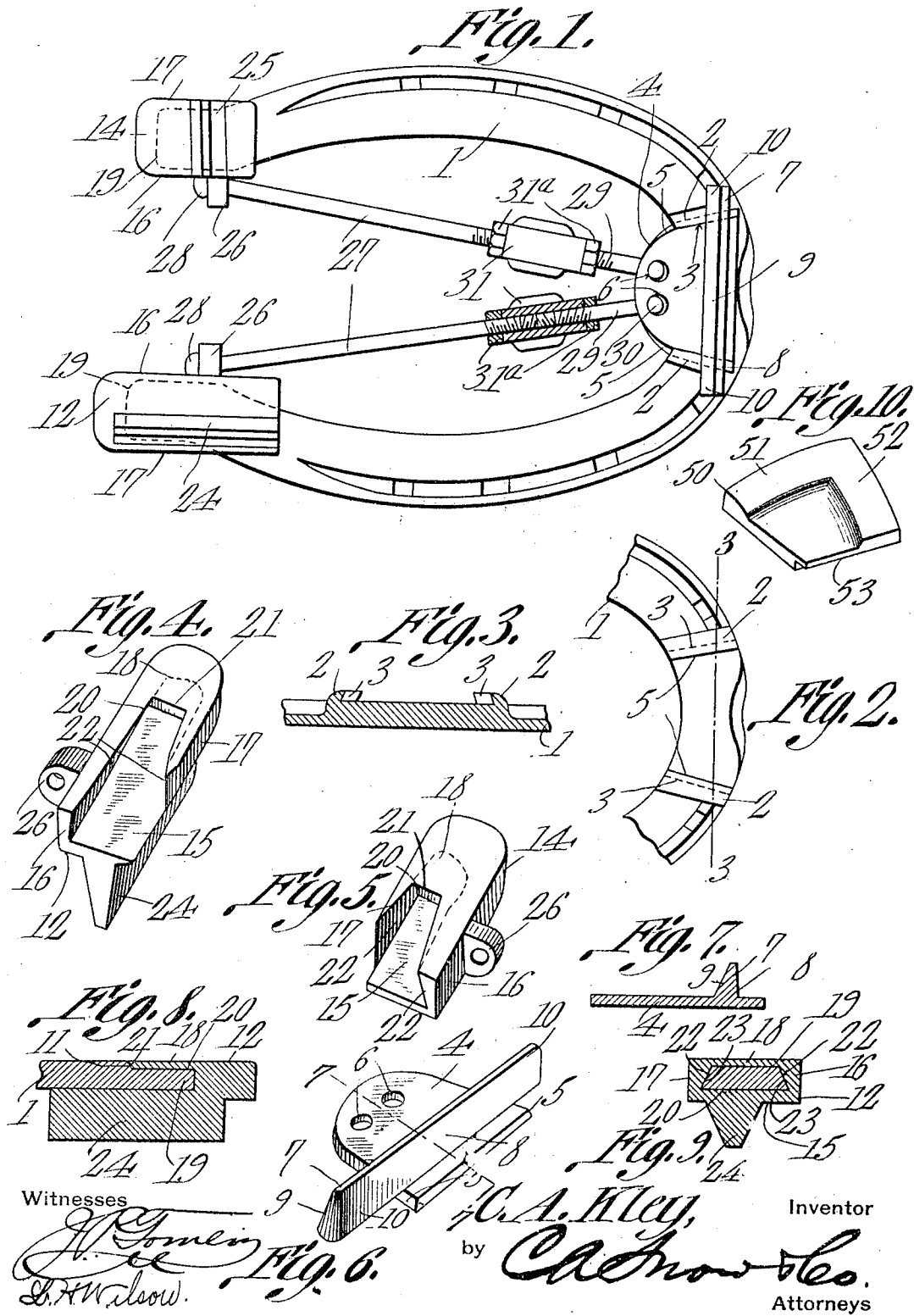


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UNITED STATES PATENT OFFICE.

CORNELIUS A. KLEY, OF GREENSBURG, PENNSYLVANIA.

HORSESHOE.

1,040,353.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CORNELIUS A. KLEY, a citizen of the United States, residing at Greensburg, in the county of Westmoreland and State of Pennsylvania, have invented a new and useful Horseshoe, of which the following is a specification.

One object of the present invention is to provide a horse-shoe, the heel and toe calks whereof are assembled with the shoe and held thereon in a novel manner.

A further object of the invention is to provide a calk-carrying cap of novel form and to provide novel means for holding the calk-carrying cap on the shoe.

A further object of the invention is to provide a member, carrying the toe calk, novel means being provided for securing the said member to the shoe, and novel means being provided for preventing a breakage of the ends of the calk which protrude beyond the lateral edges of the member.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings,—Figure 1 shows the invention in bottom plan; Fig. 2 is a bottom plan of the toe portion of the shoe, the toe calk being removed; Fig. 3 is a section on the line 3—3 of Fig. 2; Fig. 4 is a perspective of one of the caps which carry the heel calks; Fig. 5 is a perspective of the other heel calk cap; Fig. 6 is a perspective of the toe calk and the member whereby the same is carried; Fig. 7 is a section on the line 7—7 of Fig. 6; Fig. 8 is a longitudinal section of one of the heel calk caps, showing a portion of the heel of the shoe mounted therein; Fig. 9 is a transverse section of one of the heel calk caps, showing a portion of the heel of the shoe therein; and Fig. 10 is a perspective showing one-half of a heel pad which may be employed in connection with the shoe herein disclosed.

In the accompanying drawings, the numeral 1 indicates a horse-shoe, the same having upon its bottom and at its toe, converging ribs 2, the adjacent faces of which are

undercut as indicated at 3. A calk-carrying member 4 is provided, the same preferably taking the form of a flat plate having converging edges 5, adapted to cooperate wedgewise with the converging, undercut faces 3 of the ribs 2. In the rear portion of the member 4 there are openings 6. Extended transversely of the member 4 is a toe calk 7, the forward face of which stands approximately at right angles to the member 4, as shown at 8, the rear face 9 of the calk 7 defining an obtuse angle with the member 4. The ends 10 of the calk 7 project beyond the edges 5 of the member 4, the ends 10 being supported by the ribs 2, thereby preventing a breaking off of the projecting ends. The ribs 2 upon the shoe 1 thus exercise a double function. They cooperate with the inclined, converging edges 5 of the member 4, to hold the member 4 upon the shoe, and they serve to reinforce the projecting ends 10 of the toe calk 7. The shoe, adjacent each heel, is provided with a shoulder 11 in its upper face.

The invention further includes a pair of heel calk caps. These caps are of substantially identical construction, saving in so far as hereinafter modified, and a general description of one cap, will suffice for both caps. One cap, denoted by the numeral 12, is slightly longer than the other cap which is denoted by the numeral 14. Each cap comprises a bottom 15, and side walls 16 and 17, the side wall 17 being shorter than the side wall 16. The walls 17 and 16 are connected by a top 18, the top and the side walls defining a socket 20 in which the extremity 19 of the heel of the shoe is received. The forward edge 21 of the top 18 of the cap constitutes an abutment which receives the shoulder 11 in the shoe of the heel, and when the parts are thus assembled, the upper face of the top 18 and the upper face of the shoe proper will lie in a common plane, so that the shoe and the cap will fit readily against the hoof. The adjacent faces 22 of the side walls 16 and 17 overhang the bottom 15, and the edges of the heels of the shoe are slanted as indicated at 23, to cooperate with the faces 22 of the cap. Owing to this construction, the cap cannot tilt upon the shoe with that portion 19 of the heel of the shoe which is engaged in the socket 20, as a fulcrum. The longer cap 12 is provided with a calk 24 which extends

longitudinally of the shoe, and the shorter cap 14 is provided with a calk 25 which extends transversely of the shoe.

As will be understood readily, the calk 24 serves to prevent the shoe from slipping transversely of the direction of travel, the calk 25 serving to prevent the shoe from slipping longitudinally of the direction of travel.

10 A means is provided for securing the caps 12 and 14 to the calk-carrying member 4. This means includes lugs 26 projecting toward each other from the caps 12 and 14, rods 27 being engaged in the lugs 26, the
15 rods 27 having bosses 28 at their rear ends which engage with the lugs 26. Other rods 29 are provided, the same having hooks 30 engaged removably in the openings 6 in the body 4 of the toe-calk-carrying member.
20 The ends of the rods 29 and 27 are threaded to receive turn buckles 31, held in place by lock nuts 31^a.

When the shoe herein disclosed is used upon a tender hoof, a resilient pad may be
25 introduced between the shoe and the hoof. The pad under consideration preferably comprises two parts, one of which is shown in Fig. 10 and is indicated by the numeral 50. Each part 50 comprises a longitudinal
30 rib 51 which lies along one of the heels of the shoe, and a transverse rib 52 which extends transversely of the shoe. The adjacent edges of the parts 50 of the pad, which lie along the longitudinal center of the shoe
35 may be halved together, as indicated at 53.

In practical operation, the toe calk-carrying member 4 is mounted in place between the ribs 2, and is wedged therebetween, in the manner hereinbefore described. The
40 caps 12 and 14 are placed upon the heels of the shoe, and when the turn buckles 31 are manipulated, the caps and the member 4 will be held securely upon the body of the shoe.

45 The device is so constructed that the calks may readily be assembled with the shoe and, with equal facility be removed therefrom, the use of tools to effect this result being entirely unnecessary.

50 As will be understood readily, the calks are preferably fashioned from cast steel.

In the summer and upon other occasions when the calks are not necessary, the same may be detached readily from the body portion of the shoe.
55

Having thus described the invention, what is claimed is:—

1. A horse-shoe provided at its toe with converging ribs; a calk-carrying member
60 having converging faces to engage the ribs; calk-carrying caps having recesses in which

the extremities of the heels of the shoe are received; and independent, adjustable connections between each cap and the member.

2. A horse-shoe provided at its toe with 65 converging ribs; a calk-carrying member having converging faces to engage the ribs; calk-carrying caps having recesses in which the extremities of the heels of the shoe are received; and a turn buckle structure connecting each cap with said member. 70

3. A horse-shoe provided at its toe with converging ribs; a calk-carrying member having converging faces to engage the ribs; calk-carrying caps having recesses in which 75 the extremities of the heels of the shoe are received, the caps being provided with approaching lugs; turn buckle structures engaged in the lugs, the turn-buckle structures having hooks removably engaged with the 80 calk-carrying member.

4. A horse-shoe having a transverse shoulder in its upper face adjacent its heel; a calk-carrying cap having a socket receiving the extremity of the heel, the cap having 85 a top wall defining one side of the socket and constituting an abutment for the shoulder; and adjustable means connecting the cap with the toe of the shoe, for holding the shoulder and the top wall in abutment. 90

5. In a device of the class described, a calk-carrying cap comprising a bottom, side walls and a top, defining a socket, the top being shorter than the side walls; and a shoe, the heel of which is inserted into the 95 socket, there being a shoulder in the heel, engaging the free edge of the top, the upper face of the top and the upper face of the shoe lying in a common plane; and adjustable means connecting the cap with the toe 100 portion of the shoe.

6. In a device of the class described, a calk-carrying cap comprising a bottom, side walls and a top, defining a socket, the top being shorter than the side walls; a shoe, 10 the heel of which is inserted into the socket, there being a shoulder in the heel, engaging the free edge of the top, the side walls of the cap overhanging the shoe, beyond the shoulder to prevent the cap from tilting 11 with the socket-engaged portion of the shoe as a fulcrum; and means for connecting the cap with the toe portion of the shoe to hold the shoulder and the free edge of the cap in abutment.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

CORNELIUS A. KLEY.

Witnesses:

FRANK E. SMITH,
G. W. ALCOTT.