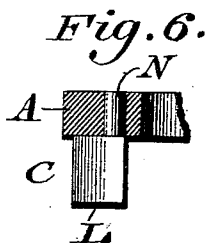
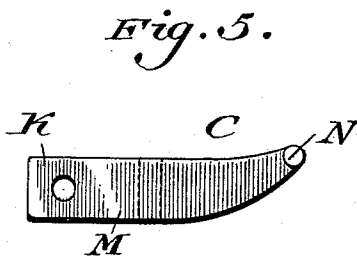
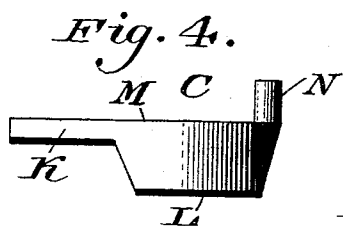
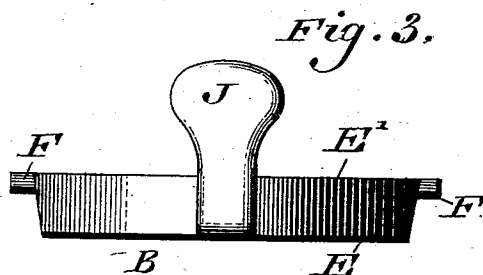
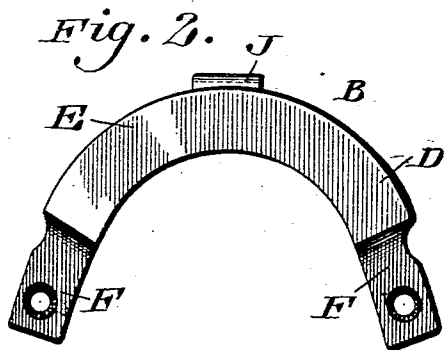
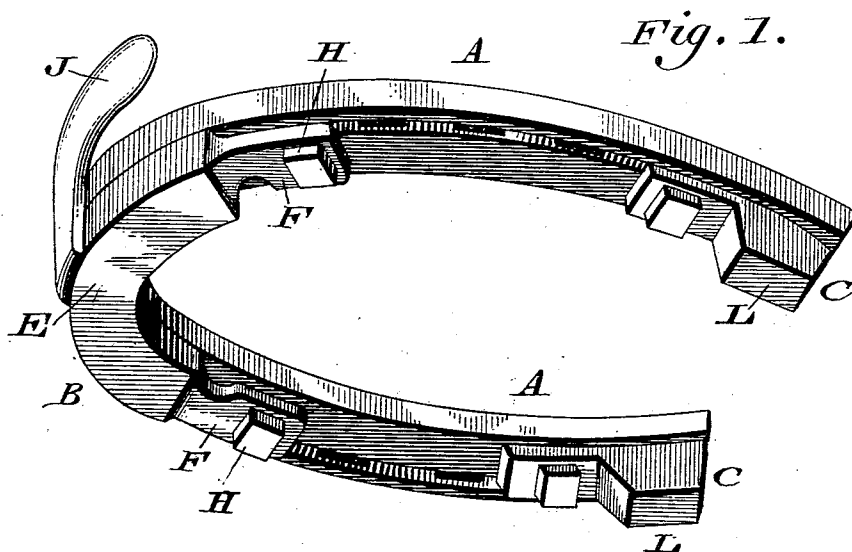


(No Model.)

A. H. CARROLL.
HORSESHOE.

No. 555,361.

Patented Feb. 25, 1896.



Witnesses
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UNITED STATES PATENT OFFICE.

ALEXANDER HENRY CARROLL, OF PHILADELPHIA, PENNSYLVANIA.

HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 555,361, dated February 25, 1896.

Application filed March 21, 1895. Serial No. 542,610. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER HENRY CARROLL, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Horseshoes, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to horseshoes; and it consists of a novel construction of the toe and heel pieces or calks therefor, which can be readily removed and replaced when worn out, thus rendering frequent shoeing unnecessary, since all the wear is upon said toe and heel pieces, provision being also made by the use of the above appliances for readily converting a shoe of ordinary construction into a shoe especially adapted for ice, slippery pavements, &c., and guarding the heads of the connecting-bolts from contact with the earth, ice, &c., as will be hereinafter set forth.

It further consists of novel details of construction, all as will be hereinafter set forth.

Figure 1 represents a perspective view of a horseshoe embodying my invention. Fig. 2 represents a plan view of a detachable toe-piece employed. Fig. 3 represents a front elevation of the same. Figs. 4 and 5 represent side and plan views of one of the heel-pieces. Fig. 6 represents a detached view showing the heel portion of a shoe in section and the heel-piece attached thereto.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a horseshoe of the usual construction, the same having attached thereto the toe and heel pieces or calks B and C respectively. The said toe-piece consists of the arc-shaped portion D, the face E of which is adapted to contact with the earth, ice, &c., while the face E' is adapted to be held against the bottom of the shoe. Projecting rearward from the upper portion of the ends of said toe-calk are tongues F, the latter having holes therein through which pass the bolts H, which are common to said shoe and toe-piece E, the latter being held tightly in position against said shoe by said bolts.

J designates a clip attached to said toe-

piece, and adapted to engage the front of a horse's hoof, and so hold the front part of said toe-piece in position, said clip also abutting against the front of the shoe, so that rear movement of the clip is prevented.

Projecting forwardly from the upper portions of the ends of the heel-calks C are tongues K. The lower faces L of said calks are adapted to engage with the ice, &c., while the upper faces contact with the shoe in substantially the manner described with reference to the toe-piece B.

N designates a pin attached to the end of each heel-piece and adapted to extend up into the shoe A, as will be understood from Fig. 6.

The operation is as follows: When it is desired to convert an ordinary shoe into a working or ice shoe, the toe and heel pieces are attached thereto in the manner described, said toe-piece being held in position by means of the bolts H and the clip J, said bolts being screwed into the shoe A, while the heel-pieces are held in position by bolts and the engagement of the pin N with the shoe A, as is evident.

It will be seen that while the tongues F and K provide increased surfaces of the respective calks for contact with the shoe they set the heads of the bolts H above the lower faces of the calks, so as to be removed from contact with the earth, ice, &c., thus preventing bending of the bolts and breaking off of the same.

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

1. The toe-calk B having on the upper portion of the ends thereof the rearwardly-projecting tongues F, with openings therein, and the clip J rising from the front of said calk, and adapted to abut against the shoe and contact with the hoof, substantially as described.

2. The combination with a shoe, of a toe-calk with rearwardly-extending tongues on the upper portion thereof, heel-calks with forwardly-extending tongues on the upper portions thereof, a vertical pin on each heel-calk, and securing-bolts, the several tongues having openings for said bolts, and the shoe having openings for said bolts and pins, substantially as described.

3. The combination with a shoe, of a toe-calk with rearwardly-extending tongues F on the upper portion thereof, a clip rising from the front of said calk, heel-calks with forwardly-extending tongues on the upper portions thereof, and vertical pins on the heel-calks, the several tongues having openings

with securing-bolts therein, and the shoe having openings for said bolts and pins, the parts being combined substantially as described.

ALEXANDER HENRY CARROLL

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