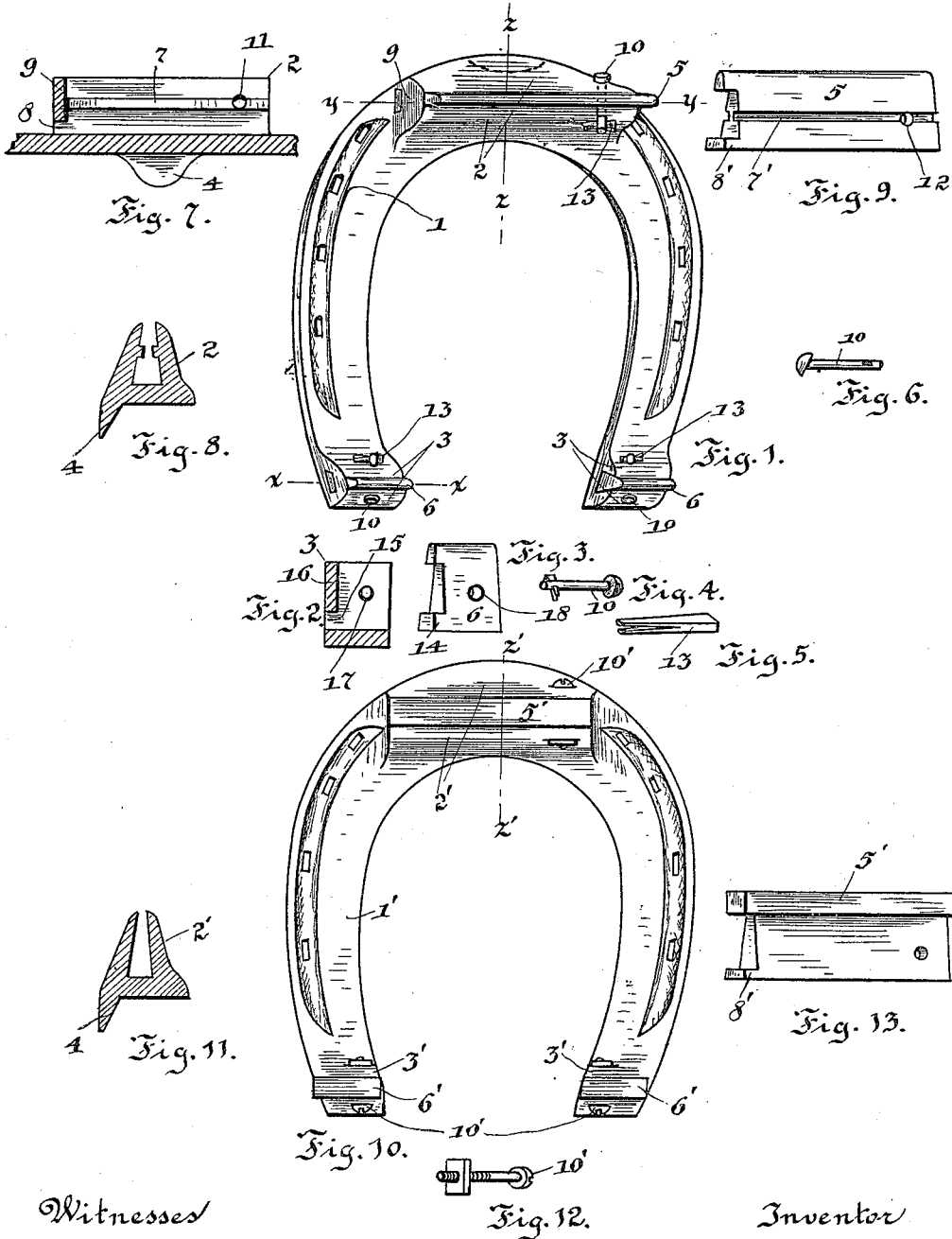


H. JOHANSEN.
HORSESHOE.

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Witnesses

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UNITED STATES PATENT OFFICE.

HARALD JOHANSEN, OF CHICAGO, ILLINOIS.

HORSESHOE.

961,499.

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To all whom it may concern:

Be it known that I, HARALD JOHANSEN, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Horseshoes, of which the following is a specification.

My invention relates to improvements in horseshoes and has for its object the production of a horseshoe which shall be inexpensive of construction and durable in service.

A further object of my invention is to provide means whereby the parts subject to wear in the shoe may be replaced when worn by new parts.

A further object is to provide such a design in a shoe that the same may be readily formed of cast metal.

Other objects will appear hereinafter.

With these objects in view my invention consists in the novel construction and arrangement of parts which will be hereinafter fully described and more particularly pointed out in the appended claims.

My invention will be more readily understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a perspective view of my improved horseshoe in its preferred form, Fig. 2 is a section taken on line $x-x$ of Fig. 1, Fig. 3 is a detail perspective view showing a removable heel calk, Figs. 4 and 5 are perspective views showing a pin and cotter therefor respectively, Fig. 6 is a detail view showing said last named pin, Fig. 7 is a section taken on line $y-y$ of Fig. 1, Fig. 8 is a section taken on line $z-z$ of Fig. 1, Fig. 9 is a detail perspective view showing a removable toe calk, Fig. 10 is a bottom view of a modified form of shoe, Fig. 11 is a section taken on line $z'-z'$ of Fig. 10, Fig. 12 is a detail perspective view showing a securing bolt, and Fig. 13 is a detail perspective view showing a removable toe calk.

Referring now to the drawings, 1 designates my preferred form of shoe having downwardly extending projections 2 and 3 having recesses therein adapted to receive toe and heel calks respectively. 4 indicates an upwardly extending clip in the front part of the shoe which is of the usual form. The toe and heel calks 5 and 6 respectively are tapered as shown and have narrow rounded wearing surfaces. The recess in

the projection 2 which is adapted to receive the toe calk 5 is provided with inwardly extending flanges 7 which are adapted to engage the longitudinally extending grooves 60 7' formed in said toe calk. At one end of the toe calk recess a small recess 8 is formed which is adapted to receive a small projection 8' formed at the end of the toe calk, the bridge 9 extending over the recess 8, the bearing edge of said calk being also extended to pass over and protect said bridge, said bridge passing into the recess between the projections. The calk 5 after being inserted in the recess is locked in position by means 70 of a pin 10 which passes through a hole 11 in the projection 2 and a hole 12 in the calk 5. In order to retain the pin 10 in position a split cotter 13 is provided, said cotter being tapered as shown in Fig. 5. Each heel calk 6 is provided with a small projection 14 75 which is adapted to enter the small recess 15 as shown in Fig. 2, a bridge 16 extending across said small recess. In order to secure each calk 6 in position a hole 17 is provided 80 in each projection 3 and a hole 18 in each calk, the pins 10 extending through these holes and securing the calks the same as the calks 5 are secured.

In the modified form of shoe shown in 85 Fig. 10 calks 5' and 6' are provided which are especially adapted for summer use, the same having large flat wearing surfaces. These calks are secured in the body 1' of the shoe the same as calks 5 and 6 except that 90 the projection 2' is not provided with flanges 7, the calk 5' having smooth tapering sides. Instead of the pins 10 to secure the calks in position in projections 3' bolts 10' are provided. 95

While I have shown what I deem to be the preferable forms of my improved horseshoe, I do not wish to be limited thereto as there might be various changes made in the details of construction and arrangement of 100 parts described without departing from the spirit of my invention, and hence I desire to avail myself of such changes and alterations as fairly fall within the scope of the appended claims. 105

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a horseshoe, a body having a downwardly tapering recess therein for the reception of a calk, the said recess being partially closed at one end by a bridge, calks adapted 110

to be inserted laterally in said recess, projections on the ends of said calks arranged to take over and under said bridge; and means for preventing lateral displacement
5 of said calks, substantially as described.

2. In a horseshoe, a body having a downwardly tapering recess therein for the reception of a calk, the said recess being partially closed at one end by a bridge and
10 formed by flanges on both sides; a calk adapted to be inserted laterally in said recess and provided with side grooves arranged to

receive said flanges; projections on the ends of said calk arranged to take over and under said bridge; and means for preventing lateral displacement of said calk; substantially as described. 15

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HARALD JOHANSEN.

Witnesses:

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