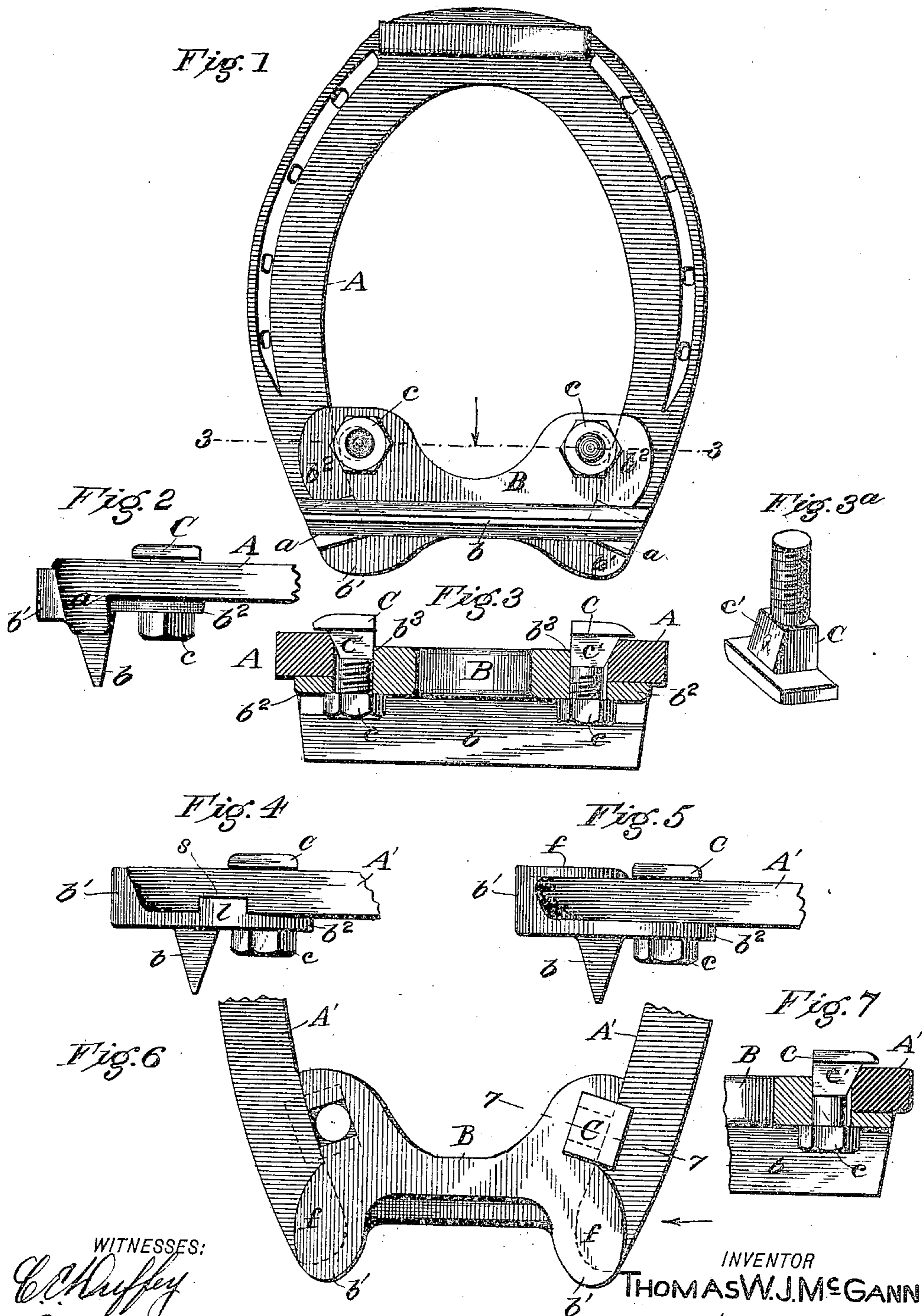


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T. W. J. MCGANN.
DETACHABLE HEEL CALK FOR HORSESHOES.

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DETACHABLE HEEL-CALK FOR HORSESHOES.

No. 817,582.

Specification of Letters Patent.

Patented April 10, 1906.

Application filed December 22, 1905. Serial No. 292,920.

To all whom it may concern:

Be it known that I, THOMAS W. J. MCGANN, a citizen of the United States, and a resident of Washington, in the District of Columbia, have made certain new and useful Improvements in Detachable Heel-Calks for Horseshoes, of which the following is a specification.

My invention relates to that form of detachable heel-calk for horseshoes which is made in the form of a bridge-piece that extends across the rear ends of the shoe from heel to heel. The difficulty has been with this form of detachable heel-calk to insure its firm adherence to the shoe against getting loose and coming off. My invention provides means for accomplishing this and supplies an efficient heel-calk that can be applied by any one without sending the horse to the blacksmith and which is applicable both to plain and roughshod shoes.

It consists in the novel construction and arrangement of parts hereinafter described with reference to the drawings, in which—

Figure 1 is an outside face view of the detachable heel-calk applied to a roughshod shoe. Fig. 2 is an end view of the calk looking at the side of the rear end of the shoe. Fig. 3 is a section on line 3 3 of Fig. 1, and Fig. 3^a is a detail of the clamp-bolt. Fig. 4 is a view similar to Fig. 2, showing a modification. Fig. 5 is an end view of a calk looking sidewise the shoe. Fig. 6 is an inside face view; and Fig. 7, a section on line 7 7 of Fig. 5, showing a further modification.

In the drawings, Figs. 1 to 3, A represents a horseshoe, which in this instance is formed with rigid heel-lugs *a*.

B is the bridge-shaped heel-calk, which extends across the rear opening of the shoe from heel to heel and is firmly attached thereto. This bridge-piece is formed with a wedge-shaped calk *b*, whose ends overhang and rest on top of the shoe-lugs *a*. It is also formed with rear flanges *b'* *b'*, which extend outwardly behind the rear ends of the heels of the shoe, and with horizontal flanges *b*² *b*², which lie flat against the outer face of the shoe just in front of the heel-lugs *a* *a*, the middle part of the bridge-piece extending into the plane of the horseshoe and having its ends abutting against the inner sides of the two heels of the shoe. All these parts of

the detachable calk B are cast or forged in one piece.

Through the horizontal flanges *b*² *b*² are formed bolt-holes *b*³ *b*³, which on the side of the calk next to the horse's hoof take a square shape, as seen in Fig. 6. These holes are so placed that on the inner side of the calk next to the horse's hoof said holes open against the inside edges of the shoe, so that the square shank of a bolt C will touch the inside edges of the shoe. These bolts are formed with heads that overlap the edges of the shoe next to the hoof and are secured by nuts *c* outside the horizontal flanges of the calks. The portions of the bolts next to the heads are made wedge-shaped, as at *c'*, being largest next to the head, and this wedge-shaped portion when the bolt is tightened up by the nut bears against the inside edge of the shoe and makes a tight expansion of the bridge between the heels of the shoe, so that the detachable calk is rendered rigid and tight, so that it cannot have any initial looseness, which if it existed would soon allow the calk to come off.

It will be seen that my heel-calk is so fashioned with seats for the heels of the horseshoe at its ends as to lock rigidly against movement forward, backward, downward, or upward—that is, it is locked by abutting faces in all directions—so that the weight of the horse in stamping or pulling does not come on any bolt, and not only this, but the expanding or wedging action of the bolt takes up all looseness and causes the calk to be always held rigid and firm as against initial movement.

As so far described the calk is shown applied to a roughshod horseshoe having heel-lugs *a* *a*. In Figs. 4 to 7 I have shown it applied to flat or plain shoes A' having no heel-lugs. In Fig. 4 the only change in the calk is to form it with a lug *l* next to the shoe, which locks into a slot or recess *s* cut across the outer face of the heel of the shoe, the other parts being substantially the same as in Figs. 1, 2, 3. When the calk is off this shoe, the grooves in the shoe are to be temporarily plugged with filling-pieces of steel.

In Figs. 5, 6, and 7 the lug *l* and groove *s* of Fig. 4 are omitted and the flat shoe requires no preparation whatever. The calk,

however, is formed with a flange *f*, that extends over the upper surface of the heel of the shoe next to the horse's hoof. In this case the calk is prevented from moving to the rear by the expanding action of the shanks of the bolts against the inner sides of the shoe near the heels. This in most shapes of shoes which bend inwardly at the heel will be sufficient to lock the calk to the shoe.

10 In all the forms described the opening in the center of the shoe is not crossed or obstructed by horizontal screws or a longitudinal middle bar, which are liable to be bent or broken by striking a stone, and thus loosening the calk.

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

1. A detachable heel-calk for horseshoes, consisting of a bridge-piece formed with an outer calk edge and with two seats to receive the heel ends of the shoe and two vertical bolts having wedged-shaped shanks adapted to pass through the calk and lock over the upper inner edges of the shoe and bear with their inclined wedge faces directly against

the inner edges of the shoe to make an expandible bridge connection between the heels.

2. A detachable heel-calk for horseshoes, consisting of a bridge-piece formed with an outer calk edge and with two seats to receive the heel ends of the shoe, two vertical bolts clamping the calk to the shoe, and interlocking means for preventing the rear horizontal movement of the calk.

3. A detachable heel-calk for horseshoes, consisting of a bridge-piece formed with an outer calk edge having flanges extending outwardly past the rear ends of the heels of the shoe, flat horizontal and perforated flanges resting against the outer face of the shoe, abutting faces resting between the heels of the shoe and lying in the plane of the same, and two vertical bolts passing through the perforations of the horizontal flanges and having wedge-shaped shanks binding against the inner edges of the shoe.

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Witnesses:

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