

(No Model.)

J. W. JOHNSON.
HORSESHOE.

No. 511,020.

Patented Dec. 19, 1893.

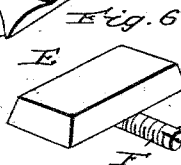
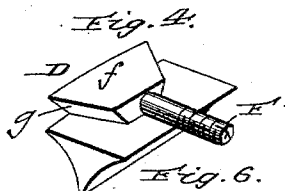
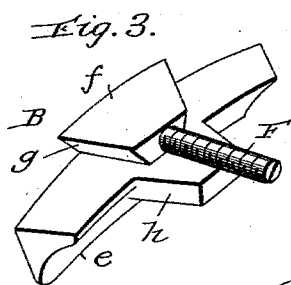
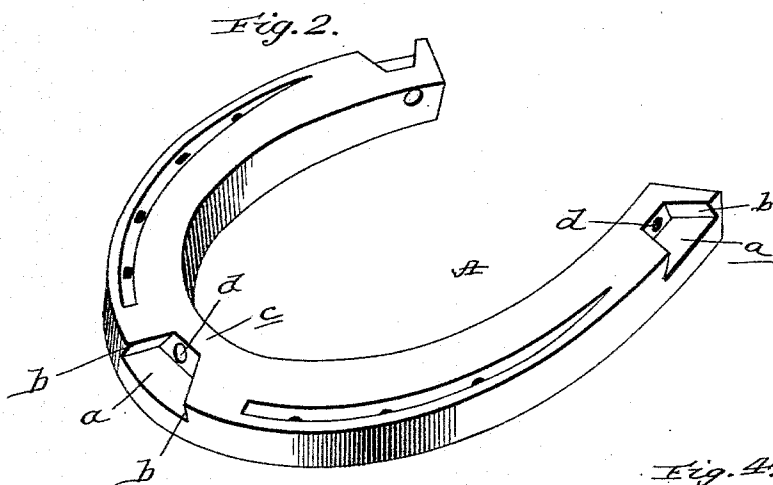
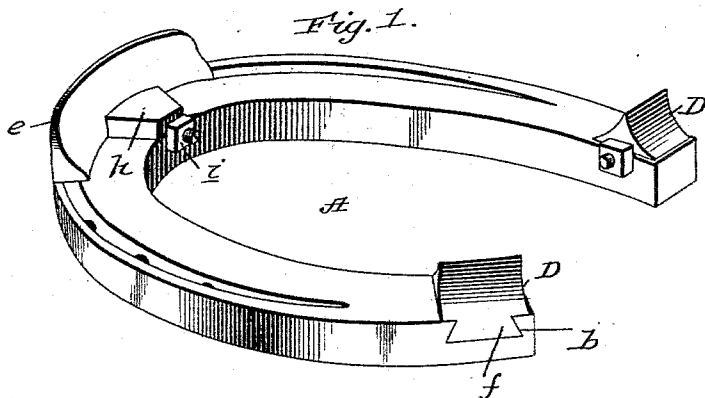
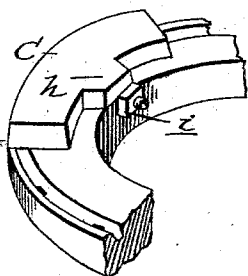


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOHN W. JOHNSON, OF HARRODSBURG, KENTUCKY.

HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 511,020, dated December 19, 1893.

Application filed March 14, 1893. Serial No. 465,938. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. JOHNSON, a citizen of the United States, residing at Harrodsburg, in the county of Mercer and State of Kentucky, have invented certain new and useful Improvements in Horseshoes; and I do 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.

This invention has relation to an improvement in that class of horseshoes, in which removable calks are employed and the novelty will be fully understood from the following description and claim when taken in connection with the accompanying drawings, in which—

Figure 1, is a perspective view of my improved shoe. Fig. 2, is a similar view with the calks removed. Fig. 3, is a perspective view of the toe calk known as a rough calk. Fig. 4, is a similar view of one of the heel calks. Fig. 5, is a perspective detail view of the toe portion of the shoe showing a smooth toe calk applied; and Fig. 6, is a perspective view of one of the plain or smooth heel calks removed.

It has heretofore been proposed to provide a horseshoe with removable calks with an object of having them removed and replaced without taking the shoe off of the horse so that when desirable, rough calks may be placed on the shoe and taken off and replaced by smooth calks. One means of doing this has been to recess the shoe at the toe and heel respectively and provide a calk with a lug corresponding to the shape of the recess so as to sit therein and provide the lug with a hole and the recess part of the shoe with a screwed tapped aperture to receive a set screw. This construction has been found very objectionable, if not impracticable, for the reason that the head of the screw is so exposed to wear that after but little use, it cannot be removed without first taking off the shoe, and in the second place the shoe is made very weak after having recessed it by providing the recesses with apertures. Another mode has been to provide the shoe with recesses and then form a burr or lug with an eye in said recess part to receive the threaded stem of a

calk. This burr projecting beyond the contact surface of the shoe, is of course subject to wear, and when the rough calk has been removed, this burr will always present a projection.

The object of my invention is to overcome these difficulties and provide a shoe at a minimum expense which will be durable and effective, and the owner or attendant of a horse, may remove the rough calks from the shoe and provide it with plain ones or vice-versa, without necessity of taking off the shoe or taking the animal to a blacksmith-shop, as the parts are so constructed and combined as to afford little or no wear upon the screw and nut which are preserved from danger.

Referring by letter to said drawings: A, indicates a horseshoe which may be mainly of any ordinary or approved construction. This shoe is provided on its under side and at its toe and heels respectively, with a dovetail recess *a*, having its longitudinal walls undercut as shown at *b*, and the inner end of this recess is closed by a wall *c*, which is provided with a horizontal aperture for the passage of the bolt or threaded stem of the calk. It will be observed that the recess *a*, extends the greater width of the shoe and tapers from without, inwardly, in its side walls.

B, indicates one of the rough toe calks; C, one of the plain or smooth toe calks; D, one of the rough heel calks, and E, one of the plain heel calks. These calks B, and D, differ from the calks C, and E, in that the first have a pointed or roughened surface *e*, while the others have their surfaces smooth or plain. These calks have their under side provided centrally with a depending lug *f*, which is of a form in cross section corresponding with the recesses *a*, in which they are designed to fit snugly; the side edges being beveled or undercut as shown at *g*, so as to engage the undercut walls *b*, of the recesses. These toe calks may be furthermore provided on their central inner edges, in a plane above the lugs *f*, with an extension *h*, which extends to the inner edge of the shoe. Extending inwardly from the lugs *f*, is a threaded rod or stem *F*, which is designed to take through the apertures *d*, of the shoe and receive a nut *i*, or other suitable fastening device, and I prefer

to split the stem as shown so that it may be spread upon the nut after the latter has been screwed home, as a means for holding the nut upon the stem.

- 5 In operation it is simply necessary to slide the tapering and beveled lug of the calk into the recess of the shoe from without, inwardly, inserting the threaded stem through the hole *d*, when by applying the nut, the calk will be
10 firmly secured in position upon the shoe. I attach importance to the fact that the heel calks are removable and applied in a manner similar to the toe calks, as by this means the foot of the animal will rest in a natural position, which is not the case when the toe calks
15 only are removable, and it will be seen that the threaded stem and nut are so arranged as to be protected from wear and injury, being at all times in a convenient position for ma-
20 nipulation.

Having described my invention, what I claim is—

The horseshoe having its plain faced under side provided with the tapering recess *a*, having its side walls undercut as at *b*, and also 25 having its end or transverse wall *c*, provided with a hole *d*, in combination with a calk provided on one side with the lug *f*, adapted to fit snugly in said recess *a*, and also provided with the threaded stem *F*, adapted to enter the 30 hole *d*, and a nut for securing the calk in the recess of the shoe, all adapted to operate substantially as and for the purpose specified.

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

JOHN W. JOHNSON.

Witnesses:

BUELL JOHNSON,

WM. B. ALLIN.