No. 742,464. PATENTED OCT. 27, 1903.

J. MacLEAN.

HORSESHOE.

APPLICATION FILED MAY 27, 1902

NO MODEL.

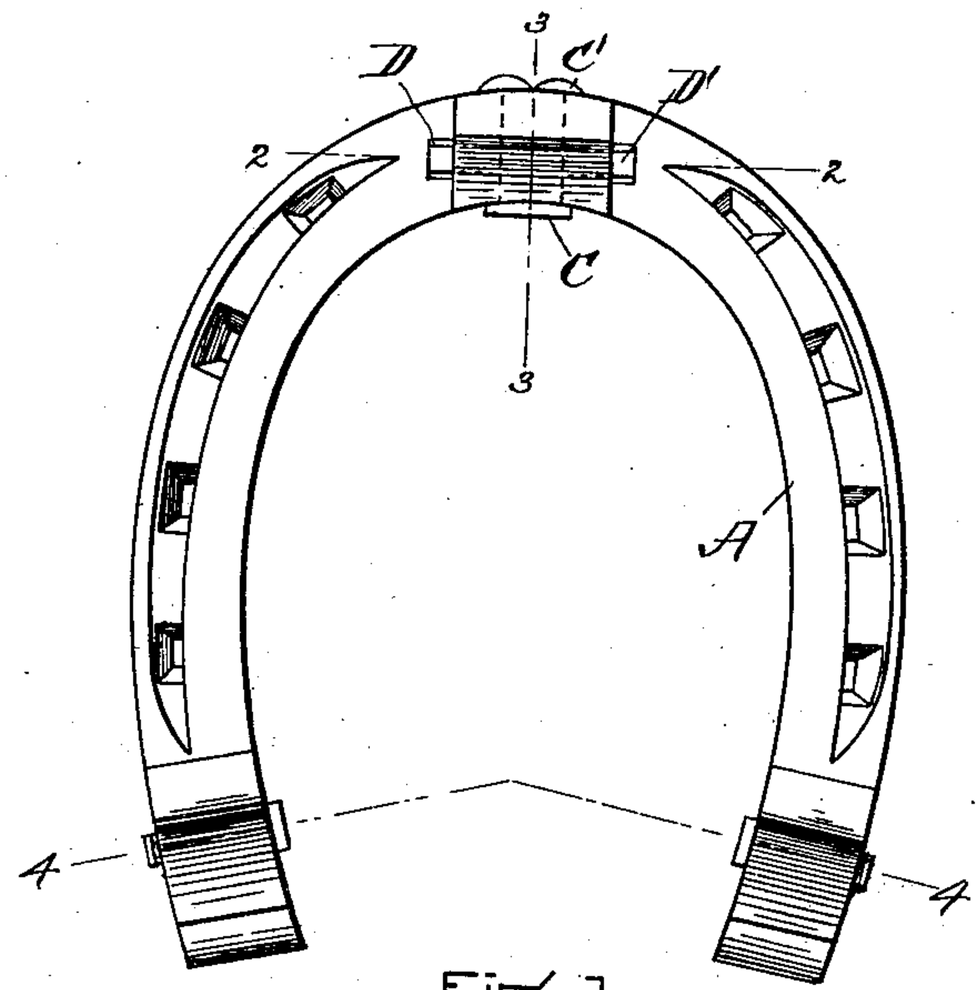

Fig. 1.

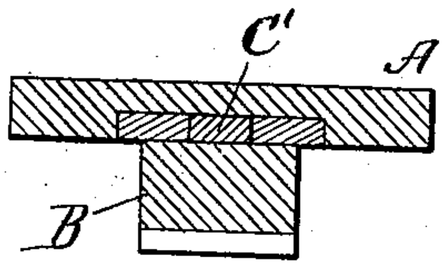

Fig. 2.

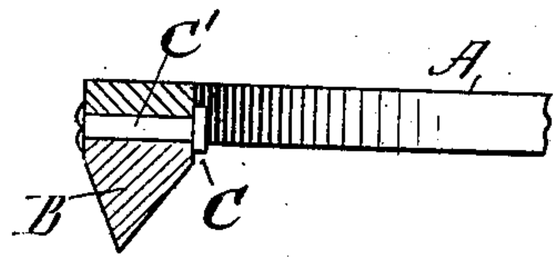

Fig. 3.

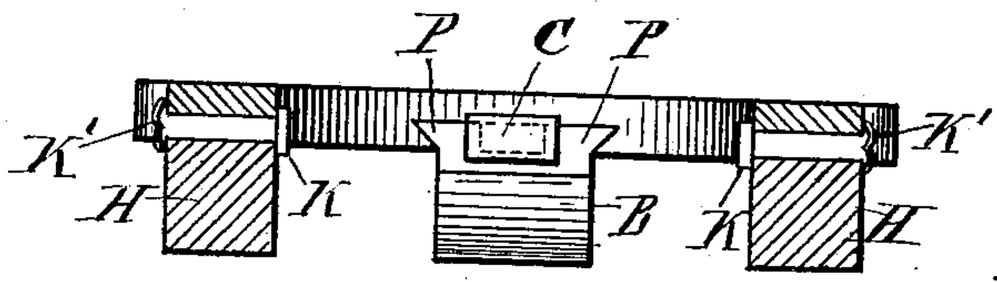

Fig. 4.

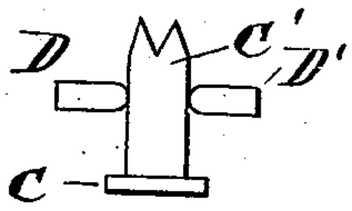

Fig. 6.

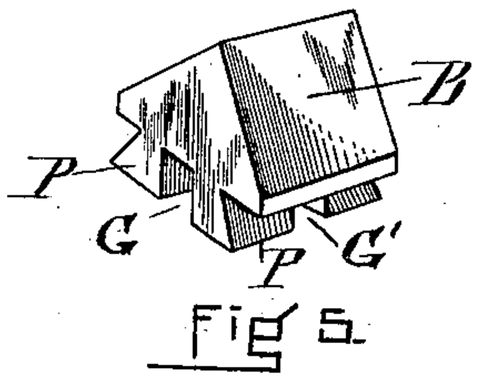

Fig. 5.

WITNESSES

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INVENTOR.

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No. 742,464. Patented October 27, 1903.

UNITED STATES PATENT OFFICE.

JAMES MACLEAN, OF BOSTON, MASSACHUSETTS.

HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 742,464, dated October 27, 1903.

Application filed May 27, 1902. Serial No. 109,247. (No model.)

To all whom it may concern:

Be it known that I, JAMES MACLEAN, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Horseshoes, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to the construction and means of attaching detachable calks to horseshoes.

The object is to so construct and attach the calks that no additional weight is added to the shoe and that the calks, though detachable, will not work loose in use. This object I attain by means of the mechanism shown in the accompanying drawings, in which—

Figure 1 is a plan of a horseshoe having the improved calks attached. Fig. 2 is a cross-section taken on line 2 2 of Fig. 1. Fig. 3 is a section taken on line 3 3 of Fig. 1. Fig. 4 is a cross-section taken on line 4 4 of Fig. 1. Fig. 5 is a perspective view of one of the toe-calks. Fig. 6 shows in plan the keys used for fastening the toe-calk.

A full plan view from the under side of the shoe with the calks attached is shown in Fig. 1.

The general shape and size of the shoe are not different from an ordinary shoe.

The toe-calk B shown in plan in Fig. 1 and in rear elevation in Fig. 4 is also shown in perspective in Fig. 5 and in section in Figs. 2 and 3. This toe-calk has dovetail projections P P. These projections are so arranged as to leave keyways between, one keyway crossing the other and adapted to receive the three keys C C′, D, and D′, as shown in Fig. 6. The toe-calk is fastened to the shoe by forcing it into the dovetail recess made in the toe of the shoe, which is easily done by the fingers alone, or it may, if necessary, be driven by light blows of a hammer. The short side keys D and D′ may be placed in their grooves G′ in the toe-calk before it is inserted into the shoe, in which case their inner ends meet in the center of the calk, so that their outer ends will not extend beyond the calk while the calk is being placed in its groove. When the calk is in place and the side keys D and D′ are within their grooves, then the key C C′ may be driven in through its groove G. This action will force the side keys D and D′ outwardly into the grooves made for them in the shoe, thus locking the toe-calk securely in its place. To further secure the calk, the key C C′ is riveted or upset at C′, thus making a safe fastening for the calk. To remove the calk, the upset part C′ of the key is filed or cut off and the key is driven out. This will allow the side keys D and D′ to be pushed in toward the center, thus leaving the toe-calk free to be driven out at its dovetail groove.

The heel-calks H and H have each a dovetail portion adapted to slide into a corresponding dovetail groove made across the shoe. The key K K is driven in from the inside and riveted or upset on its outer end, as indicated at K′. (See Figs. 1 and 4.) To remove the heel-calks, it is only necessary to file or cut off the upset parts K′ and drive the key out. Then the calk is easily driven out of its groove.

In the drawings I have shown the system of keys and cross-keys applied to the toe-calk only, although it may be applied to the heel-calks, if desired.

I claim—

A horseshoe comprising a shoe proper, having, at the toe, grooves constructed to receive the dovetail projections of the toe-calk and also to receive the main key and the cross-keys; a dovetail toe-calk having a main keyway and transverse keyways for the cross-keys; and a main key and cross-keys, the said cross-keys constructed to be driven and wedged in place by the main key; substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 9th day of May, A. D. 1902.

JAMES MACLEAN.

Witnesses:
FRANK G. PARKER,
FRED E. DORR.