J. D. PORTER.

ICE-CREEPER.

No. 187,234. Patented Feb. 13, 1877.

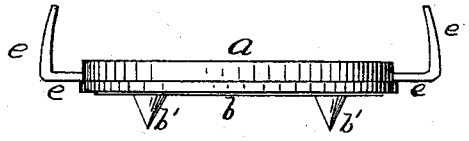

Fig. 1.

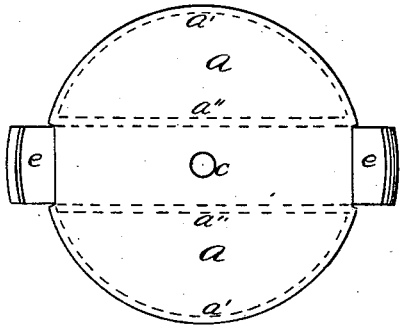

Fig. 2.

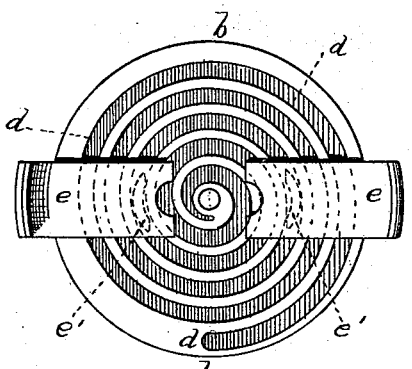

Fig. 3.

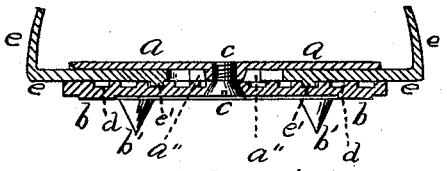

Fig. 4.

WITNESSES.

D. W. Williams.

John K. Fleming.

John D. Porter INVENTOR

By his Attys,

Henry A. Williams & Co

UNITED STATES PATENT OFFICE.

JOHN D. PORTER, OF WOBURN, MASSACHUSETTS.

IMPROVEMENT IN ICE-CREEPERS.

Specification forming part of Letters Patent No. **187,234**, dated February 13, 1877; application filed October 16, 1876.

To all whom it may concern:

Be it known that I, JOHN D. PORTER, of Woburn, in the county of Middlesex and State of Massachusetts, have invented a new and valuable Improvement in Ice-Creepers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature and operation of my invention are below set forth.

It is intended to be used upon the heel or sole of the boot or shoe, and is particularly useful mainly on account of the ease and rapidity with which it can be placed in position and removed, and also on account of the firmness of its hold upon the shoe, and its strength.

In the accompanying illustration, Figure 1 is a side elevation of my invention. Fig. 2 is a plan view of the upper side of the same, the ribs a' and a'' being shown in broken lines. Fig. 3 is an interior plan view of the same after the plate a has been removed. Fig. 4 is a transverse vertical section of the ice-creeper, taken longitudinally through the slides.

Similar letters of reference indicate corresponding parts.

a is a round metallic plate or disk, provided upon its under side with the ribs a' and a'' in the locations indicated by the broken lines in Fig. 2. The ribs a' serve to raise the disk a from the plate or disk b, and also to prevent dust or dirt from entering between them. b is a disk or plate of similar size and shape to the disk a, and attached to the plate a by means of a screw or rivet, c. d is a spiral groove cut in the upper side of the plate b, in the manner shown in Fig. 3 in the drawings. $e\ e$ are slides, which, by means of projections $e'\ e'$, slide in the spiral groove d. These slides $e\ e$ are placed directly opposite each other, being held in said position by means of the ribs $a''\ a''$, which serve as guides upon both sides of the slides. The outer ends of the slides e are bent upward at about a right angle, so as to clamp the heel of the boot. The position of the projections $e'\ e'$ is indicated in Fig. 3 by broken lines, and in Fig. 4 in section.

In practical operation, when the creeper is to be used the lower plate b is turned, thus operating the slides $e\ e$ by means of the projections $e\ e'$, which lie in the groove d, causing them to slide from or toward each other, as desired, until they are so adjusted that the boot-heel will lie loosely on the upper plate a of the creeper, between the upward-projecting ends of the slides or clamps $e\ e$. Then, by a sudden turn of the foot in the proper direction, the slides are brought against the opposite sides of the heel, and clamp it tightly, so that the creeper is securely fastened upon the heel. The creepers can be as easily removed and left in any position by simply pressing the prongs b' down by means of the weight of the body, and giving the foot a turn in the opposite direction, thus releasing the heel from the clamps $e\ e$; or, if preferred, the creeper may be adjusted by merely turning the plate b with the hand.

Of course, this ice-creeper may be applied to any portion of the sole of the boot or shoe, as well as to the heel, or it may be used as a means for attaching a skate to the boot or shoe, if desired.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

In combination with the plate a, provided with the ribs or guides $a''\ a''$, the slides $e\ e$, provided with projections $e'\ e'$, and the plate b, provided with the spiral groove d and prongs b', all substantially as and for the purpose herein set forth.

JOHN D. PORTER.

Witnesses:

HENRY W. WILLIAMS,

E. R. WILLIAMS.