J. KUNZ.

ICE GRIP FOR BOOTS OR SHOES.

APPLICATION FILED JAN. 12, 1909.

990,883.

Patented May 2, 1911.

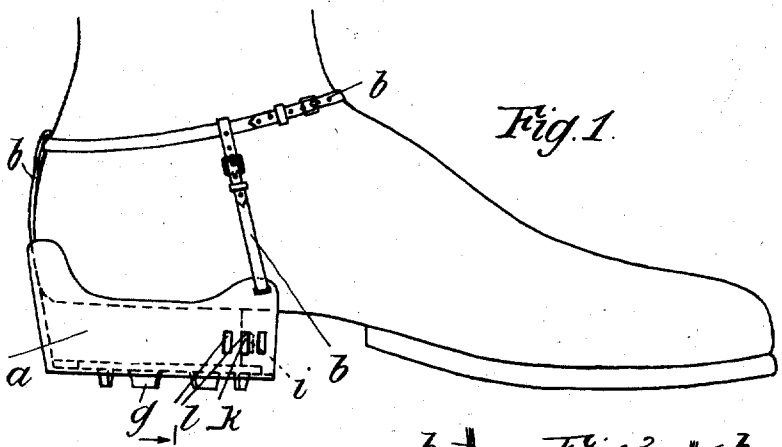

Fig. 1.

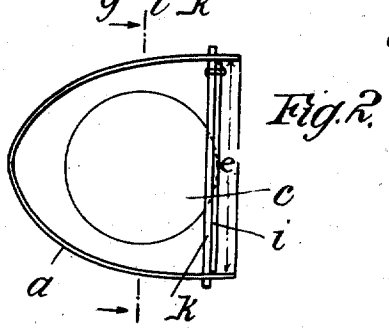

Fig. 2.

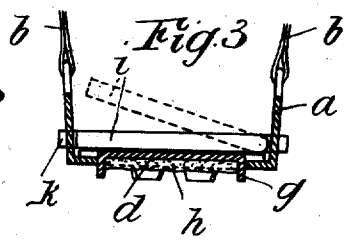

Fig. 3.

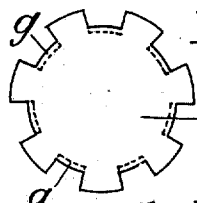

Fig. 4.

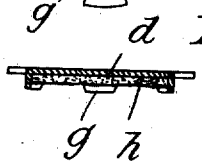

Fig. 5.

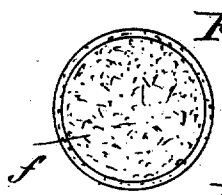

Fig. 6.

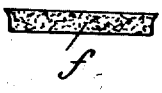

Fig. 7.

Witnesses:

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UNITED STATES PATENT OFFICE.

JEAN KUNZ, OF CRONBERG, GERMANY.

ICE-GRIP FOR BOOTS OR SHOES.

990,883. Specification of Letters Patent. Patented May 2, 1911.

Application filed January 12, 1909. Serial No. 471,834.

To all whom it may concern:

Be it known that I, JEAN KUNZ, manufacturer, a subject of the German Emperor, and resident of Hartmuthstrasse No. 1, Cronberg-on-the-Taunus, Germany, have invented new and useful Improvements in Ice-Grips for Boots or Shoes, of which the following is a specification.

The ice grip to which this invention relates differs from those hitherto used in that it has interchangeable insertions, adapted to prevent slipping, in the cap to be fixed to the heel. Moreover it is provided with an adjustable abutment for the straight front vertical face of the heel, so that the grip can be used for heels of different sizes.

The invention is illustrated in the accompanying drawings wherein—

Figure 1 shows the grip in use, Fig. 2 is a plan view of the grip and Fig. 3 is a section of it, Figs. 4–7 show two different insertions for use in the grip.

The grip comprises the usual heel cap or receptacle *a* adapted to the form of the heel, which is fixed in the usual manner to the boot by the strap *b*. In the middle of the heel cap or receptacle there is a circular opening *c* for the interchangeable insertions *d* and *f*. That marked *d* consists of a circular iron plate having sections of its periphery turned inward so as to form a sort of ring of such a size that it can pass through the opening *c* of the heel cap or receptacle *a*. The projecting sections *g* are long enough to extend beyond the under surface of the heel cap, so as to grip the ice or snow with the desired effect.

Preferably, under the plate *d* and between the projections *g*, is inserted a disk *h* of cork or the like, which is to prevent the caking of snow. Since the plate *d* is between the heel cap or receptacle and the under surface of the heel when the device is in position, and the said cap or receptacle is also drawn toward the heel by the strap *b*, the plate *d* is held sufficiently tightly. Obviously the plate *d* must be so formed that it fits tightly in the opening *c* and cannot accidentally fall out when the grip is not in use.

For walking in soft snow a coned cork disk *f* is inserted being pressed into the opening *c* in place of the plate *d*. Owing to its conical form, it cannot pass through this opening and cannot be pushed upward owing to the heel.

The abutment for the front vertical face of the heel consists of two bars *i* and *k*, pivoted together at one end by means of a bolt or the like. The bar *k* extends beyond the bar *i* at each end to a distance at least equal to the thickness of the cap *a*. There are several openings *l* in the heel cap or receptacle of a size corresponding with the cross-section of the bar *k*. When the abutment is to be put into the heel cap or receptacle the bars *k* and *i* are spread apart and the former can be inserted into the slots *l* on each side of the heel cap or receptacle. The two bars are then pressed together again until they coincide so that the abutment cannot fall out, the length of bar *i* being approximately equal to the distance *e* in Fig. 2, that is to say, its ends abut against the inner faces of the said cap or receptacle. As there are several slots *l* on each side of the said cap or receptacle the abutment can be adjusted as desired, so that the grip can fit heels of different sizes.

The projections on the plate *d* may naturally be in any other position on the plate, and in the said cap or receptacle *a* there need only be the necessary holes to allow these projections to pass through. The projections *g* need not be formed by cutting and turning out the material of the plate; they may if desired be formed of angle iron riveted on.

The bars *i* and *k* may be connected in a manner other than that shown; for example, they may be pressed apart in a direction at right angles to their plane, a separate hoop or the like being provided to hold them together.

A further essential advantage is obtained by making the grip cap surround the heel in a smooth curve. Owing to this, the grip can be used not only when walking on ice or snow, for example when dragging up a toboggan, but also when tobogganing as it allows the foot to be slid along the ground without damaging the boot or tearing up projecting objects.

Now what I claim and desire to secure by Letters Patent is the following:

1. An anti-slipping device for boots and shoes comprising a receptacle for the heel open at its front portion and provided with

oppositely arranged slots, means for securing said receptacle on the heel, a projection removably carried by said receptacle, and a bar adapted to be removably inserted in said slots to bridge said open portion of the receptacle adjacent to the front wall of the heel.

2. In ice grips for boots and shoes, the combination of a heel plate having slots, means for securing said heel plate on the heel, an interchangeable insertion consisting of a plate carried by said heel plate, and two bars pivoted together at one end, one of said bars being arranged to enter said slots to form an abutment for the heel and the other of said bars being arranged to act as a lock for the first named bar, substantially as and for the purpose described.

3. An anti slipping device for boots and shoes comprising a heel plate, an interchangeable plate, means for removably securing said interchangeable plate on said heel plate and having sections of its periphery turned outwardly to form spaced projections extending beyond said heel plate, and a disk of cork secured between the said projections.

4. An anti slipping device for boots and shoes comprising a receptacle for the heel, a projection removably carried by said receptacle and held against inward movement by said heel, means for preventing outward movement of said projection, and means for securing said receptacle on said heel.

5. An anti slipping device for boots and shoes comprising a heel plate provided with oppositely arranged slots, means for securing said heel plate on said heel, a projection carried by said heel plate, a bar adapted to be removably inserted in said slots and to engage the front wall of the heel, and a second bar pivotally mounted on said first named bar and adapted to lock it against removal from said slots.

6. An anti slipping device comprising a heel plate provided with an aperture, an interchangeable device arranged to be inserted in said aperture from the inside and provided with spaced projections extending beyond said heel plate, means for preventing said device from being forced entirely through said aperture, and means for securing said heel plate in operative position.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two witnesses, this 30th day of December 1908.

JEAN KUNZ.

Witnesses:
JEAN GRUND,
ROBERT BÜHL.