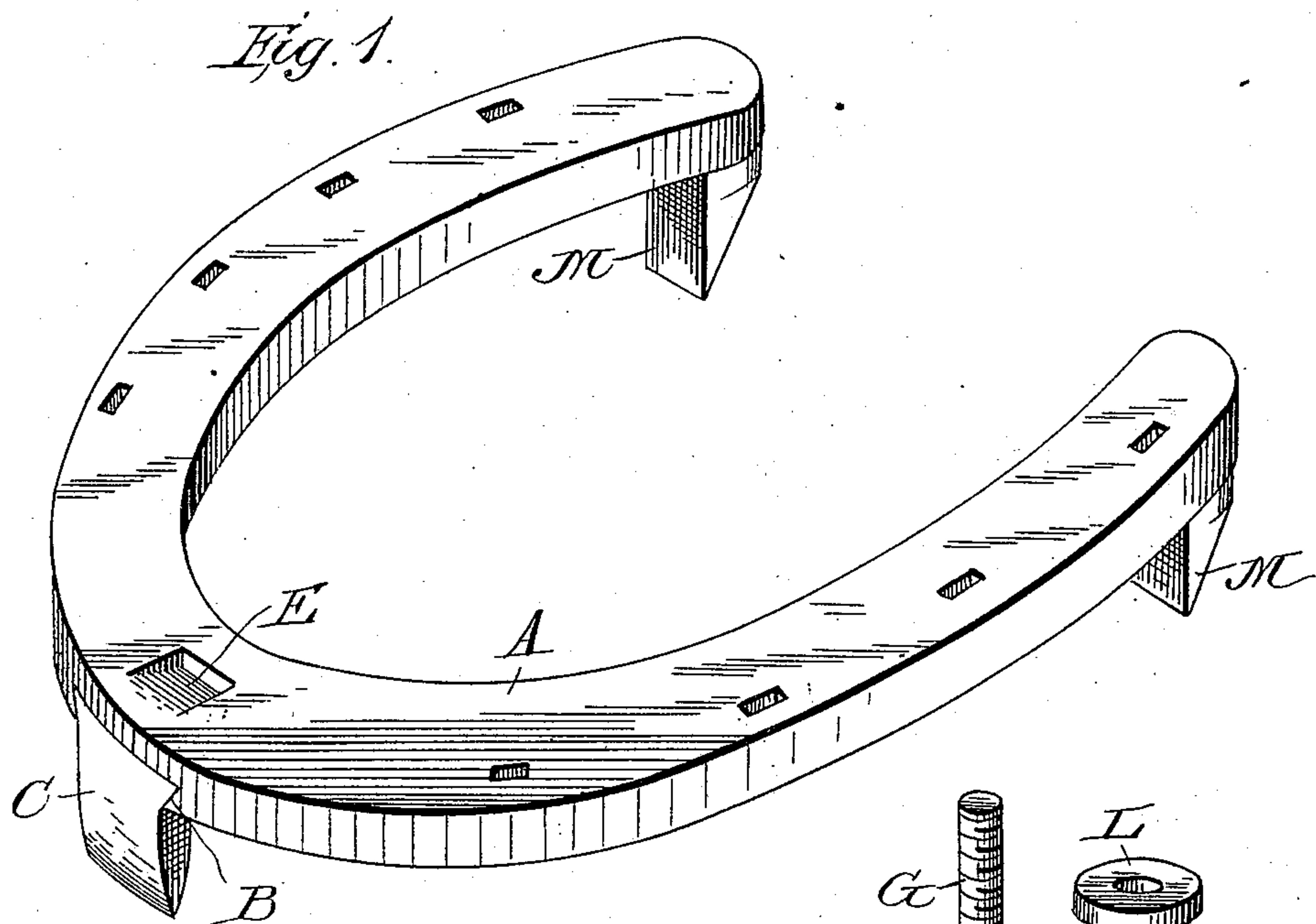


(No Model.)

J. MACDOUGALL.
HORSESHOE.

No. 574,553.

Patented Jan. 5, 1897.



Witnesses:
H. L. Ourand.
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UNITED STATES PATENT OFFICE.

JOHN MACDOUGALL, OF WYOMING, PENNSYLVANIA.

HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 574,553, dated January 5, 1897.

Application filed May 27, 1896. Serial No. 593,278. (No model.)

To all whom it may concern:

Be it known that I, JOHN MACDOUGALL, a citizen of the United States, residing at Wyoming, in the county of Luzerne and State of Pennsylvania, have invented certain new and useful Improvements in 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 certain new and useful improvements in horseshoes, and more especially has reference to the construction of calks therefor and the manner of attaching the same to the shoe, as will be hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the horseshoe, showing the insertion of the front or toe calk into its seat or operative position. Fig. 2 is a central sectional view of Fig. 1. Fig. 3 is a transverse sectional view through the securing-screws, showing the locking-disk interposed between the head and seat of the screw. Fig. 4 is a perspective view of the locking-disk and bolt.

Reference will be had to the several parts of my invention by letters, similar letters designating the same parts throughout the several views.

The object of my invention is the provision of a simple and effective construction of the calks and means for securely holding them in their respective positions after the same have been adjusted.

In carrying out my invention I construct the shoe proper, A, in the usual manner, and in the toe thereof I form the dovetail slot or recess B, arranged at right angles to the line of the body and tapering rearwardly, and within this slot or recess I mount the toe-calk C, the body D of which is so constructed as to be snugly received by said recess.

The means I have provided for holding the toe-calk in position consists of the depending tongue E, which is formed by being struck out of that part of the shoe immediately above the rear section of the body D. The upper central surface of the rear part of the body D is countersunk sufficiently to provide the recess F, adapted to receive the depending tongue E when the same is forced downward

therein by the blow of a hammer or otherwise. In order to reinforce said means for holding the toe-calk in position, I provide the retaining-screws G, which are constructed of the proper size and in the usual manner, except the under surface of the heads thereof is provided with a series of grooves H, having inclined and vertical walls, the inclined faces respectively being in advance of their collateral vertical walls as the screw is turned home. The screw is threaded at its end in the usual way, and such end reaches through holes provided in the calk and engages with the screw-threaded socket in the shoe. A countersink or seat I is provided in the calk for letting in the head of the screw flush with the body of the calk, and in the periphery and bottom of the seat thus provided I form a series of sockets or extensions K, the object and purpose of which will be hereinafter fully set forth. Said seat I is of sufficient depth to not only receive the head of the screw, but also to admit the introduction of the disk L, which is formed of some soft metal, as lead or the like, or may be formed of a composition which will first yield and afterward harden under pressure. The heel-calks M are tapered or formed in any preferred manner at their free ends, while their opposite ends are formed with screw-threads adapted to be received by threaded sockets N in the heels of the shoe.

The screw-threaded ends O of the heel-calks are of a less diameter than the body thereof, which construction forms the shoulder P. Seats Q are provided for shoulder P by slightly enlarging the lower end of the sockets N, and such seats are provided, like the countersink F, above mentioned, with a series of indentures or sockets R, as shown. The shoulder P carries a series of grooves S, similar to the grooves H on the screws G and adapted to subserve the same purpose.

Within the seats I and N, I place the disks L, preferably formed of lead. After thus placing said disks in position the reinforcing-screws G and the heel-calks M are entered in their respective seats and screwed home, and the pressure thus brought to bear upon the locking-disks causes the yielding metal to take into the grooves and the sockets H and S and K and R, respectively, before mentioned, and a reverse movement of the screw is there-

by rendered very difficult, thus positively guarding against casual displacement, yet at the same time rendering it possible to remove the calks for the purpose of sharpening or re-
5 newing the same.

A further advantage resulting from providing the soft-metal locking-disks for the heel-calks is in the fact that a cushion of more or less resiliency is provided for absorbing
10 the concussion arising from violent contact of the shoe with the hard surface of the road.

It will be understood that the toe-calks may also be cushioned in like manner, and also that the heel and toe calks may be easily re-
15 moved and their free ends renewed by sharpening or by the reinforcement of a new edge in lieu of the one worn away. If desired, a chisel or bevel edge may be formed on the heel-calks, and one of said calks may be ad-
20 justed with its edge parallel with the line of the body of the shoe and its complement adjusted at right angles thereto, which adjustment guards against the longitudinal and lateral slipping of the shoe.

It will be readily appreciated that a plain shoe may be produced by simply removing the calks, and also that the toe-calk may be constructed without other means for securing it in position on the shoe than the retaining-
25 screws, in which case the dovetail slot may be dispensed with and a simple seat provided for such calk in the under side of the toe of the shoe, when the retaining-screws may be turned home in their sockets.

35 Having thus described the advantages and construction setting forth my invention, what I desire to secure by Letters Patent is—

1. A horseshoe provided on the under side

of its toe-section with a calk-seat having re-
taining-walls; a depending section struck 40
from the body of the shoe and extending into the body of said seat; a calk adapted to snugly fill said seat and provided upon its upper face with a recess adapted to receive said depend-
ing section of the shoe proper, substantially 45
as described and for the purpose set forth.

2. A horseshoe provided on the under side of its toe-section with a tapered calk-seat hav-
ing inwardly-inclined walls; a depending sec- 50
tion struck from the body of the shoe and extending into the body of said seat; a calk adapted to snugly fill said seat and provided upon its upper face with a transverse recess adapted to receive said depending section of the shoe proper, substantially as described 55
and for the purpose set forth.

3. The combination with a horseshoe, pro-
vided with a cylindrical calk-seat having a threaded and an enlarged section, of a washer
formed of plastic material adapted to fill the 60
enlarged section of said seat, and a calk having the body provided with a threaded stem adapted to fill the threaded section of said seat, and further provided with a cylindrical
shoulder having a roughened or corrugated 65
face arranged to tightly impinge upon said washer when the calk is turned home in its seat, substantially as described and for the purpose set forth.

In testimony whereof I affix my signature 70
in presence of two witnesses.

JOHN MACDOUGALL.

Witnesses:

W. C. BALDWIN,
J. R. VINCENT.