(No Model.)

H. L. FITCH.

ICE CREEPER.

No. 318,366. Patented May 19, 1885.

Fig. 1.

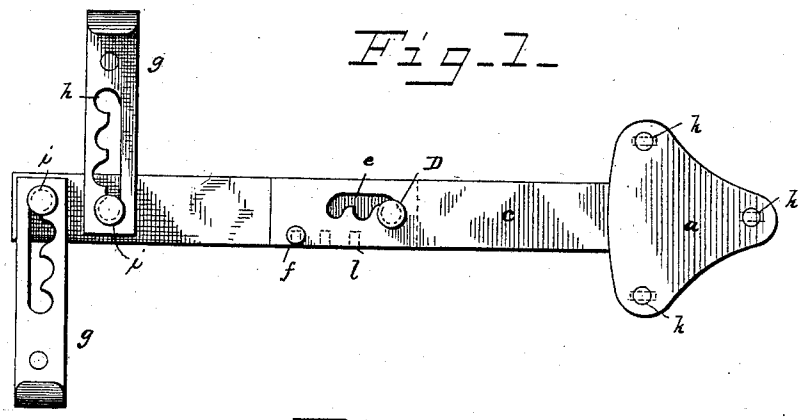


Fig. 3.

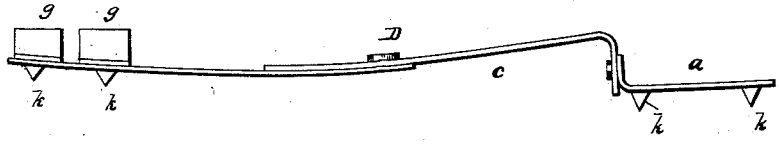
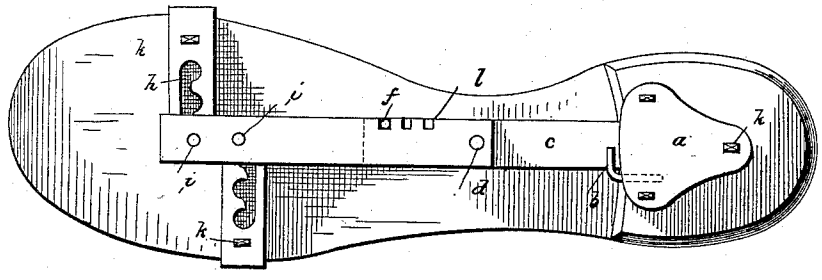


Fig. 2.



WITNESSES

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HOMER L. FITCH, OF YOUNGSTOWN, OHIO.

ICE-CREEPER.

SPECIFICATION forming part of Letters Patent No. 318,366, dated May 19, 1885.

Application filed March 7, 1885. (No model.)

To all whom it may concern:

Be it known that I, HOMER L. FITCH, a citizen of the United States, residing at Youngstown, in the county of Mahoning and State of Ohio, have invented certain new and useful Improvements in Ice-Creepers; and I do hereby declare the following to be a full, clear, and exact description of my invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to that class of ice-creepers which are detachable from the sole of the boot; and its object is a double ice-creeper holding both at the heel and the ball of the foot by connected parts so constructed that it may be readily and firmly attached to and detached from the sole of a boot of any size, and which may be folded into convenient form for carrying in the pocket. I accomplish this object by the mechanism hereinafter described, and illustrated in the drawings, in which—

Figure 1 is a vertical view of the bottom of my ice-creepers with all parts in place as in use. Fig. 2 is a similar view of the same attached to the sole of a boot; and Fig. 3 is a similar side or edge view of the same, as seen at Fig. 1.

Letters indicate parts and similar letters refer to similar parts throughout.

The heel-plate *a* is a thin triangular plate rounded at the apices, near which project downward the points *k* to penetrate the ice, and provided with a lip bent at a right angle with the plate across the straight edge of the boot-heel, held in place by the pin *b*, which protrudes from the edge of the boot-heel, and is bent across the surface of the part of strap *c*, that is in contact with the lip. The strap *c*, connecting the ball and heel creepers, is a thin narrow strap in two parts, jointed at the center and made extensible by means of the long slot *e* through the breadth of the lower part, in which moves the headed pin *d*, that extends from the lower end of the upper part underneath, in conjunction with the indentations *l* in the edge of the upper part of the strap *c* and the pin *f*, which extends from the surface of the lower part of strap *c* underneath, acting in the indentations, so that the strap *c* may be made longer or shorter by moving the pin *f* from one indentation to another. The lower end of strap *c* is bent at a right angle to rest against the lip of the heel-plate *a*, to which it is attached by a double-headed pin acting as a pivot. It will be observed that the pin *b* impinges against the strap *c* from the side opposite indentations *l* and the pin *f*, whereby, when the upper part of the strap *c* is held by the arms *g g*, as hereinafter described, the joint in strap *c* is inflexible. The arms *g g* are straps similar to the strap *c* and connected therewith near the upper end of the strap *c* by a double-headed pin, *i*, in each, forming pivots and extending right and left from the strap *c*, terminating each in an upward and thence inward curve to clasp the edges of the boot-sole. These arms are adjustable to any breadth of sole by means of the slots therein (indicated by the letters *h h*,) the lower edge of the upper slot and the upper edge of the lower slot being similarly indented, so that the length of the arms may be increased or diminished by the movements of the pins *i i*, the same being held in the indentations by the contact of the edges of the two arms. From the lower surfaces of the arms *g g* project the points *k k* to penetrate the ice, thus forming the ball-creeper. The elasticity of the arms *g g* enables the wearer to put on and take off this ice-creeper with the greatest ease and rapidity, and, when on, its mechanism holds it firmly in place. Folded, the two parts of the strap *c* are nearly parallel, while all the points *k* are inward, so that the pocket will not be torn by carrying it. For firemen and others required to walk over "pitch roofs" this creeper affords the advantage of a sure hold, both at the heel and the ball of the foot.

I make my ice-creepers preferably of steel, but iron will answer for all parts, except the parts *k*, and in manufacture I employ the processes and machinery usual in working steel or iron of similar dimensions.

I am aware that ice-creepers consisting of plates both at the heel and ball of the boot, from which project points to penetrate the ice, are now used; but I am not aware that a ball and heel plate with such projections connected together and held in place by the mechanism

described forming an ice-creeper was ever before known.

What I claim to be my invention, and desire to secure by Letters Patent, is—

In ice-creepers, in combination, the heel-plate *a*, the pin *b*, the jointed strap *c*, provided with the slot *e*, the indentations *l l*, and the pins *d f*, the arms *g g*, provided with the slots *h h*, having each an indented edge, and the downward-projecting points *k* of any suitable number, substantially as described in the foregoing specification, and for the purposes therein stated.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

HOMER L. FITCH.

Witnesses:
S. FISHEL,
A. E. KNIGHT.