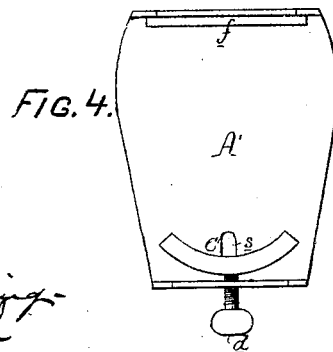
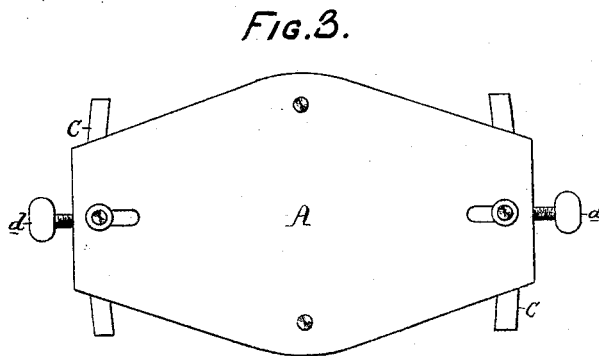
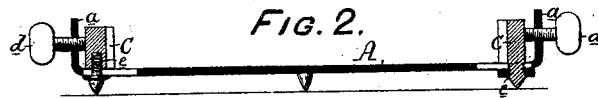
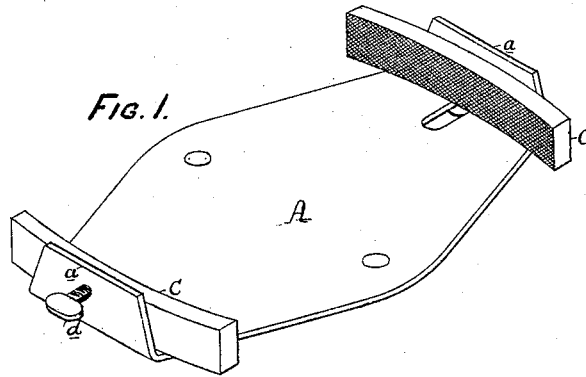


M. WARNE.

Improvement in Ice-Creepers.

No. 114,998.

Patented May 16, 1871.



WITNESSES,  
*Jos. B. Hargraving*  
*Harry Smith*

*Malton Warne*  
*by his Atty.*  
*Horison and Son*

# UNITED STATES PATENT OFFICE.

MAHLON WARNE, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN ICE-CREEPERS.

*Specification forming part of Letters Patent No. 114,998, dated May 16, 1871.*

*To all whom it may concern:*

Be it known that I, MAHLON WARNE, of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented an Improved Creeper, of which the following is a specification:

My invention consists of a creeper, constructed in the manner too fully explained hereafter to need preliminary description, for ready and secure attachment to the sole or heel of a boot or shoe.

Figure 1 is a perspective view of my improved creeper; Fig. 2, a vertical section of the same; Fig. 3, an inverted plan view, and Fig. 4 a view representing a modification of my invention.

A is a metal plate, the opposite ends of which are turned up so as to form projections *a a*.

Clamps C C, consisting of strips of metal curved to fit against the edges of the sole of a boot or shoe and serrated or otherwise roughened on their inner faces, are connected to the plate A by means of screws *e*, which pass through slots in the plate A, the head or end of each screw being pointed, as shown, and both clamps admitting of being forced inward so as to be bound to the sole by thumb-screws *d d*.

The screws *e* may be screwed into holes in the clamps, as shown at the left-hand side of Fig. 2, or they may form part of the said clamp and have nuts adapted to them, as shown at the right-hand side of the said figure.

Any desired number of spurs similar to those which are on the heads or ends of the set-screws *e* may be riveted or otherwise se-

cured to the plate A at suitable points, or they may form part of the said plate if the latter be made of cast metal.

When the sole of a boot or shoe is embraced by the clamps C C, their roughened faces prevent the displacement of the creeper.

In the modification shown in Fig. 4, the creeper is arranged for attachment to the heel of a boot. In this case a spiked clamp, *c'*, curved to conform to the back of the heel, is arranged to slide in the slot *s*, and to be so acted on by the thumb-screw *d* that the heel will be firmly gripped by and between the projection *f* on the plate A' and the clamp C'.

In like manner, but one thumb-screw and clamp may be used for receiving the creeper to the sole, the latter being embraced between the said clamp and a roughened projection on the plate.

I claim—

1. A creeper, consisting of a plate, A, having spikes projecting from its lower side, turned-up ends, and one or two clamps, *c*, with roughened faces, said clamps being arranged adjacent to the turned-up ends and operated by set-screws, as specified.

2. The clamps *c*, connected to the slotted plate A by screws having spiked heads or ends, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MAHLON WARNE.

Witnesses:

WM. A. STEEL,  
JNO. B. HARDING.