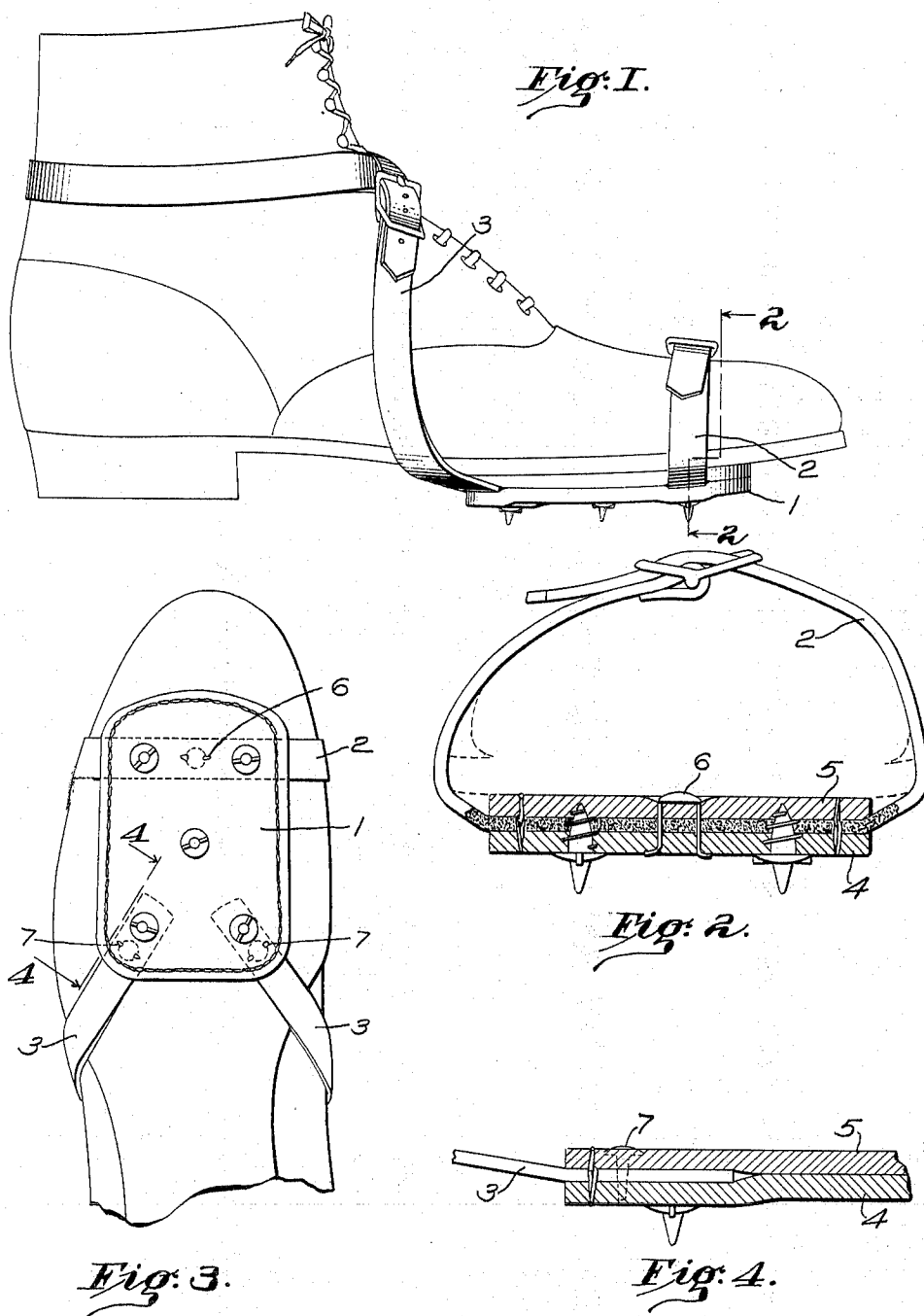


E. A. GROUT.
ICE CREEPER.
APPLICATION FILED JAN. 27, 1912.

1,032,600.

Patented July 16, 1912.



Witnesses:
Roswell F. Hatch.
George C. Stebbins.

Inventor:
Edward A. Grout
By his Attorney
Phillip Van Curen

UNITED STATES PATENT OFFICE.

EDWARD A. GROUT, OF CAMBRIDGE, MASSACHUSETTS.

ICE-CREEPER.

1,032,600.

Specification of Letters Patent.

Patented July 16, 1912.

Application filed January 27, 1912. Serial No. 673,866.

To all whom it may concern:

Be it known that I, EDWARD A. GROUT, a citizen of the United States, residing at Cambridge, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Ice-Creepers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to an improvement in ice creepers.

The object of the invention is to produce an ice creeper of improved construction, by virtue of which it is securely attached to the foot, and efficient and durable in use.

To the above ends the invention consists in the ice creeper hereinafter described and particularly defined in the claims.

In the accompanying drawings illustrating the preferred form of the invention, Figure 1 is a side elevation of the ice creeper attached to a shoe; Fig. 2 is a cross section taken on line 2—2 of Fig. 1; Fig. 3 is a bottom plan; and Fig. 4 is a section taken on the line 4—4 of Fig. 3.

The creeper consists, generally, of a sole plate provided with calks and secured to the foot by straps. The sole plate 1 is made somewhat smaller than the bottom of the sole of the shoe upon which it is intended to be used, and the toe strap 2 extends around the toe of the foot, while the heel strap 3 extends up around the foot and ankle. The sole plate 1 is made of two layers of oak tanned leather,—a tread layer 4 and an upper layer 5. The toe strap 2 is laid between the tread and upper layers of the sole plate and secured by means of a double-pronged rivet 6 at the middle of the sole plate, the prongs passing through the upper layer, the toe strap, and the tread layer 4, and being clenched on the surface of the tread layer. The toe strap, it will be seen, extends from each side of the sole plate at a place below the top of the sole plate, so that the toe strap, extending up to the edge of the sole, extends at an angle to the sole, so as thereby to cause a pressure to be exerted upon the sole plate on the pulling up of the toe strap, tending to hold the sole plate in the center of the sole of the shoe, whereas, if the strap extended from the upper surface of the sole plate, it would extend along the bottom of the sole of the

shoe parallel with the tread surface of the sole of the shoe, and therefore present less impediment to lateral movement of the sole plate upon the sole of the shoe. This feature of construction contributes materially to the security with which the creeper is held upon the foot. The ends of the heel strap 3 are introduced between the layers of the sole plate and secured by means of the double-pronged rivets 7 for the same purpose as in the case of the toe strap, namely, to obtain the secure holding of the sole plate on the shoe and also to offset the tread surface of the sole plate beyond the straps so as to thereby protect the straps at the corners of the sole from contact with the ground in walking. This heel strap is inserted at an angle, as shown in Fig. 3 of the drawings, so that it pulls on the sole plate in the direction to resist any movement of the sole plate on the sole of the shoe. It extends from the sole plate diagonally outward over the corner of the inside and the outside of the ball of the sole of the shoe, thence upward to the top of the instep, where it crosses and extends around the ankle. A single buckle secures the loose ends of the heel strap together.

Around the margin of the sole plate a seam of stitches is sewn, to unite the two layers of the sole plate together, and to secure the toe and heel straps to the sole plate, and thus to unite the layers of the sole plate into a single, rigid, strong calk-supporting body. The disposition of the calks in the sole plate is also of importance. They are arranged, as shown in the drawings, with two extending into the toe strap at opposite sides of the sole plate, one extending into each of the ends of the heel strap 3, and one in the center of the sole plate. These calks not only serve the function of securing a grip on the surface walked upon, but they also contribute to the security and strength of the creeper structure by constituting additional means for uniting the toe strap and the sole plate.

An important feature of the invention resides in attaching the straps to the sole plate at a point above the tread surface of the sole plate, and at a point below the top surface of the sole, so as thereby to obtain the two advantages of security of holding the sole plate on the shoe and the protection of the straps from wear. The sole plate being made of sole leather, and the calks being

screwed into it, they are afforded a strong and secure support so as to resist lateral pressures upon their ends, tending to pull them out of the sole, or tip them over in the sole. The toe strap will be adjusted by the wearer to his foot, and will not thereafter need to be buckled or unbuckled in use, the buckling and unbuckling of the buckle in the heel strap being all that is necessary in order to put on and take off the creeper.

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

1. An ice creeper having, in combination, a sole plate provided with calks and toe and heel straps, the sole plate consisting of a tread layer and an upper layer united at their edges, the toe strap extending across the forward end of the sole plate between the layers of the sole plate, being secured thereto by a rivet and by two calks and by the means for attaching the edges of the layers of the sole plate together, substantially as described.

2. An ice creeper having, in combination, a sole plate provided with calks, said sole plate consisting of a tread layer and an upper layer of leather united at their edges and having means for securing it to the toe of a shoe, and a heel strap having its ends secured to the heel end of the sole plate, such ends lying between the tread and upper layers of the sole plate and being secured to the sole plate by calks, rivets and the means for

uniting the edges of the layers of the sole plate, substantially as described.

3. An ice creeper having, in combination, a flexible leather sole plate provided on its tread surface with calks having screw-threaded shanks screwed into the sole plate so as thereby to be renewed when worn out, a toe strap extending from opposite edges of the forward end of the sole plate, and a heel strap extending from opposite edges of the rear end of the sole plate, said toe and heel straps being secured to the sole plate by said calks, and by stitching and rivets, substantially as described.

4. An ice creeper having, in combination, a leather sole plate provided with calks and toe and heel straps, the sole plate consisting of a tread layer and an upper layer united at their edges, the toe strap extending from opposite edges of the forward end of the sole plate, the heel strap extending from opposite edges of the rear end of the sole plate, and the calks having screwthreaded shanks screwed into the sole plate, said toe and heel straps being secured to the sole plate by the calks, rivets and the means for uniting the edges of the layers of the sole plate, substantially as described.

EDWARD A. GROUT.

Witnesses:

HORACE VAN EVEREN,
GEORGE E. STEBBINS.