I. C. PATSCH.

HORSESHOE.

APPLICATION FILED MAR. 16, 1909.

939,440.

Patented Nov. 9, 1909.

FIG. 1.

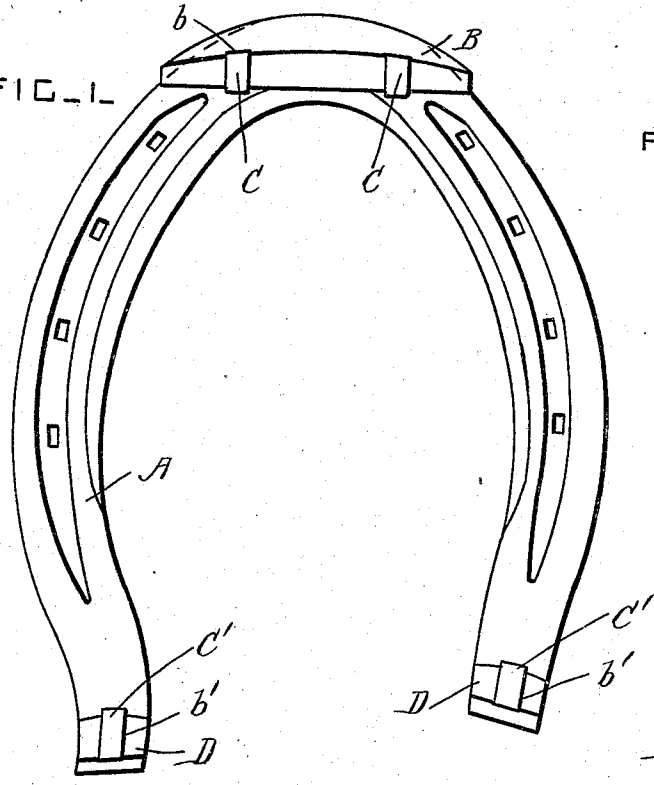


FIG. 2.

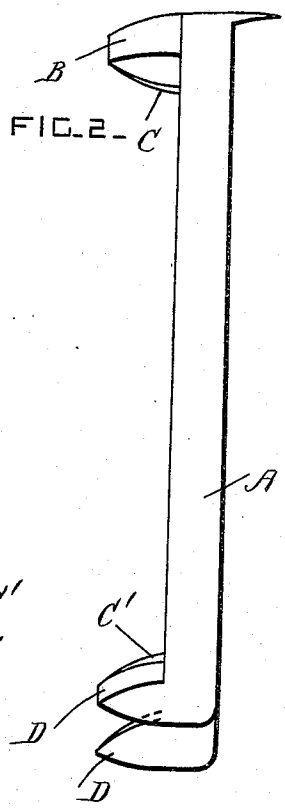


FIG. 3.

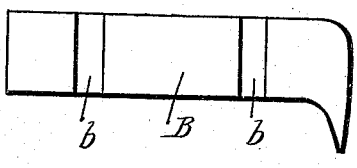


FIG. 4.

FIG. 5.

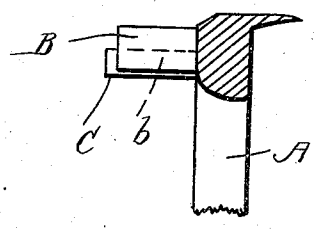
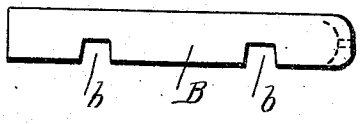


FIG. 6.



Witnesses

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HORSESHOE.

939,440. Specification of Letters Patent. Patented Nov. 9, 1909.

Application filed March 16, 1909. Serial No. 483,746.

To all whom it may concern:

Be it known that I, ISAAC C. PATSCH, a citizen of the United States, residing at Houston, in the county of Washington 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.

This invention relates to horse shoes provided with sharp calks; and it consists in the novel construction and combination of the parts hereinafter fully described and claimed.

In the drawings, Figure 1 is a plan view of the horse shoe. Fig. 2 is a side view of the same. Fig. 3 is a detail side view of the toe calk before being welded to the shoe. Fig. 4 is a detail side view of one of the steel spikes. Fig. 5 is an end view of the toe calk before being sharpened and shows the shoe in section. Fig. 6 is a plan view of the part shown in Fig. 3.

A is a horse shoe of any approved form.

B is a toe calk formed of a short bar of iron, rectangular in cross-section. Grooves *b* are formed in one side of this bar and extend across it. Two or more grooves may be formed in the bar according to the size of the shoe, and they are of any suitable form. The bar B is then welded onto the toe portion of the shoe, and spikes C of steel are inserted in the grooves *b*, while the bar and the shoe are hot. These spikes are preferably tapered a little at one end so that they will enter the lower parts of the grooves easily. The spikes are preferably nearly square in cross-section, and the grooves *b* are made so as to inclose the spikes upon three sides. The spikes may be made of other forms however, and the grooves are then made so as to receive them. The spikes are then welded to the bar and shoe, and the toe calk is then sharpened as shown in Figs. 1 and 2.

The points of the spikes when sharpened are substantially flush with the bar, and the lower portions of the spikes project above the adjacent surfaces of the calk bar. The spikes are supported by the calk bar upon three sides and are welded to the bar upon those sides. In this manner the bar is provided with steel spikes of such large size and area that the nature of the steel is not impaired in the welding operation. The spikes therefore are strong, and sufficient to prevent the animal from slipping in conjunction with the iron calk bar.

The calk can be sharpened together with the steel spikes as often as necessary, and the steel spikes can be hardened and tempered to any desired degree. The spikes are shown upon the inside surface of the calk, but they can be arranged upon the outside surface of the calk, if preferred.

D are the heel calks of the shoe. These heel calks have grooves *b'* formed in them similar to the grooves *b*, and C' are steel spikes welded into the grooves *b'*, in a similar manner to the spikes C.

When the calks are made in this way the cost is very much less than when the steel spikes are cores which are wholly inclosed in the calks, and as each spike is exposed upon one side, it can be hardened to any degree by watching its color.

What I claim is:

1. A horse shoe having a calk of relatively soft material provided with a groove which extends across the calk from base to top intermediate of its ends, and a spike or peg of relatively hard material welded in the groove and having its exposed side and end projecting beyond the adjacent surface of the calk to afford additional strength and security.

2. A horse shoe having a toe calk of relatively soft material provided with a plurality of grooves which extend across the calk from base to top intermediate of its ends, and spikes or pegs of relatively hard material welded in the grooves and having their exposed sides and ends projecting beyond the adjacent surface of the calk to afford additional strength and security.

In testimony whereof I have affixed my signature in the presence of two witnesses.

ISAAC C. PATSCH.

Witnesses:
WILLIAM A. SHILES,
J. A. MCKNIGHT.