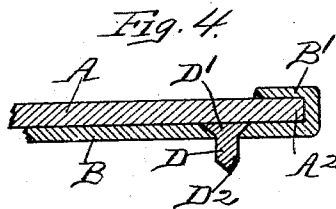
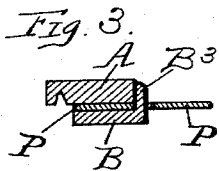
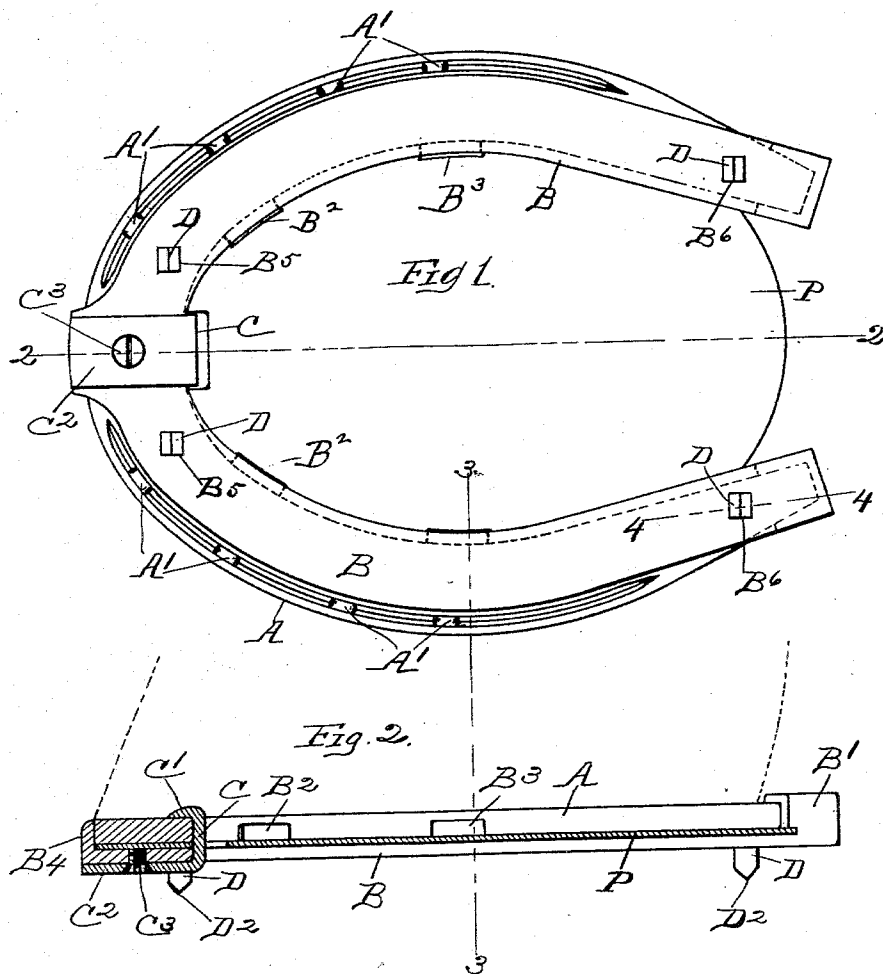


(No Model.)

L. C. THORNE.
DETACHABLE HORSESHOE.

No. 546,203.

Patented Sept. 10, 1895.



Witnesses:

J. E. Curtis
G. H. Curtis

Inventor:

Leonard C. Thorne

By M. H. Curtis
Attys.

UNITED STATES PATENT OFFICE.

LEONARD C. THORNE, OF GRANVILLE, NEW YORK.

DETACHABLE HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 546,203, dated September 10, 1895.

Application filed January 30, 1895. Serial No. 536,658. (No model.)

To all whom it may concern:

Be it known that I, LEONARD C. THORNE, a citizen of the United States, residing at Granville, county of Washington, and State of New York, have invented certain new and useful Improvements in Detachable Horseshoes, of which the following is a specification.

The invention relates to such improvements; and it consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings, and the letters of reference marked thereon, which form a part of this specification.

Similar letters refer to similar parts in the several figures therein.

Figure 1 of the drawings is a bottom plan view showing my detachable shoe in place upon the horse's hoof. Fig. 2 is a central vertical section of same, taken on the broken line 2 2 in Fig. 1, the position of the hoof being indicated by dotted lines. Fig. 3 is a cross-section taken on the broken line 3 3 in Figs. 1 and 2. Fig. 4 is a longitudinal vertical section taken on the broken line 4 4 in Fig. 1.

The object of my invention is to provide a detachable horseshoe adapted to be temporarily applied to the permanently-shod foot of the horse when the condition of the roadway renders the use of the ordinary permanent shoe injurious or dangerous.

A represents a shoe of usual form permanently secured to the hoof of a horse, as by nails A'.

B is the temporary shoe corresponding in general form with the permanent shoe and detachably secured thereto on the under side. The heel portions of the temporary shoe are enlarged at B', and the enlarged portions provided each with a socket closed on all sides and at the rear end and adapted to receive a projecting end A² of the heel portion of the permanent shoes. The temporary shoe is provided along its inner edge with a plurality of upwardly-projecting lugs B² B³, adapted to engage the inner side of the permanent shoe and prevent a relative lateral movement of the shoe. A similar lug or flange B⁴ projects upwardly from the forward end or toe of the temporary shoe, and by engage-

ment with the permanent shoe on its front side prevents a relative rearward movement of the temporary shoe. A relative forward movement of the temporary shoe is prevented by the engagement of the heels of the permanent shoe with the end walls of the respective sockets, aided somewhat by the lugs B². The two shoes are thus held against relative movement in a horizontal plane by the lugs and socket-walls so long as the parts are held together, so as to prevent a relative vertical movement.

As a means for securing the parts against relative vertical movement, I provide a clip C, comprising a flat plate of metal bent into the general form of a staple, having the upper leg C' shorter than the lower leg C².

When the two shoes are arranged in their proper relative positions, the clip is applied from the inner side, the shorter leg being driven in between the permanent shoe and the hoof, and the lower leg brought into engagement with the under side of the temporary shoe.

The longer lower leg of the clip is provided with a countersunk aperture registering with a screw-threaded aperture in the temporary shoe, adapted to receive the threaded end of a fastening-screw C³, inserted in the countersunk aperture. The screw maintains the clip in position to resist all strains tending to separate the toes of the two shoes, which are thus held securely together with comparatively little strain on the fastening-screw, permitting the use of a single screw of small size.

The outer or temporary shoe can be detached by removing the screw and clip. The detachable shoe is apertured at B⁵ and B⁶ to receive the removable calks D, inserted there-through and projecting from the lower side of the shoe. The calks are severally secured in the apertures by means of an enlarged head D', adapted to fit a countersink in the detachable shoe and be held securely therein by the permanent shoe, which overlies and engages therewith, as shown in Fig. 4. The projecting end of each calk is preferably beveled on two opposite sides to form a wedge-shaped end D², the edge of the wedge extending transversely of the shoe. The calks are preferably keyed in their respective apertures to prevent a rotary movement therein, which

would change the line of direction of the beveled edge and diminish the effectiveness of the calk.

I have shown the calks and apertures rectangular in form, whereby rotary movement of the calks is prevented.

The width of the detachable shoe may be varied, as desired; but I prefer to have the same lie wholly inside of the line of nails in the permanent shoe, except at the toe and heel portions, as shown in Fig. 1, whereby projecting nail-heads do not interfere with the proper placing of the detachable shoe.

P is a cover-plate which may, when desired, be inserted and secured at its edge between the two shoes, the plate extending entirely across the hoof to protect the same and prevent the formation of cakes of snow and ice in the hollow of the hoof. The plate is apertured to permit the passage therethrough of the lugs B² and B³ and the clip C.

In Fig. 4 the cover-plate is omitted.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a common horse-shoe and means for permanently securing the same upon the hoof; of a temporary shoe applied thereto and provided with heel-sockets

adapted to receive the respective heel-ends of the permanent shoe; inner side-lugs and an outer toe-lug on the temporary shoe adapted to engage the permanent shoe; calks supported by the temporary shoe; a clip embracing both shoes at the toe; and a detachable connection between the clip and temporary shoe, substantially as described.

2. The combination with a common horse-shoe, and means for permanently securing the same upon the hoof; of a temporary shoe applied thereto and having countersunk calk-apertures, a pair of heel-sockets adapted to receive the respective heel-ends of the permanent shoe, and inner side-lugs, and an outer toe-lug adapted to engage the permanent shoe; calks keyed in the respective countersunk apertures; a clip embracing both shoes at the toe; and a screw-connection between the clip and temporary shoe, substantially as described.

In testimony whereof I have hereunto set my hand this 18th day of January, 1895.

LEONARD C. THORNE.

Witnesses:

JURDEN E. SULEY,

JOHN GILROY.