

R. E. MAASS.
ICE CREEPER.
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1,049,113.

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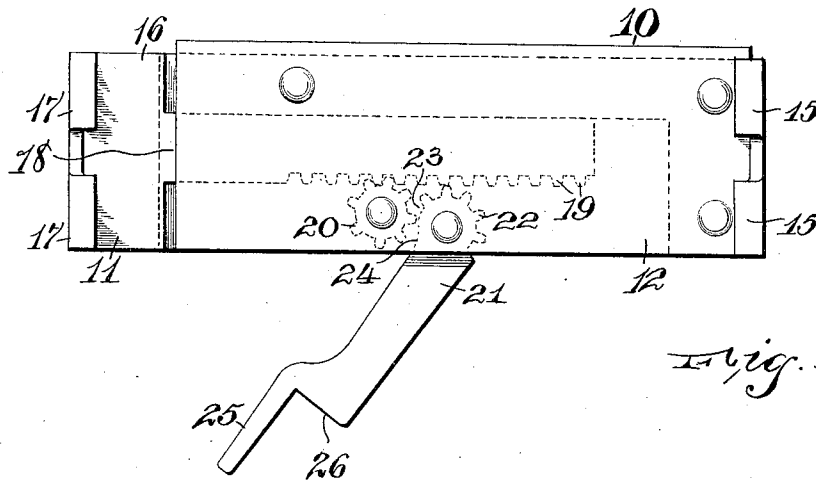


Fig. 1

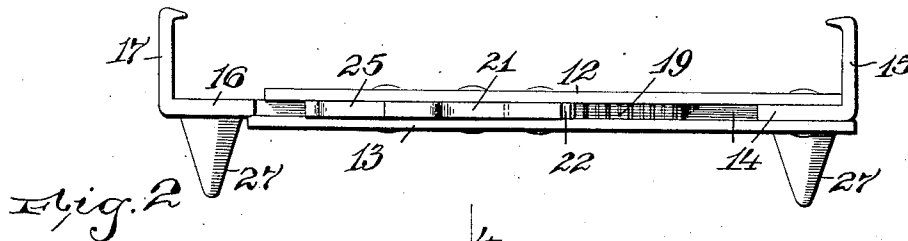


Fig. 2

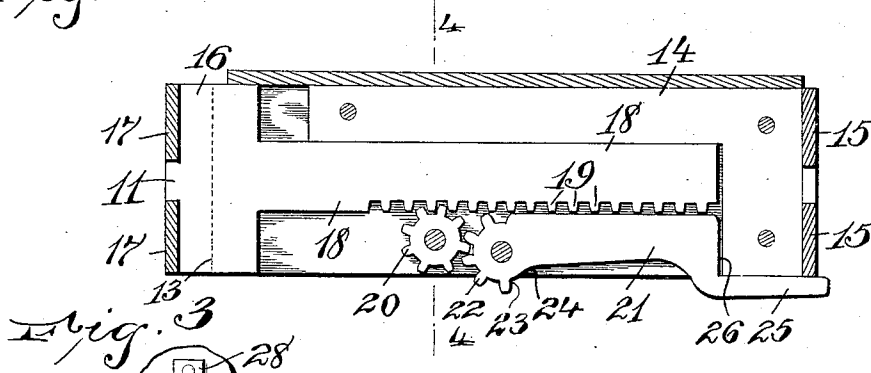


Fig. 3

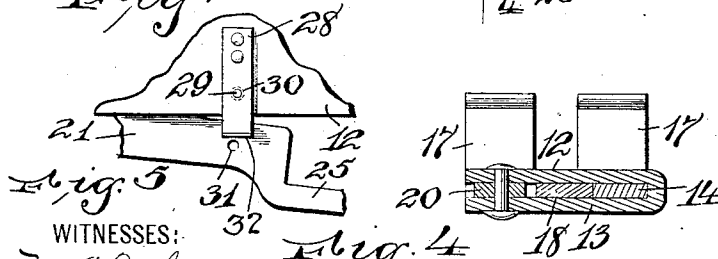


Fig. 4

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ROBERT E. MAASS, OF EAST ORANGE, NEW JERSEY.

ICE-CREEPER.

1,049,113.

Specification of Letters Patent.

Patented Dec. 31, 1912.

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To all whom it may concern:

Be it known that I, ROBERT E. MAASS, a citizen of the United States, residing at East Orange, in the county of Essex and 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, clear, and exact description of the 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, and to figures of reference marked thereon, which form a part of this specification.

15 This invention relates to an ice-creeper that can be used on the bottom of the heel or sole of a shoe, and is detachable therefrom, being at the same time adjustable to fit different sizes of shoes.

20 The creeper consists of two sliding members with gripping elements on the top and ice-engaging projections on the bottom, the members being in sliding relation. The members are equipped with a means for sliding them toward each other or closing them to grasp the sides of the shoe, the same means releasing the members when swung in one direction, and locking the members together when swung to its limit of movement in the closing direction.

30 The invention is illustrated in the accompanying drawing, in which—

35 Figure 1 is a top view of the ice-creeper in open position. Fig. 2 is a side view of the creeper shown in Fig. 1. Fig. 3 is a top view with the top plate removed, and Fig. 4 is a section on line 4, 4, in Fig. 3. Fig. 5 is a detail view of a locking device for the creeper.

40 The ice-creeper consists of two members, 10 and 11, which are in sliding relation. The member 10 consists of a top plate 12 and a bottom plate 13 which can be made of one piece as shown in Fig. 4, the plates being spaced apart to receive a strip 14 which is turned up at its ends to form the gripping elements 15 which are inwardly bent to securely grasp the side of the shoe wherever the creeper is placed. The second member 11 consists of a plate 16 having on its outer end the gripping elements 17 to co-operate with the elements 15 to engage the shoe and thus attach the creeper. The plate 16 has projecting therefrom an extension 18 with teeth on one edge forming a rack 19.

55 The rack 19 slides in between the top and

bottom plates 12 and 13. A gear 20 rotates between the plates 12 and 13, being arranged to mesh with the rack 19. A lever 21 swings between the plates 12 and 13 and has teeth 22 part way around its periphery and concentric to the pivot of the lever, the teeth terminating at one point 23 so that a recess 24 is formed in the lever. The lever has an extension 25 forming a handle, the lever being cut away as at 26 to allow the lever and handle to be swung in close as in Fig. 3. The lever is pivoted so that its teeth can be made to mesh with the gear 20, but can not mesh with the rack 19. Suitable ice-engaging projections 27 are secured on the bottom of the creeper, preferably at the outer ends of the member.

The ice-creeper is operated as follows:— The lever is swung to its open position shown in Fig. 1. The teeth 22 are out of mesh with the teeth of the gear 20 and the members are free to be slid to the approximate size of the sole or heel they are to embrace, the gripping elements or fingers 15 and 17 being placed against the sides of the shoe. The gear 20 rotates in the recess 24 and the adjustment can be quickly made. The creeper is now held in place and the lever is swung toward its closed position. The teeth 22 engage the teeth of the gear 20 and rotate it and the gear in turn moves the rack 19 and the members are drawn tightly together. The lever 21 swings in between the top and bottom plates 12 and 13 and the handle 25 lies close up against the member 10, as shown in Fig. 3. This operation forces the ends of the gripping devices 15 and 17 into the leather of the heel or sole of the shoe, and the ice-creeper is securely in place. The lever fits closely in between the plates 12 and 13 which assists in holding the lever in its locking position. If desired I may provide a spring 28 with a pin 29 passing through a hole 30 in the top plate 12 and fitting in a hole 31 in the lever 21 when the lever is swung to its locking position. The end 32 acts as a finger-piece for lifting the spring 28 and its pin 29 when the lever is to be released.

The ice-creeper described above is adapted for heel or sole, is cheap, and has its working parts protected to a great extent.

The leverage secured through the handle 25 makes the locking of the creeper easy and also permits it to be operated quickly. The plates are made flat so that a broad flat

structure is built up which has a broad bearing on the bottom of the shoe and in this way has a great deal of the strain taken from it as it is backed up by the shoe.

5 Having thus described my invention, what I claim is:—

1. A detachable ice-creeper comprising two members in sliding engagement, gripping elements on the top of the members, 10 ice-engaging projections on the bottom of the members, a lever swinging on the first member and having teeth thereon, a rack on the second member and sliding out of engagement with the teeth of the lever, and 15 a gear in constant mesh with the rack and in mesh with the teeth of the lever when the lever is swung toward its closed position.

2. A detachable ice-creeper comprising two members in sliding engagement, gripping elements on the top of the members, ice-

engaging projections on the bottom of the members, a lever swinging on the first member and forming a handle, concentric teeth on the lever, a rack on the second member, the rack and teeth aforesaid being out of 25 mesh, the teeth on the lever being cut away at one end to form a recess, and a gear on the first member and in mesh with the rack, the gear being adapted to rotate in the recess of the lever when it is open and to be 30 rotated by the teeth of the lever when the lever is swung toward its closed position.

In testimony, that I claim the foregoing, I have hereunto set my hand this 23rd day of August 1912.

ROBERT E. MAASS.

Witnesses:

WM. H. CAMFIELD,
M. A. JOHNSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."