(No Model.)

H. HOLLAND.

ICE CREEPER.

No. 346,286. Patented July 27, 1886.

Fig. 1.

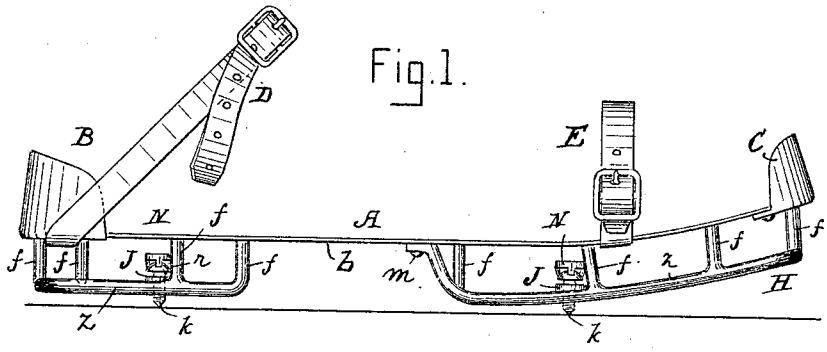


Fig. 2

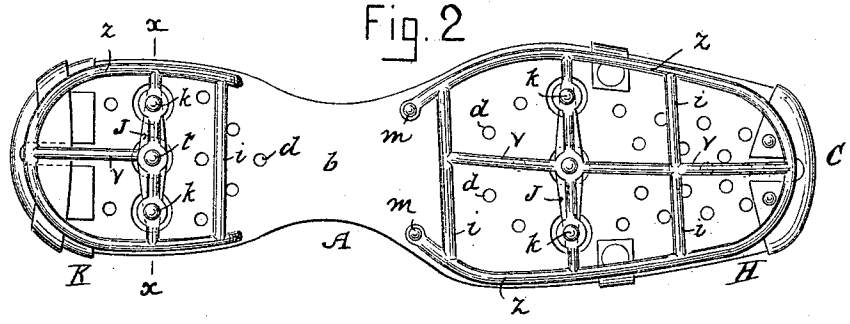


Fig. 3.

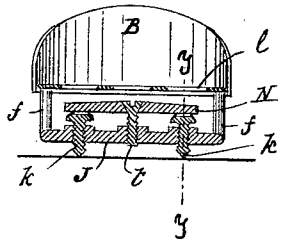
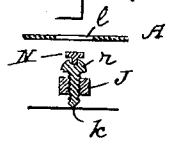


Fig. 4.



Witnesses.
C. Blanta.
O. M. Shaw.

Inventor.
Harold Holland,
per C. C. Shaw,
Attorney.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

HAROLD HOLLAND, OF LYNN, MASSACHUSETTS.

ICE-CREEPER.

SPECIFICATION forming part of Letters Patent No. 346,286, dated July 27, 1886.

Application filed May 19, 1886. Serial No. 202,635. (No model.)

To all whom it may concern:

Be it known that I, HAROLD HOLLAND, of Lynn, in the county of Essex, State of Massachusetts, have invented a certain new and useful Improvement in Pattens, of which the following is a description sufficiently full, clear, and exact, to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of my improved patten; Fig. 2, a bottom plan view of the same; Fig. 3, a vertical transverse section taken on line *x x* in Fig. 2, and Fig. 4 a vertical section taken on line *y y* in Fig. 3.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to that class of pattens which are provided with adjustable calks; and it consists in a novel construction and arrangement of parts, hereinafter more fully set forth and claimed.

The nature of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents the body of the patten, B the heel-piece, C the toe-piece, D the heel-strap, and E the toe-strap, said straps being respectively provided with suitable buckles. The body is composed of sheet metal, preferably steel, but may be constructed of any other suitable materials, the heel-piece B, toe-piece C, and straps D E being secured thereto by rivets, or in any other proper manner. A frame-work, H, is secured to the under side of the forward portion of the body A, said frame-work consisting of a stout wire or rod, *z*, which is bent to conform with the outlines of said forward portion, the body A being also so constructed as to conform in its general outlines with the sole of the boot or shoe with which it is to be worn. The ends of the wire *z* are bent upwardly and secured to the body A, at *m*, by suitable rivets; but the body of said wire rests on or is kept in position by a series of rigid pillars, *f*, which project downwardly from the lower side of the body A, and are firmly secured thereto, and also to the wire *z*, as many pillars being used as may be necessary to properly support the body A. The wire *z* is braced laterally by braces *i*, and longitudinally by braces *v*, which are also composed of wire. A bar, J, extends across the bottom of the frame-work H, being firmly secured at its ends to the wire *z*. This bar is provided with screw-calks *k*, which are fitted to work vertically in threaded holes therein. A locking-bar, N, is placed above the calks *k* and secured to the bar J by the screw *t*. This bar is provided with downwardly-projecting fins or flanges *r*, which enter the slots of the screws *k* and prevent them from accidentally turning. Holes *l* are provided in the body A, through which the screws *t k* may be removed, or through which the point of a screw-driver may be passed to turn said screws in or out, as required. A corresponding frame-work, K, is secured to the under side of the heel portion of the body A, said last-named frame-work being also composed of a wire, *z*, braces *v i*, pillars *f*, a cross-bar, J, screws *k*, and a locking-bar, N, in substantially the same manner as the frame-work H, it being understood that both frame-works correspond in contour with the portions of the body A, to which they are respectively secured.

In the use of my improvement, when the pattens are worn on ice, or when the walking is slippery, the screw-calks *k* are turned in or down, so as to project as shown, the ends of the screws being pointed to enable them to penetrate the ice or ground and prevent the wearer from slipping. When the walking is not slippery, the screw-calks *k* are turned out or up, so as not to project below the bar J, and thus prevent them from wearing out or injuring floors or carpets when worn temporarily within doors.

It will be obvious that the screw-calks *k* may be secured in any desired position by the locking-bar N, and that the frame-works H K will keep the boot or shoe of the wearer, which rests on the body A, elevated from the ground in accordance with the length of the pillars *f*, thus rendering the pattens of especial value for use in wet or damp localities. It will also be obvious that the frame-works take the place, in one sense, of the ordinary thick toe and heel taps of boots and shoes, but being composed of metal do not absorb water, like leather.

If desired, the wires *z* of the two frame-works H K may be made continuous, or but one frame-work may be used extending the entire length of the body A; but I prefer to use two frame-works, as that form of construction enables the body to spring or yield at the shank *b*, and thus render the patten more comfortable to the wearer. The body A is perforated, as shown at *d;* but the perforations may be omitted, if desired.

Having thus explained my invention, and disclaiming all other pattens and all the parts thereof, when such pattens are in and of themselves considered, what I claim is—

1. In a patten, the body A, provided with the frame-works H K, straps D E, heel-piece B, toe-piece C, and suitable adjustable calks, substantially as described.

2. In a patten, the screw-calks *k*, provided with means, substantially as described, for locking said calks in any desired position, substantially as set forth.

3. In a patten, the frame-work H, provided with the bar J, screw-calks *k*, locking-bar N, and screw *t*, in combination with the body A, and straps or means for securing the patten to the foot of the wearer, substantially as described.

4. In a patten, the frame-work K, provided with the bar J, screw-calks *k*, bar N, and screw *t*, in combination with the body A, and straps or means for securing the patten to the foot of the wearer, substantially as set forth.

5. In a patten, the bar N, provided with the flanges *r*, and screw *t*, for securing the screws *k* in any desired position in the bar J, substantially as described.

6. In a patten, the combination of the body, straps or means for securing the patten to the foot of the wearer, suitable heel and toe pieces, a frame-work secured to the under side of the forward portion of the body, a frame-work secured to the under side of the heel portion of the body, adjustable calks, and means, substantially as described, for locking or securing the calks in any desired position, substantially as set forth.

HAROLD HOLLAND.

Witnesses:
OTIS M. SHAW,
E. L. SAWYER.