

E. M. TURNER'S
Improvements in Ice Creepers.
 117945

PATENTED AUG 8 1871

Fig. 1.

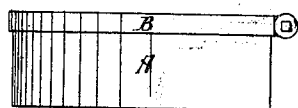


Fig. 2.

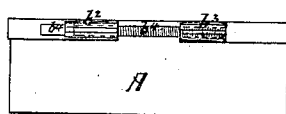


Fig. 3.

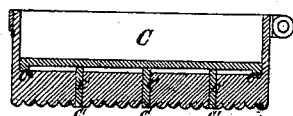


Fig. 4.

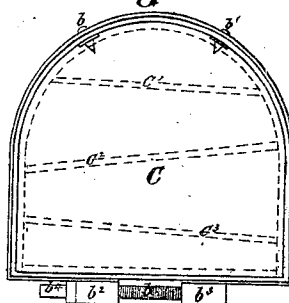


Fig. 5.

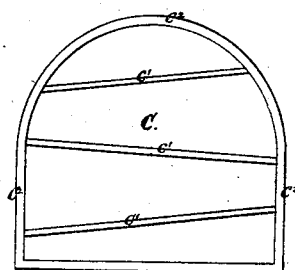
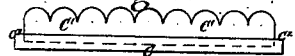


Fig. 6.



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EDMUND MALCOLM TURNER, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN ICE-CREEPERS.

Specification forming part of Letters Patent No. 117,945, dated August 8, 1871.

To all whom it may concern:

Be it known that I, EDMUND MALCOLM TURNER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Ice-Creepers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon which form a part of this specification:

The nature of my invention consists of a new and improved ice-creeper, attachable to boots and shoes; also, by a modification applicable to all kinds of overshoes having rubber soles, great safety being thereby secured in walking on ice or other slippery substance.

In the accompanying drawing, Figure 1 is a side elevation of my invention; Fig. 2, an end view of same. Fig. 3 is a longitudinal section. Fig. 4 is a plan thereof. Fig. 5 is an inverted plan of a plate. Fig. 6 is an edge view of same.

Letters of reference denote parts.

A is an India-rubber cap, so constructed, of suitable size and form, as to fit an ordinary boot or shoe-heel. Said cap A is corrugated at its under side, as shown in Fig. 3, or may have a plane surface. Placed around the upper edge of the said cap A, and securely fastened thereto, by means of two or more small rivets, b and b^1 , as shown in Fig. 4, is a thin strip of steel, B, or other suitable metal, the two ends of which nearly meet on the inside of the heel. Fixed on the outside, at or near the ends of the strip of metal B, are two short pieces of tube, b^2 and b^3 , one of which is tapped, the other having a plain hole through it. A small screwed bolt, b^4 , is also used, which is inserted in the plain hole and screwed into the tapped one of the tubing by means of any suitable key. Rivets b and b^1 may, if necessary, have their heads on the inner side brought to a point, as shown in Fig. 4. Placed inside the cap A is a plate, C, Figs. 5 and 6, corresponding to the internal shape of said cap A. Attached to plate C, on its under side, are three, or any suitable number of small plates, C^1 C^1 C^1 , placed at right angles to the plate C, and arranged angularly. The said plates C^1 are corrugated, fluted, or otherwise shaped at the lower edge. Instead of the plates C^1 I may use a suitable number of pins or their equivalents. Suitable openings are made in the bottom of cap A to receive plates

C^1 when placed in position. Around the under or same side of the plate C upon which the plates C^1 are attached is a raised edge or rim, C^2 , projecting slightly above the surface, as shown in Figs. 3 and 5 of the accompanying drawing. The use of rim C^2 is to preserve a small space between the rubber and plate, so that the rubber may yield by compression readily. The plates C^1 or their equivalents must be of such a height that when placed in position their outer edges may lie in the same plane with the bottom of the rubber cap A, as shown in Fig. 3. By simply using the plate C, with the plates C^1 or their equivalents attached in the manner described, my invention may be readily applied to all kinds of overshoes having rubber soles by making suitable openings in the heels of said overshoes to receive the plates C^1 or their equivalents. The plate C is placed in position on the inside of the heel, with the plates C^1 inserted in the openings prepared to receive them. The rim C^2 is cemented or otherwise fastened to the said overshoe, thus preventing the ingress of any damp.

My invention is adjustable as regards boots and shoes, and is accomplished in the following manner: The cap A, being placed on the heel of the boot or shoe, is held in position by tightening up the bolt b^4 in the tubes b^2 and b^3 , thereby drawing the upper part of said cap A securely around the heel of the boot or shoe, which, if necessary, may be further secured by the rivets b and b^1 , having their inner heads pointed or conical. The heel of the boot or shoe rests on the plate C while the rim C^2 forms a bearing for the said plate C upon the inner side of the cap A. To detach the cap A from the boot or shoe it is only necessary to unscrew the bolt b^4 , thereby slackening the strip of metal which holds it in position.

The advantages arising from my invention are as follows: When walking on pavement or other unyielding surface no inconvenience is experienced, as the weight rests upon the lower corrugated edges of the plates C^1 or their equivalents, which remain in the same plane with the under side of the rubber cap A, the face of which prevents slipping under these circumstances. When, however, snow, ice, or other yielding surface is walked over the weight on the plate C forces the plates C^1 into the said yielding surface, thereby preventing slipping, the rubber yielding by com-

pression and returning to its original position when the foot is raised. The plates C¹, being placed slightly diagonal, as shown in Fig. 5, prevent any side slip either way, as in such a case the ice would instantly wedge between them.

These creepers give the safety of ordinary creepers without their disadvantages, as they are so constructed as not to injure a carpet, and may remain on all winter when once adjusted, without inconvenience to the wearer. The fastening, being constructed as shown and described, will not wear or catch the dress, and, from its position, does not, in any way, disfigure the boot or shoe.

Having thus described my invention, what I

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

The metal plate C, constructed with a raised edge, C², and flanges C¹ or their equivalents upon the under side, adapted to be placed in a cavity in a detachable or permanent rubber-heel of a boot, shoe, or overshoe, substantially in the manner and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

E. MALCOLM TURNER.

Witnesses:

BENJAMIN FALLOWS,
JNO. P. CLARK.