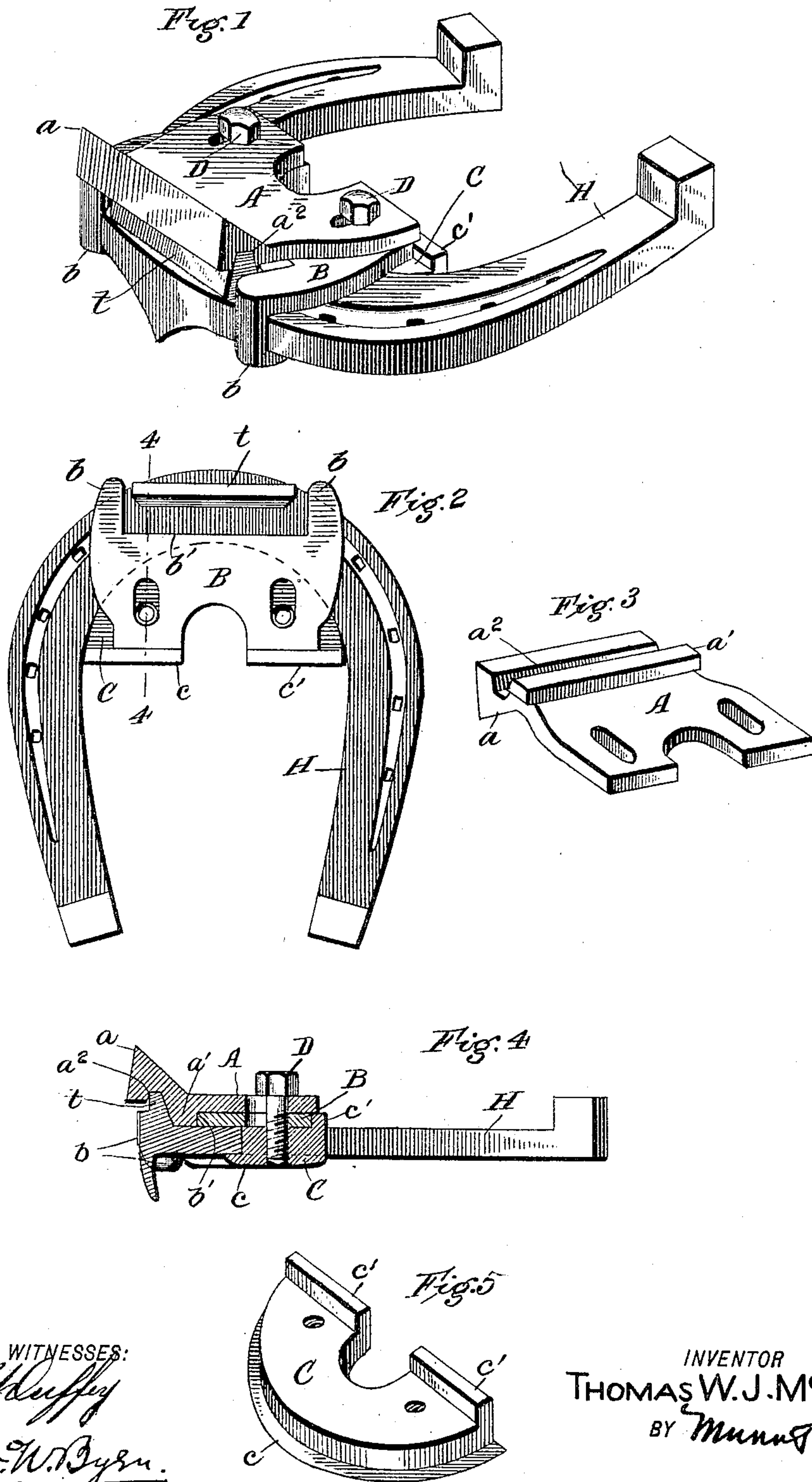


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PATENTED APR. 10, 1906.

T. W. J. MCGANN.  
ADJUSTABLE HORSESHOE CALK.  
APPLICATION FILED NOV. 23, 1905.



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# UNITED STATES PATENT OFFICE.

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## ADJUSTABLE HORSESHOE-CALK.

No. 817,578.

Specification of Letters Patent.

Patented April 10, 1906.

Application filed November 23, 1905. Serial No. 288,741.

*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 relates to that form of adjustable calk in which a plate applied externally to the toe part of the shoe is formed with two hook-shaped claws which hook around the front edge of the shoe and penetrate a short distance between the shoe and the hoof and by means of which plate a movable calk-section is secured. My invention is designed to provide a detachable calk of this general construction 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, and the means for doing this constitutes one of the most important features of my invention.

Figure 1 is a perspective view of the lower face of the shoe with the calk applied. Fig. 2 is an outer face view with the external calk-plate removed. Fig. 3 is a detail of the calk-plate, showing its face next to the shoe. Fig. 4 is a cross-section on line 4 4 of Fig. 2, and Fig. 5 is an outer face view of the inside clamp-plate.

In the drawings, H represents a horseshoe to which are shown applied the three plates A B C, forming my adjustable calk.

A is the calk-plate, which is formed with the calk *a* at its front edge. This plate is outside of all the other plates and is next to the ground and is applied externally to the other plates, so that it may be removed and replaced when worn without disturbing the position of the plates B and C and without removing the latter from the shoe and hoof.

The plates B and C are the clamp-plates, which lock the calk-plate A firmly to the shoe. The clamp-plate B is applied directly to the outer lower surface of the shoe as attached to the horse's hoof and is formed with

two hooks *b b*, which extend around in front of the toe part of the shoe and are turned inwardly in terminal claws, which enter small recesses cut in the edge of the horse's hoof where it joins the shoe, so that these claws get a bearing around and over the front edge of the shoe and hug the same closely. This plate is cut away between the hooks *b b*, so as to leave a space between the edge *b'* and the regular toe-calk *t*, formed on the shoe. This cut-away portion is to allow a slight horizontal sliding motion for this plate B in being applied to and removed from the shoe, this motion being necessary to allow the claws of the hooks *b* to pass over the front edge of the shoe and then be slid backward far enough to allow the claws of the hooks to pass into the recesses in the horse's hoof above the shoe in getting a lap over the upper edge of the same. After these claws have thus engaged the upper edge of the shoe they are prevented from moving forward and releasing the shoe by a locking-rib *a'*, formed on the adjacent face of the calk-plate A, which rib *a'* drops into the space between the edge *b'* of plate B and the shoe-calk *t*. The outer calk-plate A has at its front edge next to the shoe a recess which extends over both the front and rear sides of the rigid toe-calk *t* of the horseshoe, thus locking the detachable plate firmly against horizontal displacement. When the plates A B C are thus fitted together, they are rigidly clamped together on opposite sides of the middle line of the shoe by two screw-bolts D D, which pass through holes in all three plates, the threads of the bolts entering screw-threaded holes in the clamp-plate C, that lies next to the horse's hoof.

The clamp-plate C is shaped to the exact curve of the front inner edge of the bend of the shoe at the toe and abuts against it, and it has a flange *c* that overlaps the edge of the shoe and lies between the top edge of the shoe and the horse's hoof. The rear edges of this plate have outturned lugs *c' c'*, which extend across the plane of the edge of plate B. When the three plates are clamped together by the bolts D, the flange *c* of plate C lies above the upper edge of the shoe and prevents the plates from moving outwardly. The curved solid abutment of plate C, lying against the inner edge of the shoe, prevents



all forward movement of the plates, and the hooks *b b* of plate B prevent movement to the rear and outwardly.

To remove the adjustable calk *a*, the bolts D are unscrewed and plate A taken off, and this plate being both external in position and externally applied a new calk-plate A may be put in its place without removing the clamp-plates B and C. If, however, these latter are to be removed, when plate A is taken off its locking-rib *a'*, being no longer in front of the edge *b'* of plate B, the latter may be slid forward until its hooks *b b* are beyond the forward edge of the shoe, and then the plates B and C may be separated.

In pointing out the advantages and distinguishing features of my invention I would state that no two horses strike the road-bed with the hoof exactly alike. Some wear on one side and some on the other, and the thrust of blows on stone pavements, loose stones, and railway-tracks requires that any detachable calk shall be secure in every direction against loosening blows. It will be seen in this connection that the inner clamp-plate C has a wide and continuous abutment against the shoe, and the two clamp-bolts D are wide apart, which locks the parts rigidly together against all tilting or rocking, while the externally-applied calk-plate A is easily and quickly removed.

One great advantage of my adjustable horseshoe-calk is that it may be applied directly to horseshoes which are already provided with rigid toe-calk *t*. For this purpose it will be seen that the calk-plate A is formed on the side next to the shoe with a recess *a'*, which fits over and incloses the rigid calk *t* of the horseshoe. The externally-applied calk-plate renders this easy and practicable.

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 clamp-plate to be applied to the outside of the shoe and having hooks extending in front around and over the shoe, a clamp-plate to be applied to the inside of the shoe and having an overlapping edge extending over the rear inside edge of the shoe, an external calk-plate applied to the outside surface of the outside clamp-plate and means for locking the three plates together substantially as described.

2. An adjustable horseshoe-calk, comprising a clamp-plate to be applied to the outside of the shoe and having hooks extending in front and around the shoe, a clamp-plate to

be applied to the inside of the shoe and having an overlapping edge extending over the rear inside edge of the shoe and having a curved surface abutting against the front interior edge of the shoe, an external calk-plate applied to the outside surface of the outside clamp-plate and two locking-bolts extended through the three plates on opposite sides of the middle line of the shoe substantially as described.

3. An adjustable horseshoe-calk, comprising a clamp-plate to be applied to the outside of the shoe and having hooks extending in front around and over the shoe and an open space between the hooks, a clamp-plate to be applied to the inside of the shoe and having an overlapping edge extending over the inside edge of the shoe, an external calk-plate having a locking-rib on its inner face adapted to enter the plane of the outer clamp-plate to lock the same against sliding movement and means for fastening the three plates together substantially as described.

4. An adjustable horseshoe-calk, comprising a clamp-plate to be applied to the outside of the shoe and having hooks extending in front, around, and over the shoe and an open space between said hooks, a clamp-plate to be applied to the inside of the shoe and having an overlapping edge extending over the rear inside edge of the shoe and having also a curved abutment fitting the interior of the shoe and outturned lugs, an external calk-plate having a locking-rib on the inner face adapted to enter the plane of the outer clamp-plate and two bolts connecting the three plates together on opposite sides of the middle line of the shoe substantially as described.

5. A detachable toe-calk consisting of a flat horizontal plate having at its front edge a calk on the outside and a recess on the inside adapted to inclose the rigid toe-calk of a rough-shod horseshoe, two vertical bolts arranged in the plate inside the calk and means for connecting the bolts to the horseshoe.

6. A detachable toe-calk consisting of a flat plate having an external calk at its front end and bolt-holes in rear of the same, vertical bolts passing through the holes, and a plate secured to the bolts and arranged inside of and fitting the curve of the front part of the shoe and having a flange overlapping the upper inside edge of the shoe.

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Witnesses:

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