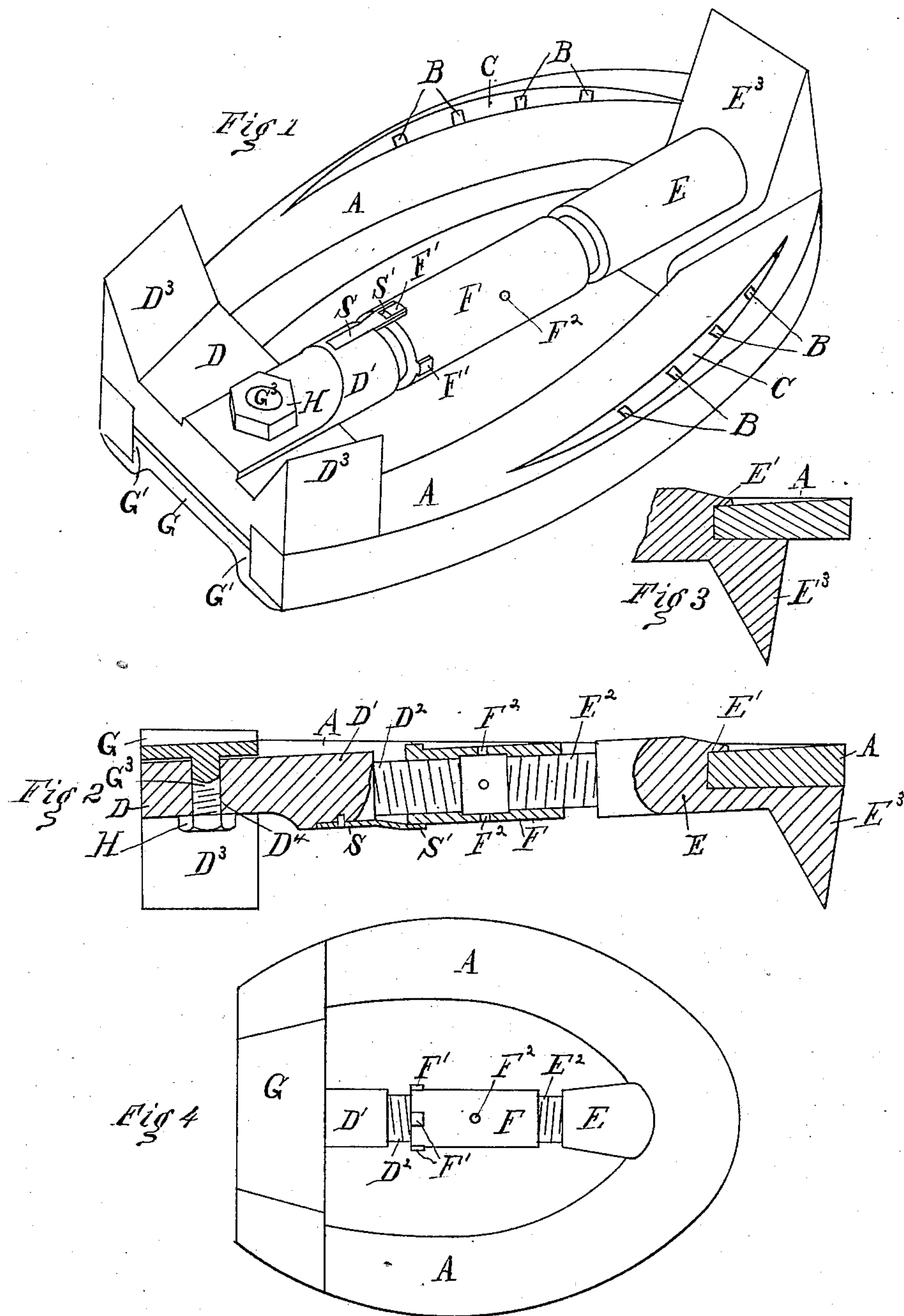


(No Model.)

T. HEAD.  
HORSESHOE.

No. 287,024.

Patented Oct. 23, 1883.



WITNESSES -  
Irving S. Porter.  
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# UNITED STATES PATENT OFFICE.

THOMAS HEAD, OF LOWELL, MASSACHUSETTS.

## HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 287,024, dated October 23, 1883.

Application filed December 30, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS HEAD, a citizen of the United States, residing at Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Horseshoes, of which the following is a specification.

My invention relates to means for spreading the heel of the shoe, and to means for readily and securely attaching calks to a smooth or "summer" shoe, to means for readily detaching such calks when not required to be used, or for the purpose of sharpening such calks.

In the accompanying drawings, Figure 1 is a perspective view, showing the under side and edge of a smooth shoe with my invention attached thereto; Fig. 2, a central longitudinal section of a shoe having my improvements attached; Fig. 3, a similar section of the front calk set back from the toe of the shoe; Fig. 4, a top view of said shoe with my improvements.

A is an ordinary flat or smooth shoe—such as is used in summer—and is attached in the usual manner to the horse's hoof by nails passing through the holes B in the creases C C. Between the branches of the shoe, near the heel, where said branches converge, I place a heel-piece, D, shaped in its upper part like the frustum of a wedge, and having a stem, D', which projects forward. A toe-piece, E, having a slot, E', to receive the inner edge of the front part of the shoe, extends back centrally and in line with the stem D'. The stem D' and the rear end of the piece E are cylindrical, and are each provided with a screw-threaded extension, D E, one thread being a left-hand and the other a right-hand thread. A sleeve, F, having internal screw-threads (one at each end) to correspond with and fit the threads D<sup>2</sup> E<sup>2</sup>, being placed around the front end of the stem D' and the rear end of the toe-piece E and turned in one direction, will wedge the heel-piece in between the branches of the shoe and spread the heel of the shoe; but, being turned in the other direction, will loosen said toe-piece and heel-piece and allow them to be removed from the shoe while the shoe is attached to the foot. The sleeve may be turned by a pin inserted in the radial holes F<sup>2</sup> and used as a lever or handspike. A spring, S, secured at its rear end to the heel-piece, is

forked at its front end, S', to engage with projections F', formed on the sleeve F, and prevent it from being accidentally turned. The toe-calk E<sup>3</sup> is formed in one piece with the toe-piece, and either comes to the front of the shoe, as usual, or (on the front shoes of over-reaching horses) is placed farther back from the toe, as in Fig. 3, having the effect of rounding up the toe and causing the heel to be lifted quicker out of the way of the horse's hind feet. The heel-calks D<sup>3</sup> D<sup>3</sup> are formed in one piece with the heel-piece D, and are extended out beneath the shoe A, (to occupy the positions in which ordinary heel-calks are placed,) and thus prevent the heel-piece from being pressed up farther into the shoe. A thin plate, G, provided with shoulders G', which fit between the branches of the shoe, lies partly on top of said shoe and partly between said branches, and is provided also with a screw-threaded stud, G<sup>3</sup>, which extends down through a hole, D<sup>4</sup>, in the heel-piece, and into a nut, H, which, being turned up against the bottom of the heel-piece, draws the plate G and heel-piece closely against the shoe and prevents any movement of the parts upon each other.

In shoes not too narrow at the heel it is a matter of indifference whether the heel-calks are applied before or after applying the toe-calk; but in shoes narrow at the heel the heel-calks are first applied as follows: The plate G, being loosely connected to the heel-piece by the threaded stud G<sup>3</sup> and nut H, is placed in the middle of the shoe, pressed toward the foot and back toward the heel. The nut H is then turned up and the toe-calk is then placed in position and crowded forward by turning the sleeve, as above described. To remove the whole calking device from the shoe the sleeve is turned in the reverse direction to draw the toe-calk back. The nut H is loosened, allowing the piece G and the heel-piece to move apart, and the toe-calk being turned down below the shoe the whole device is pushed forward until the piece G can be drawn down out of the middle of the shoe.

It will be seen that the heel-piece and toe-piece, with their respective calks, may be readily removed from the shoe when it is desired to sharpen the calks, or to use the shoe without calks, and may be as readily replaced,



and that there is no danger of these parts becoming loosened by accident from the shoe; also, that one toe-piece may be readily substituted for another having the toe-calk at a different distance from the toe of the shoe, and this may be done without removing the heel-piece; also, that my device serves the purpose of a frog-support, the advantages of which are well known, and furnishes a convenient means of mechanically expanding a contracted heel.

Instead of the sleeve a solid screw provided with a right-hand thread and a left-hand thread and entering corresponding screw-threaded holes in the toe-piece and heel-piece may be used, and in either case the same parts will fit several different sizes of shoes.

I claim as my invention—

1. The combination of the toe-piece E, provided with a slot, the heel-piece D, one of said pieces being provided with a left-hand and the other with a right-hand screw, and the sleeve F, provided at opposite ends with internal screw-threads corresponding with and fitting the threads on said pieces, as and for the purpose specified.

2. The combination, with the toe-piece E and the heel-piece D, provided with screw-threads, as described, of the sleeve F, provided

with screw-threads and means of engaging with the spring S, and said spring, as and for the purpose specified.

3. The combination, with the toe-piece E and heel-piece D, said pieces being provided with screw-threads, of the sleeve F, provided with screw-threads and with the projections F', and the spring S, as and for the purpose specified.

4. The combination of the toe-piece E, provided with the calk E<sup>3</sup> and with the slot E', the heel-piece D, provided with the calks D<sup>3</sup> D<sup>3</sup>, said toe-piece and heel-piece being also provided one with a right-hand and the other with a left-hand screw, and the sleeve F, provided with screw-threads which correspond with and fit the screw-threads on said toe-piece and heel-piece, as and for the purpose specified.

5. The combination of the toe-piece E, the heel-piece D, said pieces being provided with screw-threads, as described, the sleeve F, provided with screw-threads, as described, and the plate G, having the stud G<sup>3</sup> and the nut H, as and for the purpose specified.

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Witnesses:

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