

(No Model.)

J. F. McCONNELL & H. E. HARBSTER.

ICE CREEPER.

No. 344,666.

Patented June 29, 1886.

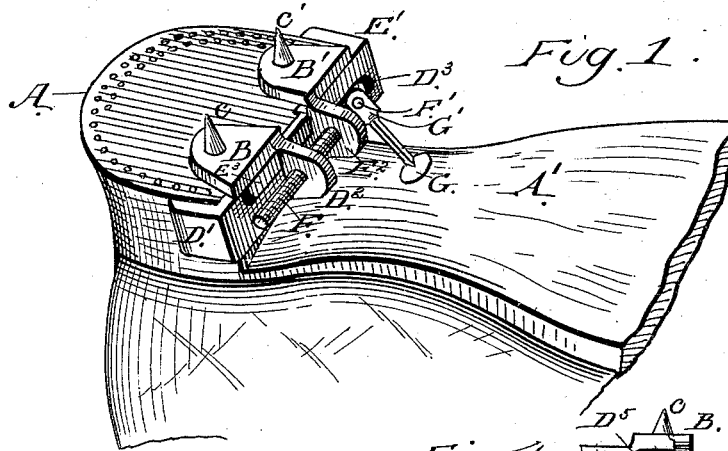


Fig. 2.

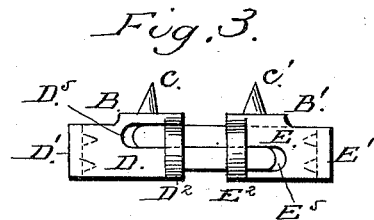
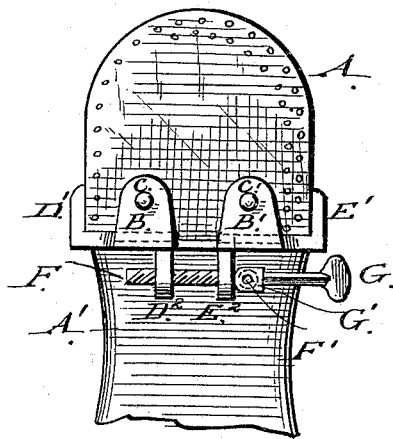


Fig. 4.

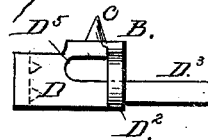


Fig. 5.

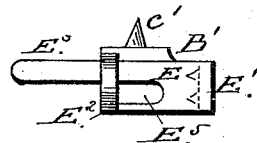
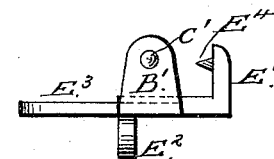


Fig. 6.



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# UNITED STATES PATENT OFFICE

JOSEPH F. McCONNELL AND HOWARD E. HARBSTER, OF READING, PA.

## ICE-CREEPER.

SPECIFICATION forming part of Letters Patent No. 344,666, dated June 29, 1886.

Application filed November 25, 1885. Serial No. 183,900. (No model.)

*To all whom it may concern:*

Be it known that we, JOSEPH F. McCONNELL and HOWARD E. HARBSTER, citizens of the United States, residing at the city of Reading, county of Berks, State of Pennsylvania, have invented a new and useful Improvement in Ice-Creepers, of which the following is a specification.

This improvement relates more particularly to the class of ice-creepers removably adjustable to the heel of the boot or shoe.

The object of the invention is to provide an ice-creeper that is readily adjusted to the heels of boots and shoes over a wide range of sizes, yet light, strong, and effective, and once adjusted to the heels of the wearer's boots or shoes it will thereafter be the work of a moment only to put on or take off the same.

The objection to all ice-creepers permanently secured to the boot or shoe is, that additional weight is constantly carried around, and that even those having good memories forget at times to turn back the calks, to the great injury of the floors or carpets walked over.

The accompanying drawings, forming a part of this specification, very fully disclose the construction of our improved ice-creeper, in which similar letters of reference indicate similar parts throughout.

Figure 1 represents in perspective our improved ice-creeper applied to the heel of a boot or shoe, the pivoted thumb-screw lying out of the way upon the sole. Fig. 2 is a plan of the improvement, showing the pivoted thumb-screw in the position in which it is used to open or close the creeper upon the heel. Fig. 3 is a front elevation, looking toward the inner face of the reversed heel, the thumb-screw removed. Fig. 4 represents in elevation and plan one-half of the creeper. Fig. 5 represents the completing half of the creeper in elevation and plan; Fig 6, a view of the adjusting thumb-screw and its pivoted lever.

In the drawings, A represents the heel of a boot or shoe; A', a portion of the sole of the same.

The creeper is composed, essentially, of two portions, D and E, which are adapted to slide upon and within each other, as will be clearly shown when we come to describe the creeper in detail. The left-hand piece, D, in the draw-

ings, which in this case we will distinguish as the abutment-piece, is provided with a right-angle clamping-arm, D', which, when the piece D is laid against the inner face of the heel, as shown, grasps the outer face of the same. Pricks D<sup>1</sup>, upon the inner face of the arm, on pressure being applied, sink into the heel and prevent movement of the piece D. An ear, D<sup>2</sup>, is arranged in front of the piece, which, when the creeper is closed to its minimum size, will meet the ear E<sup>2</sup> of its corresponding piece, E, nearly at the center of the creeper. The height of the creeper we prefer to make about one-half inch, which adapts it to the average height of the heels worn. The height is divided centrally into two parts, forming arms D<sup>3</sup> and E<sup>3</sup>, as shown, the arm D<sup>3</sup> passing under the ear E<sup>2</sup> and into a recess, E<sup>5</sup>, provided for it in the movable piece E, while the arm E<sup>3</sup> at the same time passes under the ear D<sup>2</sup> and into a recess, D<sup>5</sup>, provided for it in the abutment D. The piece E has an arm, E', and prickers E<sup>1</sup>, corresponding with those of D. The ear D<sup>2</sup> is threaded, while the ear E<sup>2</sup> of the movable piece is enlarged in the bore, to pass freely over the screw F, the thread of which is constructed with a quick pitch. The screw is pivoted at F' to a bifurcated jaw, G', of the lever G. The pieces D and E are thickened up at those points to admit of the recesses D<sup>5</sup> and E<sup>5</sup> being sunk therein, and the arms D<sup>3</sup> and E<sup>3</sup> are also reduced in thickness as far as they slide, respectively, under the ears D<sup>2</sup> E<sup>2</sup>, which span said recesses. The calk-plates B B', provided with calks C C', lie upon the top edges of the pieces D E on the piece E, forming a cover to the recess E<sup>5</sup>, while the recess D<sup>5</sup> is capped from below, as shown, by a retention of part of the height of the creeper below the same.

The pieces D E may be cast of any suitable metal. We prefer to have them cast of steel, all the parts enumerated of each piece being cast integral with the same, thus the only fitting required after leaving the tumbler being the drilling of the plain hole in the ear E<sup>2</sup> and the drilling and tapping of the ear D<sup>3</sup>, with the fitting up of the thumb-screw F and its lever G.

The creepers are constructed in pairs, as right and left, so as to bring the lever G into a convenient position to operate upon either

foot. The bifurcated jaw of G is slightly truncated, so that when the lever is turned upon its pivot F' against the ear E<sup>2</sup> it will positively lock itself against any automatic release from its turned-down position upon the sole of the boot or shoe. For ladies' shoes, where the heels are higher, the lever G will be shortened and raised in a vertical position against the sole.

10 We are aware that we are not the first to provide a sliding adjustable clamping ice-creeper to the heel of a boot or shoe, (see Patent No. 313,898, March 17, 1885, John Temple,) in which the creeper rests upon the face of the heel, 15 and is composed of a right and left piece, each having two heel-clamps, an ear, and guiding-arm, with two calks to each piece, the clamping-screw being sharp-pointed at one end and squared for a key at the opposite end, the 20 creeper being arranged for attachment to the heel at right angles with its normal position, to act as a spur when riding horseback. A creeper requiring considerable machine-work to fit, raises the heels to an awkward height 25 above ground and requires a loose key, liable to be mislaid or lost when the creepers are to be used, whereas our creeper costs but a trifle to fit up, the parts always ready to be opened or closed, as desired, and applied, as it is, to 30 the inside face of the heel, attracts no attention, while the calk-plates rest upon the heel and give a solid bearing, but do not raise the calks to an awkward height above the same.

35 To apply the creeper, the foot is raised sole upward, and the abutting-piece held against the side and inner face of the heel with the clamp-arm E<sup>2</sup> clear of the opposite side of the same. The screw F is then turned until the

bifurcated jaw contacts with the ear E<sup>2</sup>, then as the screw advances in the thread of the ear 40 D<sup>2</sup> the movable piece E is drawn toward the abutment-piece D, forcing the pricklers D<sup>4</sup> E<sup>4</sup> into the leather, and solidly clamping the heel between the two arms D' E', and the creeper 45 is releasably retained in place by throwing the arm or lever G over against the sole of the shoe, as shown in Fig. 1. After the creeper has been applied to a boot or shoe subsequent applications or release of the same will only require a partial turn of the quick-pitch screw 50 F to produce the desired result.

Having shown the construction, use, and advantages of our improved ice-creeper, we desire to claim as follows:

1. As an improved construction of ice-creeper, 55 the parts D E, provided, respectively, with clamping-arms D' E', having pricklers D<sup>4</sup> E<sup>4</sup>, sliding arms D<sup>3</sup> E<sup>3</sup>, recesses D<sup>5</sup> E<sup>5</sup>, calk-plates B B', calks C C', and clamping-ears D<sup>2</sup> E<sup>2</sup>, each piece D or E cast or formed as an integral whole 60 and adapted to slide freely upon and interlock adjustably with each other within the recesses D<sup>5</sup> E<sup>5</sup>, in combination with the clamping-screw F in the ears D<sup>2</sup> E<sup>2</sup>, substantially as shown, 65 described, and for the purpose set forth.

2. In the within-described ice creeper, the combination, with the sliding members, of the clamping-screw F, pivoted at F' to a bifurcated jaw, G', of a lever, G, said bifurcated jaw truncated, substantially as shown, and for the 70 purpose specified.

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