

G. MCGREGOR.

Detachable Calks for Horseshoes.

No. 147,417.

Patented Feb. 10, 1874.

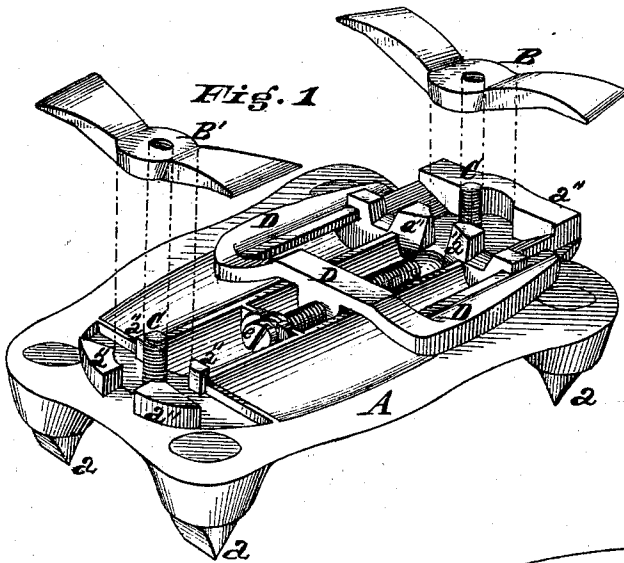


Fig. 2

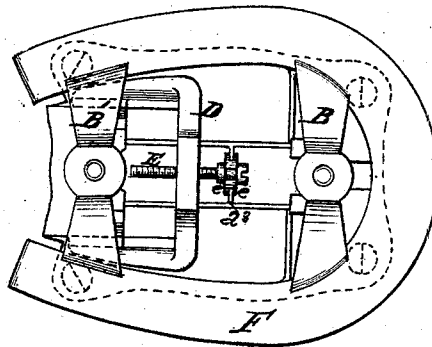


Fig. 3

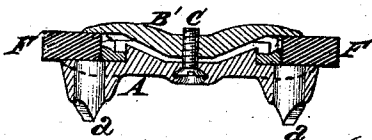


Fig. 4

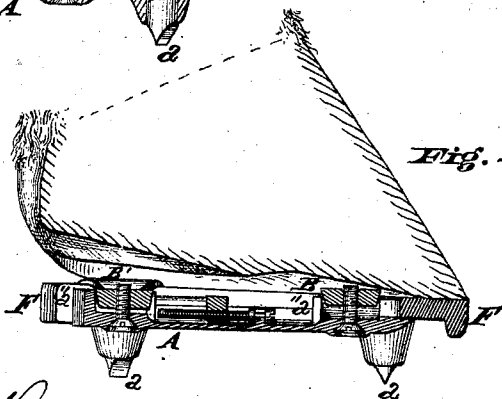
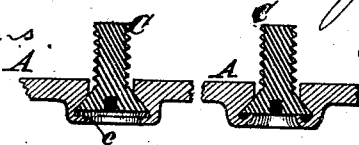


Fig. 5



Attest

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# UNITED STATES PATENT OFFICE.

GEORGE MCGREGOR, OF CINCINNATI, OHIO, ASSIGNOR TO HIMSELF AND  
JOHN B. MORRIS, OF SAME PLACE.

## IMPROVEMENT IN DETACHABLE CALKS FOR HORSESHOES.

Specification forming part of Letters Patent No. 147,417, dated February 10, 1874; application filed  
December 13, 1873.

*To all whom it may concern:*

Be it known that I, GEORGE MCGREGOR, of Cincinnati, Hamilton county, State of Ohio, have invented a certain new and useful Improvement in Detachable Calk-Plates for Horseshoes, of which the following is a specification:

My invention relates to the class of devices designed for attachment to horseshoes in winter, during the presence of ice or snow, to prevent slipping; and my invention consists, first, in a certain construction and combination of parts by which the calk-plate is secured to the ordinary horseshoe, and at the same time the clamping-bars held from rotation or other displacement; second, in a peculiar device for preventing the displacement, loss, or loosening of the fastening-screws; third, in a certain combination of parts by which the calk-plate is not only held firmly against the shoe, but is also secured laterally in a manner adapted to accommodate itself to different sizes of shoes.

Figure 1 is a perspective view of the calk-plate with the clamps detached. -Fig. 2 is a plan of the same connected together. Fig. 3 is an interior section of the calk-plate, clamp, connecting-screw, and horseshoe. Fig. 4 is a section, front to rear, showing the calk-plate upon the shoe. Fig. 5 is an enlarged view of the device for retaining the fastening-screws.

A is the calk-plate, which is fitted with sharp calks *a* to prevent slipping. The plate is of such a size that it more than covers the interior of the horseshoe F, as shown in dotted lines in Fig. 2, and, owing to the continuity of surface in the plate A, snow cannot accumulate so as to "ball" under the shoe. B B' are clamps, which engage between the shoe and the foot of the horse, as shown in Fig. 3, to enable the attachment of the plate A to the shoe F by screws C; and, in order to prevent the displacement of these clamps during the process of fastening on the calk-plate, or afterward, I provide projections *a''* on the plate A, which extend sufficiently above the upper surface of plate A to embrace the central hub and sides of the clamps B B', in the manner clearly shown in Figs. 2 and 4.

For the purpose of preventing the accidental withdrawal of the screws C while in

use, I swage the annular projecting metal of plate A over the heads of the screws after their insertion in the plate, a washer, *c*, being preferably interposed between the head of the screw and the swaged metal, as shown in the left-hand part of Fig. 5. This device, while permitting the free revolution of each screw in the plate A for attachment or removal of the plate from the clamps B B', prevents the withdrawal of either of the two screws in any other way than by the systematic revolution of both nearly together, and to the same extent, as, if one screw is forced out alone for a short distance, the entire structure is locked, and further withdrawal of this screw is prevented. A partition or rib, *a<sup>3</sup>*, crosses the plate A, in the manner shown, over which the collars *e* of the screw E fit, so as to permit the revolution of the screw without permitting its end movement. To this screw a bracing-plate, D, is fitted to slide longitudinally; and, owing to the fact of the converging character of the sides of the shoe, and the corresponding shape of this brace D, a longitudinal movement of the brace in the direction of the heels suffices to key the brace firmly in between the sides of the shoe, and to thus prevent the calk-plate moving laterally, the clamp B, front projections *a''*, and the same brace also preventing movement from front to rear, or rear to front.

I claim—

1. The combination of calk-plate A *a*, clamps B B', and screws C, when the calk-plate is provided with projections *a''* embracing the clamps, substantially in the manner and for the purpose specified.

2. The combination of calk-plate A *a*, clamps B B', and screws C, when the plate A is swaged over the heads of the screws, substantially in the manner and for the purpose specified.

3. The combination of calk-plate A *a*, clamps B B', screws C, and side brace D E, operating substantially in the manner and for the purpose specified.

In testimony of which invention I hereunto set my hand.

GEORGE MCGREGOR.

Witnesses:

FRANK MILLWARD,  
JEROME D. CREED.