J. KIRKWOOD.

ICE CREEPER.

APPLICATION FILED MAR. 8, 1916.

1,194,191. Patented Aug. 8, 1916.

Fig. 1.

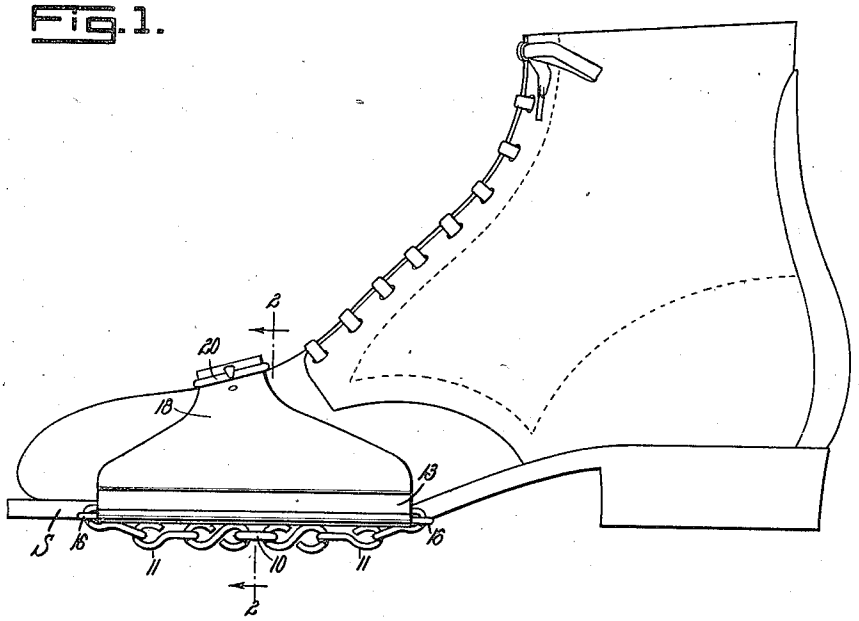


Fig. 2.

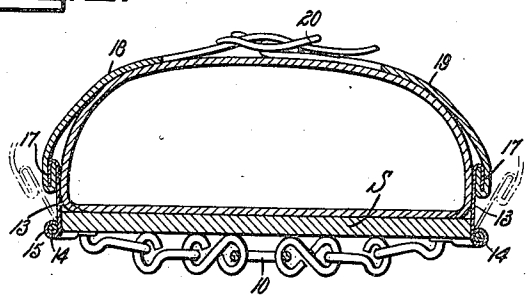
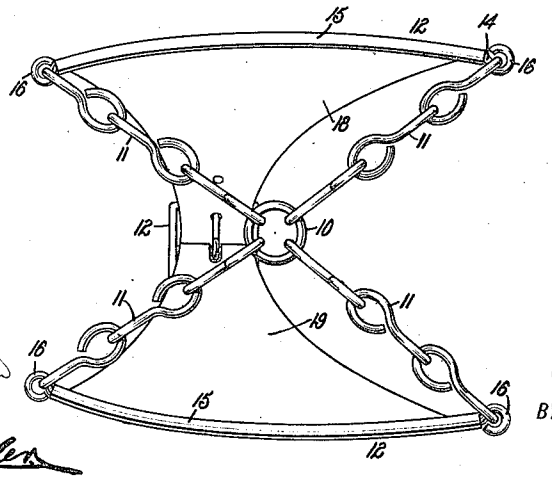


Fig. 3.



WITNESSES

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UNITED STATES PATENT OFFICE.

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ICE-CREEPER.

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To all whom it may concern:

Be it known that I, JOHN KIRKWOOD, a citizen of the United States, and a resident of Lenox, in the county of Berkshire and State of Massachusetts, have invented a new and Improved Ice-Creeper, of which the following is a full, clear, and exact description.

This invention relates to attachments for boots and shoes for personal wear, and has particular reference to means to prevent slipping on ice or other slippery walks.

Among the objects of the invention is to provide an anti-slipping attachment or creeper adapted to be easily applied to a person's shoe as, for instance, to the ball portion thereof, and whereby the person so shod will be free from danger of slipping, the device being light and neat in practical use and adapted to be easily applied or removed.

With the foregoing and other objects in view, the invention consists in the arrangement and combination of parts hereinafter described and claimed, and while the invention is not restricted to the exact details of construction disclosed herein, still for the purpose of illustrating a practical embodiment thereof reference is had to the accompanying drawings in which like reference characters designate the same parts in the several views, and in which—

Figure 1 is a side elevation of a preferred embodiment of the invention shown as applied to a conventional form of shoe; Fig. 2 is a vertical transverse section of the same on the line 2—2; and Fig. 3 is a bottom plan view of the creeper detached.

Referring now more particularly to the drawings I show an ice creeper, the sole or tread portion of which comprises a central link 10 from which radiate a plurality of chains 11 shown as four in number and constituting with the link the principal anti-slipping contact members.

As a suitable means for easily connecting the chains and links to the shoe sole S, I provide a pair of wings 12, one for each side of the device. Each wing comprises a metal plate 13 and a bar 14 secured to the lower edge of the plate. The plate 13 is formed in a peculiar manner, the same being provided at its lower edge with an outwardly turned roll 15 which embraces the bar 14, locking it securely in position, and the plate and bar are curved slightly longitudinally of the device to conform approximately to the shape of the sole in plan and against which the inner surface of the lower portion of each wing bears forcibly in practice. The bars 14 have eyes or loops 16 at both ends into which the end links of the several chains 11 are connected. The upper edges of the wing plates 13 are bent outwardly and downwardly, forming flanges 17.

At 18 and 19 I provide a pair of straps, the lower end of each of which is elongated or broadened to a length substantially equal to the length of the wings, and the extreme lower edge of each strap is projected upwardly and locked beneath the flange portion 17 of the adjacent wing plate, and the strap thence is folded upwardly on the outside of such flange and over the top of the foot where the ends of the straps are adapted to be secured together with any sufficient degree of tightness by means of a buckle or its equivalent.

These devices are made in sizes and designs to meet all requirements of different sizes and shapes of shoes, and in the selection of a pair of these creepers for personal wear, care is exercised to select a pair having a width between the bars 14 slightly less than the width of the sole, so that when applying the device to the sole it may assume the position indicated in dotted lines in Fig. 2. The side plates 13 thereby act in the capacity of bell crank levers, the lines of contact between the edges of the sole and the lower portions of the plates representing the fulcrums, the bars 14 with their loops or eyes 16 defining the shorter arms, and the straps 18 and 19 being arranged to draw forcibly upon the longer upwardly projecting arms of the bell cranks so that even a moderate degree of force applied to the straps for securing them together at the buckle will suffice to cause the wings to grip tightly upon the sole edges. The device thus is adapted to be worn with complete comfort so far as the gripping action is concerned, and because of the grip upon the sole and the friction incident to the wide or broad strap portions upon the foot, makes it a practical impossibility for the device to become loose or lost in practice. The device, furthermore, is of such a light and convenient construction that no element of discomfort is experienced in wearing it and the gripping effect thereof is so pronounced that it is a practical impossibility for a

person wearing the device to slip on any kind of slippery streets. The device also is well adapted for use by ball players, tennis players or others who wish to provide a simple, strong and reliable anti-slipping device for their feet.

I claim:—

In an ice creeper, the combination of a pair of metallic wings each comprising an upstanding metal plate and a bar secured to the lower edge thereof, each bar conforming to an edge of the sole along which it is adapted to extend and having eyes at its ends the upper edge of each wing having an outwardly and downwardly projecting flange, a binding strap having its lower edge projected upwardly and clamped beneath the aforesaid flange of each wing and extending thence outwardly and upwardly thereover, and link means extending from the eyes of the bars of the wings across the bottom of the sole.

JOHN KIRKWOOD.

Witnesses:

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KATE FIELDING.