W. DICKINSON.

Attaching Calks to Horseshoes.

No. 201,335. **Patented March 19, 1878.**

Fig. 3.

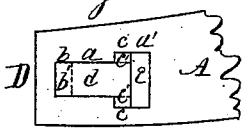


Fig. 2.

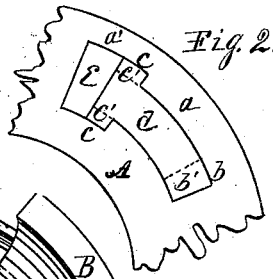


Fig. 1.

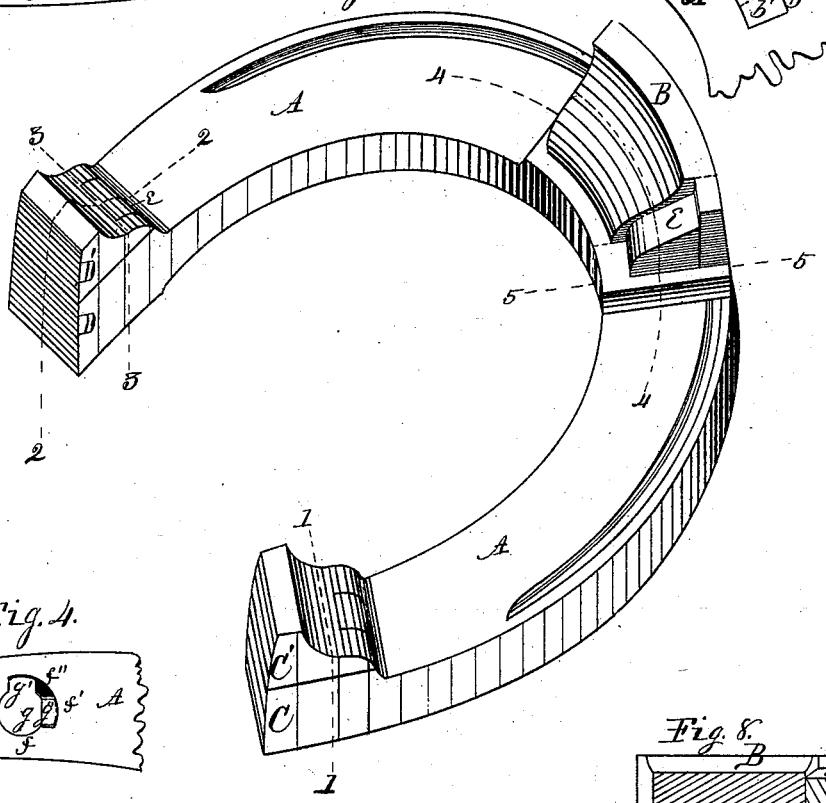


Fig. 4.

Fig. 8.

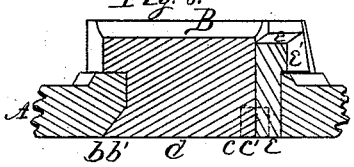


Fig. 5.

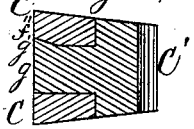


Fig. 6.

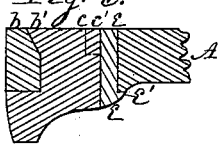


Fig. 9.

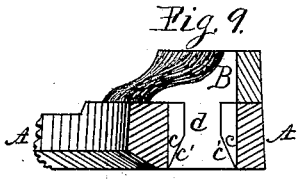
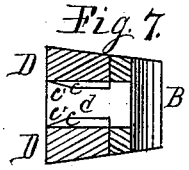


Fig. 7.



Witnesses.
A. O. Behel.
E. O. Darling

Inventor.
William Dickinson
Per. Jacob Behel.
Atty.

UNITED STATES PATENT OFFICE.

WILLIAM DICKINSON, OF ROCKFORD, ILLINOIS.

IMPROVEMENT IN ATTACHING CALKS TO HORSESHOES.

Specification forming part of Letters Patent No. **201,335**, dated March 19, 1878; application filed August 16, 1877.

To all whom it may concern:

Be it known that I, WILLIAM DICKINSON, of the city of Rockford, in the county of Winnebago and State of Illinois, have invented a new and useful Improvement in Horseshoes, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is an isometrical representation of a horseshoe embodying my invention. Figs. 2, 3, and 4 are upper face views of portions of the shoe which receive the calks. Fig. 5 is a sectional view on dotted line 1 1; Fig. 6, on dotted line 2 2; Fig. 7, on dotted line 3 3; Fig. 8, on dotted line 4 4, and Fig. 9 on dotted line 5 5.

The object of my invention is to produce a horseshoe the calks of which when worn may be removed and new ones inserted without removing the shoes from the horse's feet. To this end I have devised and constructed the shoe represented in the drawings, in which—

A represents the main portion of a horseshoe, which, in outline, is substantially the same as shoes now in use. The toe of this shoe is provided with a lengthwise vertical mortise, *a*, enlarged transversely at one end, as at *a'*, which gives the mortise the form of the letter T. On the upper face of the shoe this mortise is enlarged lengthwise, as at *b*, and transversely, as at *c*. These enlargements are beveled inward, and form a dovetailed mortise.

B represents a toe-calk, in which *d* is a tenon, constructed to enter the mortise, and is provided with dovetail enlargements *b'* and *c'* on its outer end to fit the dovetail enlargements *b* and *c* in the mortise. The transverse enlargement *a'* will receive the dovetailed enlargement *c'*, to permit the tenon *d* to pass upward through the shoe, and when in the mortise it can be moved lengthwise, to cause the dovetailed enlargements *b'* and *c'* to enter the dovetailed portion *b* and *c* of the mortise, which will leave the transverse enlargement *a'* of the mortise *a* open to receive a key.

e is a key, fitted to the transverse enlargement *a'*, and is driven into the opening at the end of the calk, which holds it in position. The key is constructed with a hooking head, as at *e'*, which overlaps the shoe. To remove the key for the purpose of removing the worn calk to insert a new one, any instrument similar to a chipping-chisel, driven under the hooking head, will cause it to rise, so as to be readily removed, after which the calk can be moved lengthwise in the mortise, to free it from the dovetailed parts, and then removed from the shoe, and a new one inserted, and the same or a new key driven into the opening will fix it in place.

The heel of the shoe, at C, shows a modification of my improvement, which is constructed with a cylindrical hole vertically through it, as at *f*, Figs. 4 and 5. The forward side of this hole is fitted with a grooved key-seat, *f'*, and on the upper side of the shoe is fitted with a countersink, *f''*, which extends to about one-fourth of a circle.

C' is a heel-calk, constructed with a cylindrical stud, *g*, projecting from its upper side, fitted to enter the cylindrical hole *f* in the heel of the shoe. This stud is provided with a dovetailed projection, *g'*, on one side of its upper end, and of proper size and form to pass upward through the key-seat in the shoe, and, when in place, will permit the calk to be turned lengthwise of the shoe, and the projection *g'* will turn in the countersink *f''*, forming a dovetailed lock, to hold the calk in the shoe. The forward side of the stud is flattened, so that when the calk is in place the flattened surface on the stud will be opposite the key-seat in the shoe.

g'' is a key with hooking head, and is driven in the key-seat *f'*, against the flattened surface of the stud, which holds the calk fixed in the shoe. This key is removed from the shoe in the same manner and by the same means as the key *e* in the toe-calk is removed; and after the removal of the key, the calk can be turned in the shoe until the dovetailed projection *g'* comes to the key-seat, when it can be withdrawn from the shoe and a new calk inserted in its place, and secured therein by the same key, or a new key may be employed.

The heel-calk, as shown at Figs. 6 and 7, and at D and D', is substantially the same as that of the toe-calk hereinbefore described, and similar letters of reference relate to similar

parts in both cases, from which it will be fully understood without a more particular description thereof.

I claim as my invention—

A horseshoe constructed with a T-formed mortise, with lengthwise and transverse enlargement on its upper side, beveled inward, forming the dovetailed mortise herein described, the removable toe-calk, constructed with an upward-projecting tenon, provided with dovetailed enlargements on the sides and edge of its upper end, and the hook-headed key herein described, these parts constructed, arranged, and operating as and for the purpose hereinbefore set forth.

WILLIAM DICKINSON.

Witnesses:
JAMES FERGUSON,
DUNCAN FERGUSON.