Richardson & Morse,

Ice Creeper,

No. 52,077, Patented Jan. 16, 1866

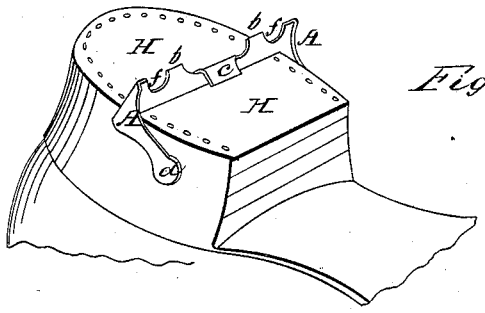


Fig. 1

Fig. 2

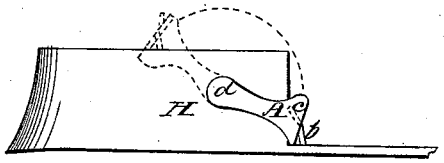


Fig. 3

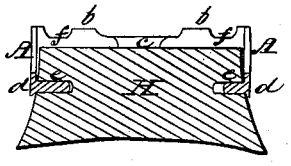
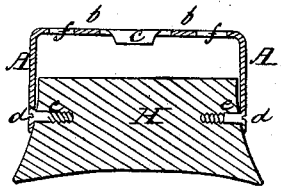


Fig. 4



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UNITED STATES PATENT OFFICE.

J. F. RICHARDSON AND GEORGE F. MORSE, OF PORTLAND, MAINE.

IMPROVED HEEL-CALK.

Specification forming part of Letters Patent No. **52,077**, dated January 16, 1866.

To all whom it may concern:

Be it known that we, J. F. RICHARDSON and G. F. MORSE, both of Portland, in the county of Cumberland and State of Maine, have invented a new and Improved Heel-Calk for Boots and Shoes; and we hereby declare the following to be a full, clear, and exact description of the same, which will enable others to make and use our invention, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 represents a perspective view of our invention attached to a heel and resting upon the bottom thereof; Fig. 2, a side view of the same turned front of the heel, also indicating the two positions of the calk; Fig. 3, a section of a heel, showing the method of attachment; Fig. 4, the same, showing the shape of the calk.

Our invention consists of a strip or narrow piece of sheet metal cut into the form hereinafter to be described, and bent so as to encompass the heel and bind it upon either side by means of a spring constituted by bending the strip or plate, as before described.

A represents the bent portion or spring of our invention. These are secured to the side of the heel at D by the rivets *e*. The bent portions press somewhat upon the sides of the heel at the rivets, but do not touch it at any other point. The strip or plate is so attached to the heel that when resting upon the bottom thereof the edges remain one upon the bottom of the heel, and the other turned downward ready to penetrate anything upon which the foot may be placed. The tongue *c* is constructed to retain the device in position when it is forward of the heel, as illustrated at Fig. 2, by pressing slightly against the forward edge of the heel.

Our invention is fastened to a heel by making two holes, one on either side of the heel, then expanding the spring portions sufficient to allow the admission of the rivets or pivots into the holes. The pivots *e* are secured to the spring portions A, and are removed from the heel, together with the other parts of the device.

b represent projections, to enable the calk more readily to penetrate ice, or anything upon which the heel is placed in walking, and formed by cutting out certain pieces from the metal, as indicated at *f*.

Turning upon the pivots *e* the device can be placed in either of the positions shown in Fig. 2.

We construct our invention by cutting from sheet metal a straight piece, of the form desired, then bending the same so as to encompass the heel to which it is to be adapted, and then fitting to the ends of the arms or bent portions the pivots to indent into the sides of the heel.

What we claim as our invention, and desire to secure by Letters Patent, is—

The strip of metal, bent as described, and combining the tongue *c*, the springs A, and pivots *e*, as and for the purposes specified.

J. F. RICHARDSON.
GEORGE F. MORSE.

Witnesses:
WILLIAM H. CLIFFORD,
EDWARD NUTTER.