W. E. ABBOTT.

HORSESHOE CALK.

APPLICATION FILED MAY 1, 1909.

955,246.

Patented Apr. 19, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

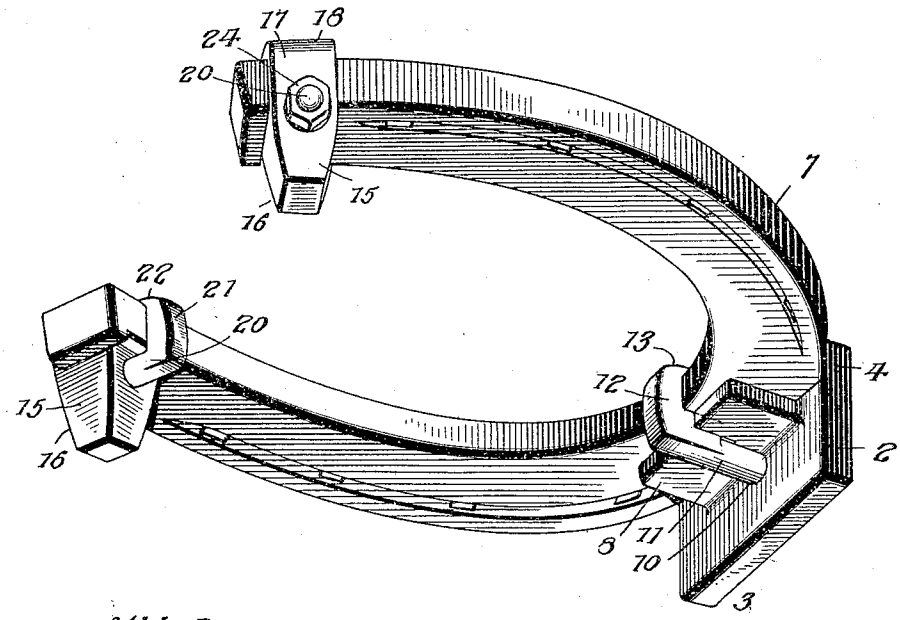
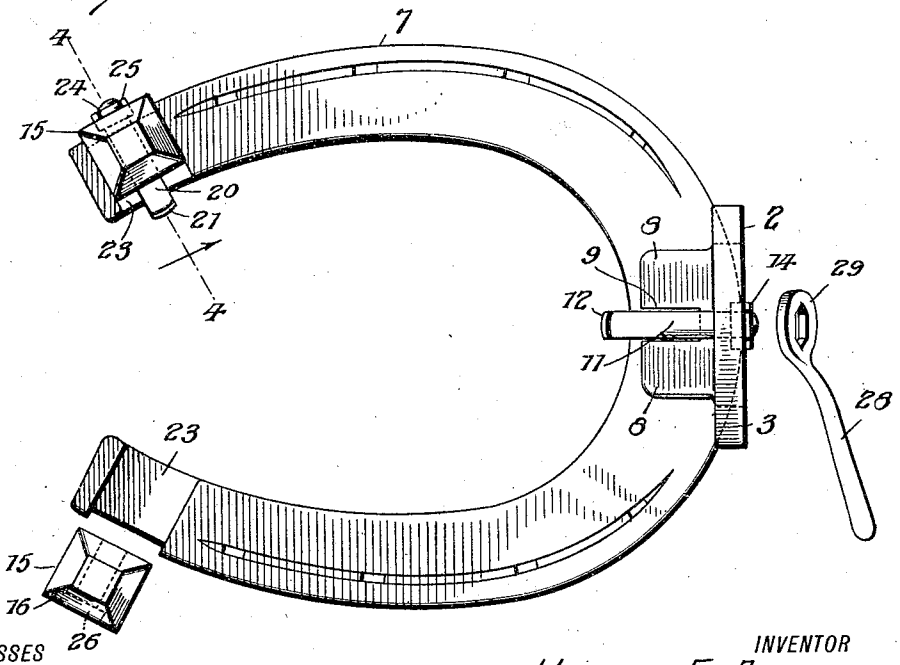


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 5.

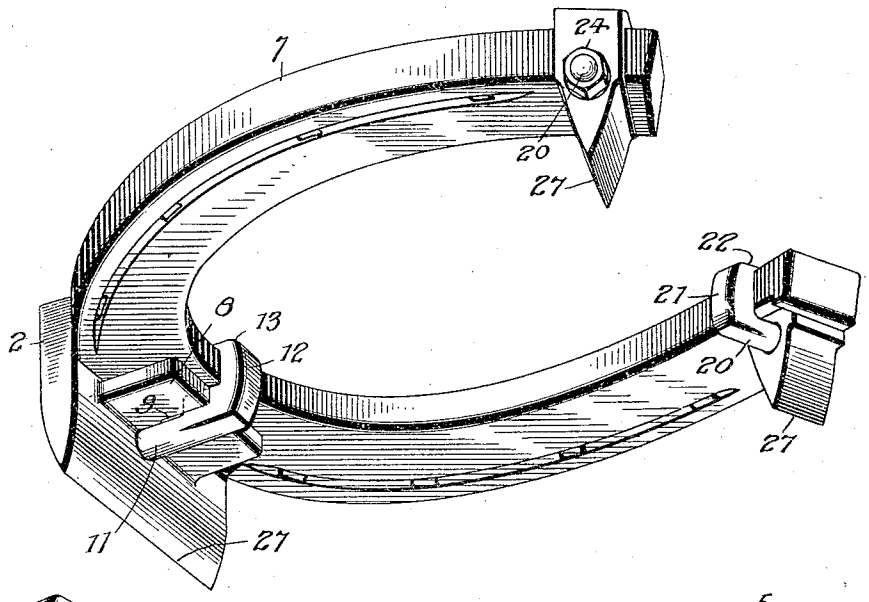


Fig. 3.

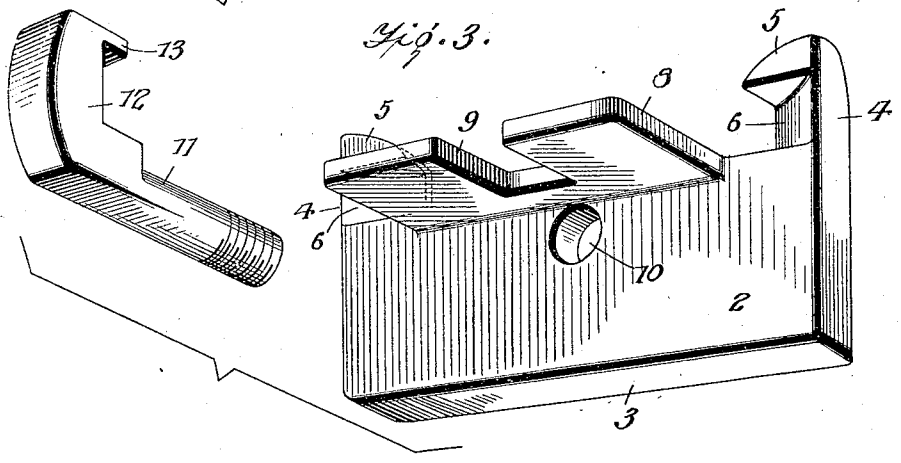
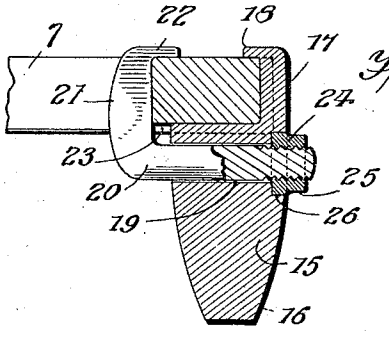


Fig. 4.



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UNITED STATES PATENT OFFICE.

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HORSESHOE-CALK.

955,246. Specification of Letters Patent. Patented Apr. 19, 1910.

Application filed May 1, 1909. Serial No. 493,245.

To all whom it may concern:

Be it known that I, WARREN E. ABBOTT, a citizen of the United States, and a resident of Wilmington, in the county of Clinton and State of Ohio, have invented certain new and useful Improvements in Horseshoe-Calks, of which the following is a specification.

My invention is an improvement in horseshoe calks, and consists in certain novel constructions and combinations of parts, hereinafter described and claimed.

The object of the invention is to provide calks, either sharp or dull, which may be removed and replaced, without disturbing the shoe, and without recourse to a skilled mechanic.

Referring to the drawings forming a part hereof, Figure 1 is a perspective view of a horseshoe provided with the improvement, Fig. 2 is a plan view of the same, Fig. 3 is an enlarged perspective view of a toe calk and its securing device, Fig. 4 is a section on the line 4—4 of Fig. 2, and Fig. 5 is a perspective view of a shoe provided with sharp calks.

The embodiment of the invention shown in the drawings, comprises a plurality of heel calks and a toe calk. The toe calk shown in Figs. 1 to 4, consists of a substantially rectangular plate 2 of suitable thickness, and having a blunt lower edge 3. The plate is provided at each end of its upper edge, with an upwardly extending lug 4, having an overhanging lip 5, and the inner face 6 of the lug is beveled as shown to correspond with and fit the curve of the edge of the shoe 7. A lateral flange 8 is arranged on the plate intermediate the lugs 4, and is adapted to underlie the lower face of the shoe, as shown in Fig. 1. The flange is provided with a central recess 9, for a purpose to be presently described, and directly below the recess the plate is provided with a transverse opening 10. It will be noticed that the flange 8 projects rearwardly from the upper edge of the calk plate 2 and that the recess 9 is in the nature of a notch extending from the rear edge of the plate 8 to a point slightly in rear of the juncture of the plate 8 with the calk 2, a portion of the plate 8 at the front edge thereof remaining intact and forming a bearing below which the bolt 11 engages when the said bolt is applied as shown in the drawings. The bolt 11 is also provided upon its shank close to the juncture thereof with the hook 12 with an upwardly projecting boss which operates in the notch 9 and immediately underlies a horseshoe when the parts are applied, the upper face of the said boss resting in operation flush with the upper face of the plate 8 so the bolt will bear directly below the toe portion of the shoe and also directly below an uninterrupted portion of the plate 8 before it passes through the opening 10 to receive the nut. This is important in the practical operation of the invention as by it I am able to secure the bolt in direct connection with the shoe and also secure the bolt in direct connection with the calk plate and the rearwardly extending plate 8 by the bearing of the bolt below the plate 8 at the front edge of the latter and I present a construction which is convenient of application, of maximum strength and in which the parts are firmly held together by the tightening of a nut in the practical use of the invention. A clamp is provided for securing the plate to the shoe, the clamp consisting of a threaded stem 11 for engaging the opening 10, and a lateral lug 12 for engaging the inner edge of the shoe, the lug having a lip 13, which overlies the upper face of the shoe when the clamp is in place. The stem is also provided with a square portion at the junction of the lug therewith, and this portion is received in the central recess, before mentioned. In placing the calk, it is arranged with the outer edge of the shoe in contact with the faces 6 of the lugs 4, and with the flange 8 against the lower face of the shoe. The stem of the clamp is passed through the opening 10, and a nut 14 is threaded thereon, and turned sufficiently to draw the edge of the lug 12 closely against the inner edge of the shoe. If desired the outer face of the plate may be recessed, as indicated in Fig. 2 to receive the nut.

The heel calks each consist of a plate or bar 15 substantially square in cross section, and tapering toward the bottom somewhat as at 16, and each is provided with an upwardly extending lug 17, for engaging the outer edge of the shoe, and the lug has a lip 18 overlying the upper face thereof. The bar is also provided with a transverse opening 19, and a clamp similar to the clamp before described is provided for securing the calk to the shoe. The clamp consists

of a stem 20 having one end threaded, and the other provided with a lateral lug 21 for engaging the inner face of the shoe, the lug having a lip 22 for overlying the upper face thereof. The shoe is transversely grooved on its lower face as at 23 for receiving the upper face of the calk, and provided with a vertical groove on its outer side registering with the transverse groove, for receiving the lug 17. The heel calks are secured in place in the same manner as described for the toe calk, by means of a nut 25, engaging the threaded stem, the nut being a barrel nut, that is having a round portion 24. The bar of the heel calk is also recessed as at 26 for receiving the barrel of the nut.

The sharp calks are precisely the same in construction with the exception of the lower edge of the toe calk and the lower ends of the heel calks, which are sharpened as shown at 27, and they are secured in place in the same manner.

A convenient tool for placing and removing the calks is shown at the right of Fig. 1, the tool consisting of a handle 28, and a ring 29, whose inner face is shaped to fit the nuts.

It will be evident that each calk consists of the calk proper, and a clamp, each of which is provided with a recessed lug, or with a recess broadly considered for receiving one side of the shoe, and means for connecting the clamp and the lug.

If desired, the upper face of the shoe at the heel, may be grooved for receiving the lip 22. This will make a somewhat stronger construction.

I claim:

A calk attachment for horseshoes comprising a calk plate arranged vertically edgewise and provided at its upper edge at its opposite ends with upwardly projecting lugs having lips to overlie a horseshoe and having at the upper edge of the calk plate a rearwardly projecting wing or plate adapted to underlie the toe of a horseshoe and provided in the rear edge of said plate with a notch which terminates in rear of the juncture of the said wing plate with the calk plate whereby a portion of the wing plate is left uninterrupted and unbroken at the front edge of said plate, the calk plate being provided immediately below the wing plate with a bolt hole arranged in line with the notch in the wing plate and a bolt having a threaded shank adapted to extend through the bolt hole in the calk plate, a hook at its rear end to engage with the rear edge of the toe of a shoe and provided upon its shank immediately adjacent to said hook with a boss or projection to fit in the notch of the wing plate, the said boss or projection lying at its upper edge flush with the upper edge of the wing plate whereby it may directly abut the under surface of a horseshoe and the shank and the bolt extending forwardly below the interrupted or broken portion of the wing plate whereby when the parts are assembled the hook will directly engage and directly underlie the toe of a horseshoe and the shank of the bolt will directly underlie an uninterrupted portion of the wing plate, all substantially as and for the purposes set forth.

WARREN ELLSWORTH ABBOTT.

Witnesses:

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N. S. GREGORY.