

(No Model.)

H. COTTRELL.

ICE CREEPER.

No. 351,966.

Patented Nov. 2, 1886.

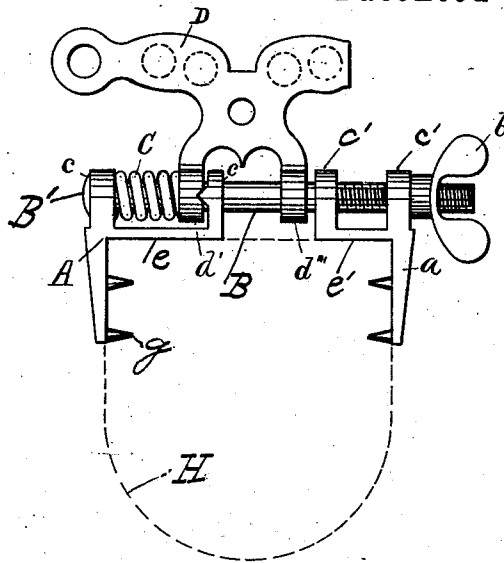


Fig. 1.

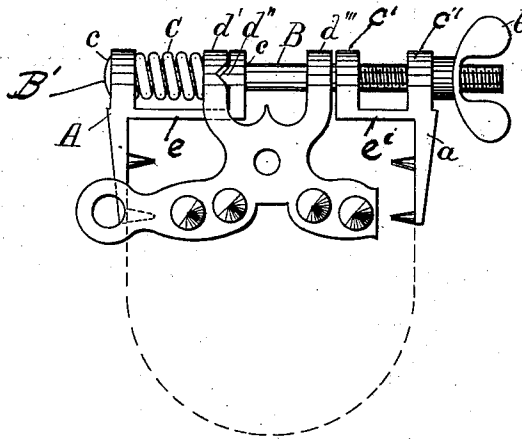


Fig. 2.

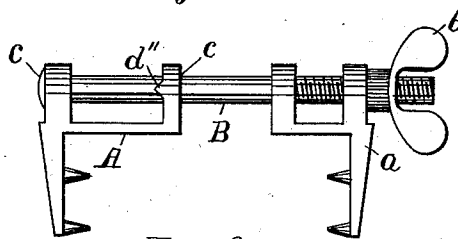


Fig. 3.

Attest:

H. C. Condit
L. A. Sayre

Inventor.

Herbert Cottrell

UNITED STATES PATENT OFFICE.

HERBERT COTTRELL, OF NEWARK, NEW JERSEY, ASSIGNOR TO LOUIS A. SAYRE, OF SAME PLACE.

ICE-CREEPER.

SPECIFICATION forming part of Letters Patent No. 351,966, dated November 2, 1886.

Application filed November 23, 1885. Serial No. 183,620. (No model.)

To all whom it may concern:

Be it known that I, HERBERT COTTRELL, residing in the city of Newark, county of Essex, State of New Jersey, have invented certain new and useful Improvements in Ice-Creepers; and I do hereby declare the following to be a full and clear description thereof, which will enable others skilled in the art to which this 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 view of an ice-creeper embodying said improvement as when attached to a heel and turned to its inoperative position. Fig. 2 is a view of said creeper as when it is attached to a heel in its operative position; and Fig. 3 shows the clamping-jaws A *a* of said creeper having cast integral therewith a plate adapted to extend partly across the face of the heel, and having thereon double bearings *c c* and cam projection *d'*. It also shows the supporting-rod B and the nut *b*.

Similar letters of reference indicate like parts in the several figures.

The object of my invention is to provide a stronger, cheaper, and more simple construction for that class of ice-creepers in which a reversible calk-plate is pivoted upon a rod attached to the heel by clamping-jaws; and the improvement consists, mainly, in the application of a spiral spring and one hinge of the calk-plate between two lugs upon one of the clamping-jaws, whereby an abutment is provided for the spring without the use of a nut or pin upon the clamp-rod; and it also consists in the application of two lugs to the other clamping-jaw, to stiffen and brace the same when applied to the heel of the wearer and combined with the clamp-rod.

A is one of the clamping-jaws, adapted to fit the side of the heel, (which is shown in the drawings by the dotted lines H.) and is provided with a plate, *e*, adapted to fit against the front of the heel, and provided at its inner and outer ends with two bearings, *c*, to fit the clamp-rod B.

a is the opposite clamping-jaw, provided similarly with a plate, *e'*, adapted to fit against the front of the heel, and provided at its inner

and outer ends, respectively, with two bearings, *c*.

B is a clamp-rod inserted through the bearings *c c'*, and provided with a head, B', at one end and a nut, *b*, at the opposite end, to clamp them upon the heel, the jaws being shown with points *g* to catch in the side of the heel, in the usual manner, and the plates *e e'* resting upon the front of the heel, as shown in Figs. 1 and 2. The bearings *c c'* are so constructed that when clamped upon the heel a space remains between the two inner bearings, *c c'*.

D is the calk-plate, provided with two lugs, *d'* and *d'''*, to turn freely upon the clamp-rod B. The lug *d'* is applied to the rod between the two bearings *c*, and the lug *d'''* is applied to the rod between the inner bearings, *c c'*.

A locking device to hold the calk-plate in an operative or inoperative position is provided by a beveled projection, *d''*, formed upon the side of the inner bearing *c*, and notches in the side of the lug *d'* adjacent to such bearing, to fit such beveled projection.

A spiral spring, C, is applied to the clamp-rod between the outer bearing *c* and the lug *d'*, to press it toward the inner bearing and hold the beveled projection in such notches. The notches, being made in the lug upon opposite sides of the hole by which it is fitted to the clamp-rod, operate, respectively, by fitting the projection *d''* to hold the calk-plate in the operative and inoperative positions shown in Figs. 1 and 2, in both of which the beveled projection is shown fitted to one of the notches in the lug.

The formation of the two bearings *c'* upon the jaw *a* furnishes a means of bracing the jaw more effectively when the rod is tightened upon the heel of the user, and thus prevents the tipping or displacement of the jaw under the tension of the clamp-rod. The formation of the two bearings upon the jaw A also braces such jaw in a similar manner, while the application of the locking device to the inner bearing and the insertion of the calk-plate lug *d'* and the spiral spring C between the two bearings enable the spring to perform its functions without applying any fixed abutment to the clamp-rod for sustaining the thrust of the spring.

My invention thus furnishes a reversible ice-creeper which is stronger, more simple in construction, cheaper, and consisting of parts so formed as to be more readily assembled and
 5 more perfectly perform their functions than others heretofore made.

It has already been common to construct a calk-plate and a clamping-jaw with such a projection and notch for holding the calk-plate
 10 in two different positions when pressed together by a spiral spring upon the clamp-rod; but in such constructions a fixed abutment has always been required upon the clamp-rod to sustain the thrust of the spring, and
 15 has been provided by drilling a hole through the rod and inserting a transverse pin or applying a nut to a thread upon the rod. I do not therefore claim such a locking device, broadly; but I am not aware that a jaw has
 20 ever been provided with two bearings like those shown at *c* in my construction, between which the spiral spring was compressed to actuate the locking device independently of any abutment provided separately upon the clamp-
 25 ing-rod.

It will be noticed that the operation of my locking mechanism, so far as concerns the pressing of the lug *d'* toward the inner bearing *c* by the spiral spring *C*, is effected en-
 30 tirely independent of the clamp-rod *B*, and that the latter serves only in relation to the

spring and calk-plate as a pivot upon which they are held in their proper relations to one another and to the inner bearing *c*.

I am aware that clamping-jaws have been
 35 formed with more than one bearing formed upon a plate to fit against the front of the heel in constructions different from mine, and I do not therefore claim such a construction for the jaw, except as herein set forth.
 40

Having thus set forth my invention and distinguished it from others, what I claim herein is—

In a reversible ice-creeper, the combination, with the jaw *A*, having the plate *e*, with
 45 bearings *c* at its opposite ends, and an opposed jaw and clamp-rod for clamping the same upon the heel, of the projection *d''* upon the inside of the bearing *c*, the calk-plate provided with lugs *d'* and *d'''*, fitted to the rod *B*,
 50 the lug *d'*, having notches to fit the projection *d''*, and the spiral spring *C*, applied between the outer bearing *c* and the lug *d'*, the whole being arranged and operated as and for the
 55 purpose set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

HERBERT COTTRELL.

Witnesses:

H. C. CONDIT,
 L. A. SAYRE.