No. 817.579. PATENTED APR. 10, 1906.

T. W. J. McGANN.

ADJUSTABLE HORSESHOE CALK.

APPLICATION FILED NOV. 23, 1905.

Fig. 1

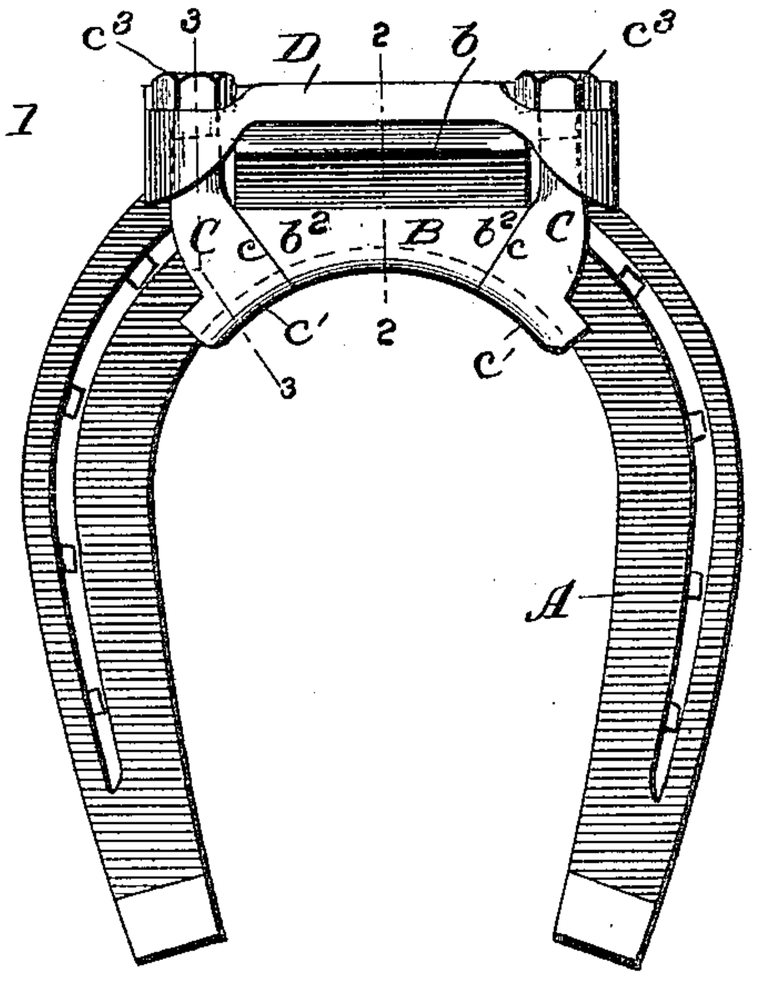


Fig. 1a

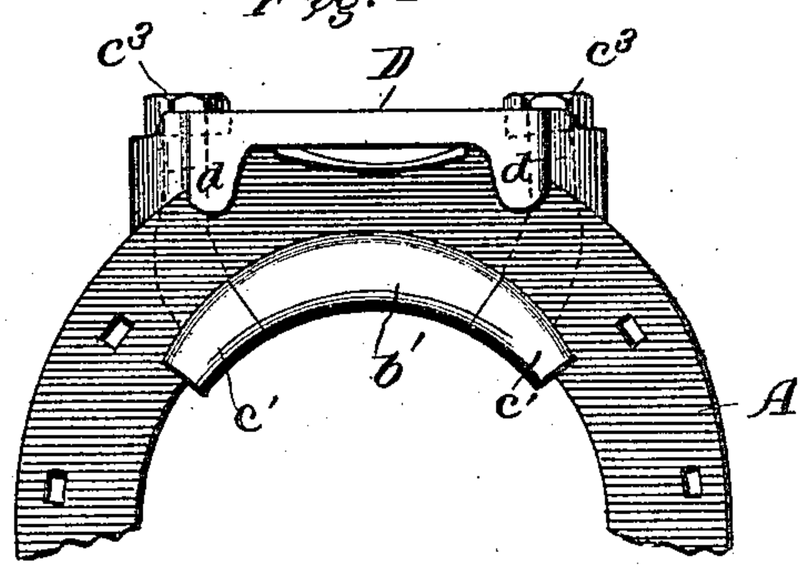


Fig. 2

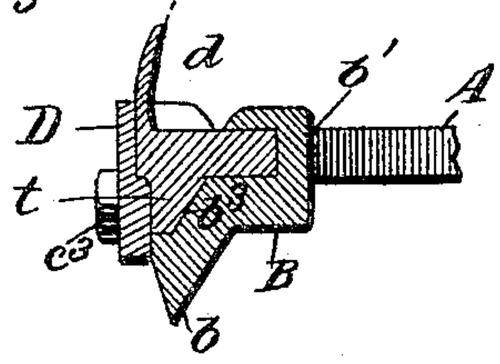
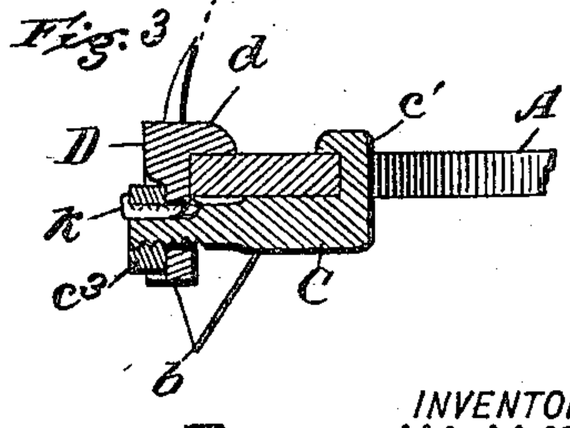


Fig. 3



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ADJUSTABLE HORSESHOE-CALK.

No. 817,579. Specification of Letters Patent. Patented April 10, 1906.

Application filed November 23, 1905. Serial No. 288,742.

To all whom it may concern:

Be it known that I, THOMAS W. J. McGANN, a citizen of the United States, residing at Washington city, in the District of Columbia, have invented a new and useful Improvement in Adjustable Horseshoe-Calks, of which the following is a specification.

My invention is in the nature of an adjustable horseshoe-calk for rendering the horse rough-shod without removing the shoe. It is designed to provide a detached calk which shall be easily applied and removed and yet so strongly connected that its parts do not become loosened by the hammering action of the horse's hoof on the road-bed. In detachable calks of this character the trouble has been to maintain a rigid connection of the calk to the shoe under the severe strains to which it is subjected, and the means for doing this constitutes the leading and important feature of my invention, as hereinafter described.

Figure 1 is an outer face view of the detachable calk shown applied to a shoe. Fig. 1ª is a partial inside face view of the same. Fig. 2 is a section through the line 2 2 of Fig. 1, and Fig. 3 is a section through the line 3 3 of Fig. 1.

In the drawings, A represents a horseshoe of the usual pattern, and B, C, and D represent my detachable calk.

B is the metal block, which has formed on its outer surface the calk *b*. This block has a hook-shaped flange *b'* along its inner edge, that is curved to correspond to the curve of the inside edge of the shoe at the toe part, and the hook portion of this flange extends above the inner edge of the horseshoe and laps over on top of the same for a short space. The block B has tapering or converging end walls b^2 b^2, which form a dovetail bearing against the correspondingly-inclined and abutting faces *c c* of two hook-bolts C C. These hook-bolts have offset heads each of which on one side is made with an inclined face *c*, and the head of each bolt is formed with a hook *c'*, which extends around the inner edge of the shoe and laps over the upper surface of the inside edge of the shoe.

D is the other member of my detachable calk. This is in the nature of a bridge or tie-block that extends across the toe of the shoe in front of the same and is formed with two reinforced and perforated ends, through which the stems of the hook-bolts extend and are secured by nuts c^3 c^3, screwed upon the stems in front of the bridge-block. This bridge-block has two lugs *d d*, which extend over the upper front edge of the shoe and which lie in small recesses cut in the edge of the hoof and between the same and the shoe. To prevent the nuts c^3 from jarring loose, they are locked upon the stems of the hook-bolts by means of keys *k*, as seen in Fig. 3, or any other suitable nut-locks.

When the bridge-block D is in position along the front edge of the toe, with its lugs *d d* overlapping to top of the shoe, and the calk-block B has its curved and hook-shaped flange *b'* close up against the interior edge of the shoe and overlapping the same and the inclined faces *c* of the hook-bolts C are fitted tightly against the tapered end walls of the calk-block and the stems of the hook-bolts are drawn up to and secured in the bridge-block by the nuts, all of these parts are bound firmly and rigidly to each other and firmly and rigidly to the shoe against strains in all directions. The lugs of the bridge-block and hook-flange of the calk-block prevent the parts from moving away from the shoe in downward direction, and the bridge-block and calk-block are drawn tightly together by the hook-bolts, so that they cannot separate, since the dovetail joint between the calk-block and the heads of the hook-bolt effectually prevent the rearward movement of the calk-block necessary to remove its hook-flange from its lap over the inside edge of the shoe. This dovetail joint also gives a wedging and tightening action to draw all the parts tightly together when the nuts are screwed up on the hook-bolts against the bridge-block.

The calk-block B, it will be seen, is formed with a recess b^3 on its side next to the shoe, which drops over and locks upon the usual toe-calk *t*, formed on the shoe, and thus forms a detachable calk on th eordinary rigid toe-calk, and this not only permits my adjustable toe-calk to be applied to the rough-shod shoe ordinarily used in winter, but also makes a firmer lock for the adjustable calk against any loosening movement.

One great advantage of this form of detachable toe-calk is that the fastening-bolts

are not underneath the horse's hoof, where they are exposed to wear and out of sight, but are in front where the nut can be easily seen and where it is not worn or battered against the pavement.

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

1. An adjustable horseshoe-calk, comprising a calk-block having a hook-flange adapted to catch over the inner edge of the shoe, a bridge-block outside the shoe having lugs adapted to catch over the outer edge of the shoe and two bolts connecting these parts together substantially as described.

2. An adjustable horseshoe-calk, comprising a calk-block having a hook-flange adapted to catch over the inner edge of the shoe, a bridge-block outside the shoe extending across the toe and having lugs overlapping the shoe and perforated ends and two bolts passing through these perforated ends and bearing against the calk-block substantially as described.

3. An adjustable horseshoe-calk, comprising a calk-block having a hook-flange adapted to catch over the inner edge of the shoe, a bridge-block outside the shoe having lugs adapted to catch over the shoe, two bolts connecting the bridge-block and calk-block and means for causing the bolts to draw the parts together with a wedging action as described.

4. An adjustable horseshoe-calk, comprising a calk-block having a hook-flange adapted to catch over the inner edge of the shoe, a bridge-block outside of the shoe having lugs adapted to catch over the shoe, two bolts connecting the bridge-block and calk-block, said bolts having hook-shaped head and engaging the inner edge of the shoe substantially as described.

5. An adjustable horseshoe-calk, comprising a calk-block having a hook-shaped flange adapted to catch over the inner edge of the shoe, a bridge-block outside of the shoe having lugs adapted to catch over the shoe, two hook-bolts connecting the bridge-block and calk-block, the head of said bolts and the adjacent faces of the calk-block being shaped and fitted to form a dovetail joint substantially as described.

6. An adjustable horseshoe-calk comprising a calk-block, a clamp-block and horizontal locking-bolts having their screw-threaded ends extending forwardly and provided with tightening-nuts as described.

7. An adjustable horseshoe-calk comprising a calk-block having a recess adapted to lock over the rigid toe-calk of the shoe and a hook-flange adapted to catch over the inner edge of the shoe a clamp-block arranged to go in front of the shoe and means for connecting it to the recessed calk-block.

8. A detachable toe-calk having a recess to receive the toe-calk of a horseshoe and a forwardly-projecting flange to hook over the upper surface of the inside edge of the shoe and means for fastening it in front of the shoe.

9. A detachable toe-calk having a forwardly-projecting flange to hook over the upper surface of the inside edge of the shoe and means arranged at the front for fastening it on in front of the shoe.

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