H. SENF.

ICE CREEPER.

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1,200,658. Patented Oct. 10, 1916.

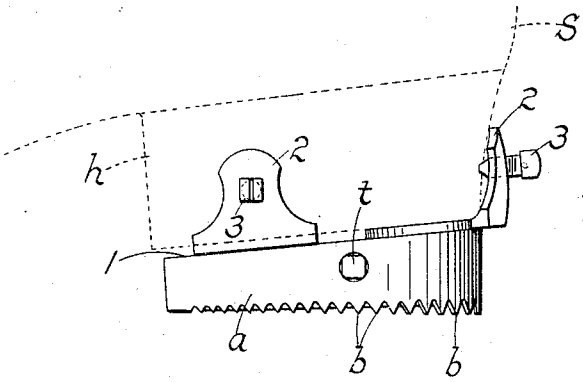


FIG. 1.

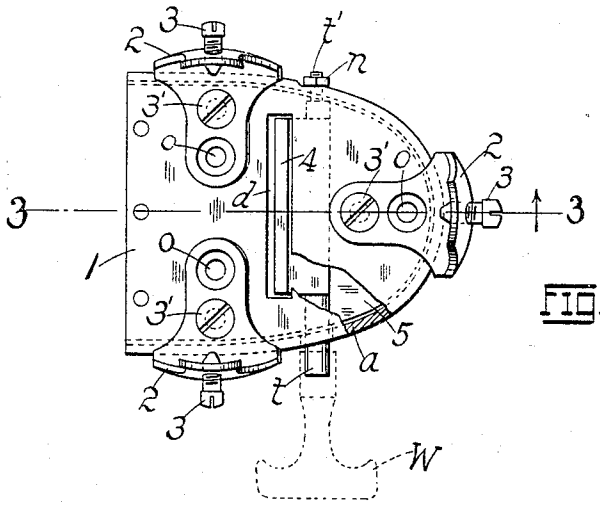


FIG. 2.

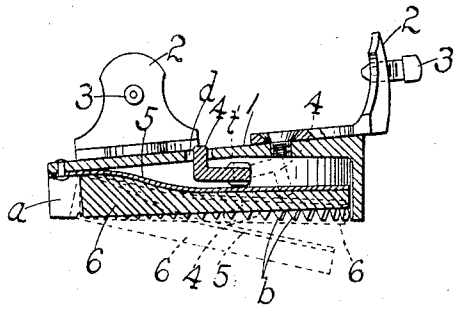


FIG. 3.

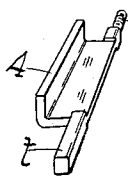


FIG. 4.

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ICE-CREEPER.

1,200,658. Specification of Letters Patent. Patented Oct. 10, 1916.

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To all whom it may concern:

Be it known that I, HENRY SENF, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Ice-Creepers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in ice-creepers; and it consists in the novel features of construction more fully set forth in the specification and pointed out in the claims.

The object of my invention is to construct an ice-creeper which may be readily converted into an extension heel which may be worn while in the house or indoors without danger of doing damage to the floor or furniture, the extension being in the form of a pad or cushion which may be projected beyond the ice-creeper prongs, leaving the wearer to walk on the pad, the prongs being for the time being out of commission.

A further object is to provide an ice-creeper which is readily applied to the heel of the shoe or boot; and one which possesses further and other advantages better apparent from a detailed description of the invention in connection with the accompanying drawings in which—

Figure 1 represents a side elevation of my improved ice-creeper; Fig. 2 is a top plan with parts broken away; Fig. 3 is a middle vertical longitudinal section on the line 3—3 of Fig. 2; and Fig. 4 is a perspective view of the rocker member or tumbler for actuating the inner pad of the creeper.

Referring to the drawings, 1 represents a plate conforming to the contour of the bottom of the heel *h* of a shoe S, the said plate being applied to the heel by means of angle brackets 2, the vertical legs of which carry the fastening screws 3 which are driven into forcible engagement with the vertical walls of the heel. The brackets 2 are secured to the plate 1 by means of screws 3′ for the reception of which the horizontal legs of the brackets are provided with two openings *o* disposed radially to allow for the necessary adjustment of the brackets to accommodate various sizes of heels. The plate 1 is provided at the sides and front with a marginal depending horse-shoe shaped flange *a* having serrations or prongs *b* at the free lower edge thereof, these prongs serving as the immediate supporting members for the wearer when serving in the capacity of an ice-creeper.

Mounted transversely across the plate 1 and supported by the sides of the flange *a* is a rocker member or tumbler 4 preferably in the form of an angle-piece with spindles or trunnions *t*, *t′*, leading from one of the legs of the tumbler, the said trunnions passing loosely through the walls of the flange *a* and freely rotatable therein. One of the trunnions *t* is square or polygonal in cross-section the projecting end being designed to receive the socket of a suitable key or socket wrench W by which the tumbler 4 may be rotated. The trunnion *t′* is cylindrical and screw-threaded, the projecting portion carrying a nut *n* which prevents the trunnion or spindle from working out of its support in the flange *a*.

Riveted, or otherwise secured to the bottom face of the plate 1 and adjacent the front straight edge thereof, is the fixed end of a resilient tongue or flexed spring 5 contoured to the shape of the creeper-plate 1, the bottom of the tongue carrying a rubber or equivalent pad or cushion 6 which under circumstances to be presently referred to serves as a rubber heel or an extension of the shoe heel *h*. The tongue 5 is made of resilient metal so that it tends to spring toward the creeper plate 1, always bearing against the rocker member or tumbler 4 and yielding thereto when rotation is imparted to said tumbler.

The plate 1 is provided with a transverse slot *d* for the accommodation of the outer leg of the tumbler, said leg projecting through the slot when the tongue 6 is resting against the inner leg (Fig. 3). This position of the tumbler allows the tongue 5 to spring upwardly or inwardly toward the creeper plate 1 a sufficient distance to bring the bottom face of the pad 6 into a plane above the points of the serrations *b* so that the device serves its normal function as an ice-creeper. Suppose however that the wearer of the ice-creepers comes into the house where he may have occasion to remain for an hour or for a considerable length of time. Instead of removing the creepers from the shoes he simply rocks or oscillates the member 4 to the dotted position shown in Fig. 3 (turning the key W applied to the square end *t* through an arc of substantially 180 degrees) which leaves the inner leg or wing

of the tumbler resting against the plate 1, and the spring tongue 5 bearing against the free edge of the outer leg or wing, this position causing an outward deflection of the tongue from its normal position, and causing the bottom face of the pad or cushion 6 to be brought into a plane below the points or ends of the serrations *b* and thus keeping the serrations off the floor and preventing injury to the floor or wood-work in the house. During the swing or oscillation of the tumbler 4 through the arc aforesaid (180 degrees) the spring tongue 5 with its pad will be forced outwardly through a maximum angle indicated by the extreme dotted lines in Fig. 3, the tongue springing toward the plate with the completion of the sweep of the tumbler 4 until it finally assumes the inner dotted position indicated on said figure, or a position which is sufficient to prevent the serrations *b* from coming in contact with the floor or wood-work. The tumbler operates as a cam, and any cam-like member or formation would be a full equivalent for the tumbler 4 here illustrated. The tongue 5 need not of course be a single piece of metal, a series of spring-like pad-supporting strips being equally as effective. In fact, a "spring" member is not absolutely indispensable, the important thing being the pad 6 or its equivalent which will normally hug the plate 1 and remain out of contact with the ice when the device is used as a creeper, and to engage the floor and keep the serrations *b* off the floor when used as a rubber heel or heel extension in the house. I may of course depart from the details here shown without effecting the nature or spirit of my invention.

Having described my invention what I claim is:

1. In an ice-creeper, a member provided with serrations or prongs, a member encompassed by the prongs and operating to be projected beyond the tips of the prongs for converting the creeper into an extension heel, and a rocker member for actuating the first mentioned member.

2. In an ice-creeper, a plate provided with a serrated flange and adapted to be secured to a shoe heel, a pad confined within the flange and operating to be projected outwardly into a plane beyond the tips of the serrations whereby the creeper is converted into a heel extension, and a rocker member for actuating the pad.

3. In an ice-creeper, a plate securable to a shoe heel and provided with a depending serrated flange at the sides and rear, a resilient tongue secured at one end to the bottom of the plate at the front edge thereof, a pad carried by the bottom of the tongue, and means carried by the flange for oscillating said tongue and forcing the bottom face of the pad into a plane beyond the tips of the serrations.

4. In an ice-creeper, a plate securable to the heel of a shoe and provided with a horse-shoe shaped depending serrated flange, a resilient tongue fastened at one end to the front edge of the plate and oscillatable to and from the plate within the confines of the flange, a tumbler mounted in the flange and interposed between the plate and tongue and operating through the plate, means for rocking said tumbler from a point outside the flange, and a pad on the tongue, said tongue being adapted to be forced outwardly sufficiently to bring the bottom of the pad below the tips of the serrations with a rocking of the tumbler in one direction, the tongue springing back toward the plate to raise the pad above the tips of the serrations with a rocking of the tumbler in the opposite direction.

5. In an ice-creeper, a creeper member, a pad operable to and from the member, and an angled rocker member for actuating the pad.

6. In an ice-creeper, a creeper plate provided with a transverse slot, an angled rocker member having one leg operating through said slot, and an oscillating pad controlled by said rocker member.

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

HENRY SENF.

Witnesses:
EMIL STAREK,
ELSE M. SIEGEL.

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