

(No Model.)

H. BLAND.
ICE CREEPER, &c.

No. 252,349.

Patented Jan. 17, 1882.

FIG. 1.

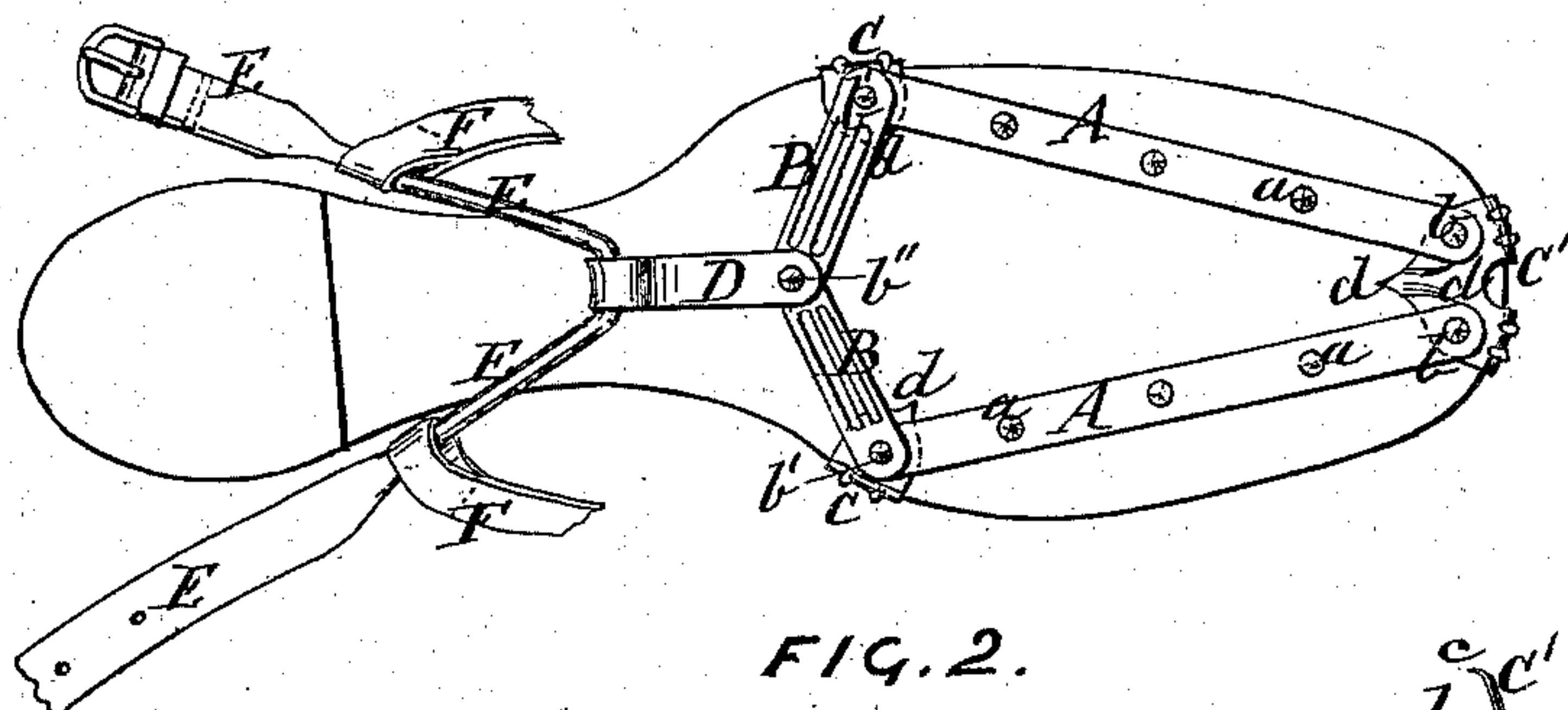


FIG. 2.

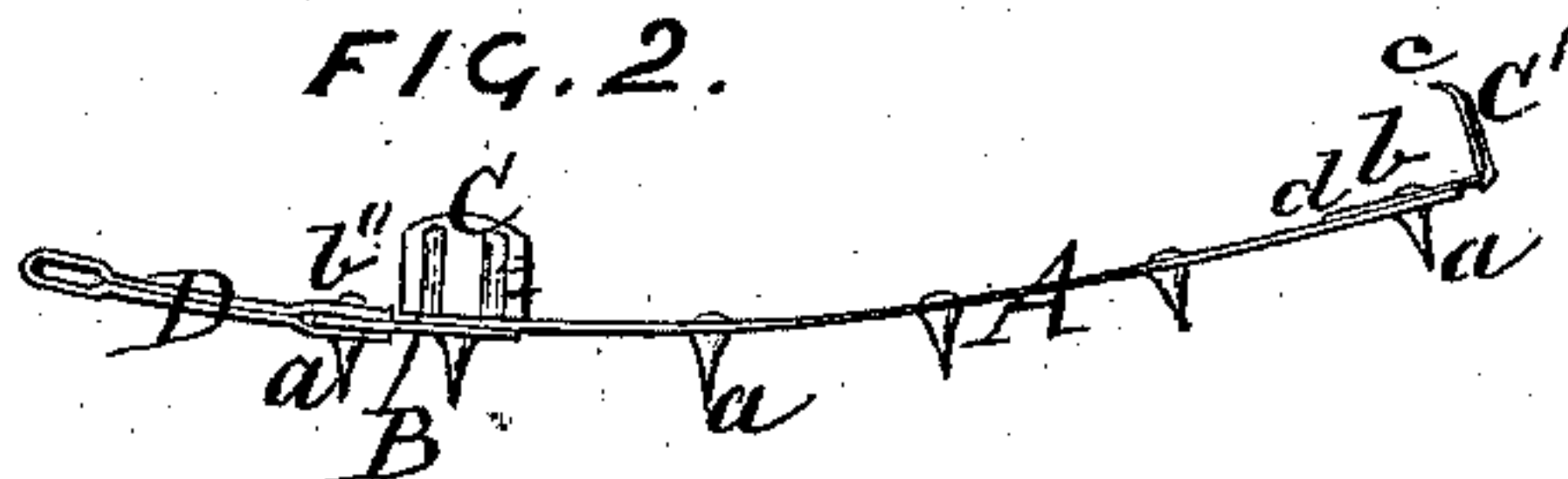


FIG. 3.

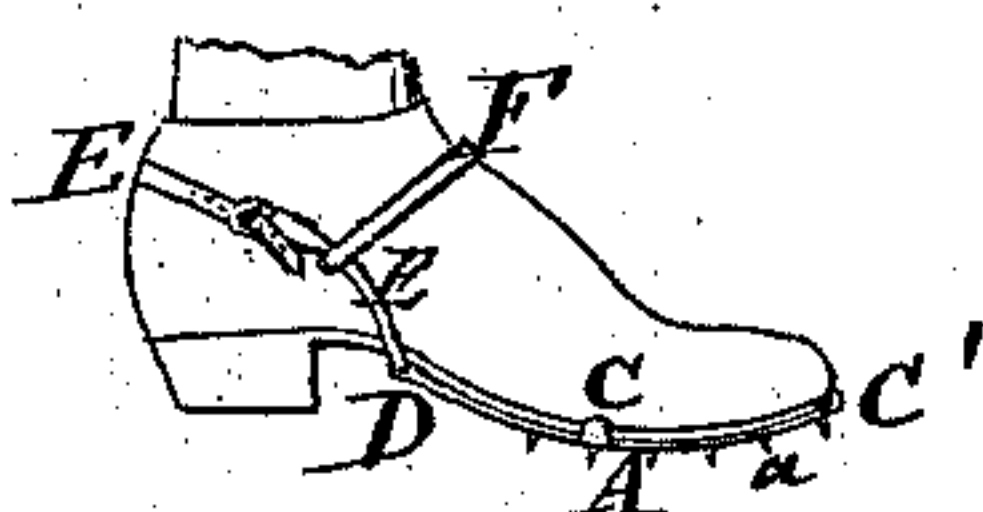
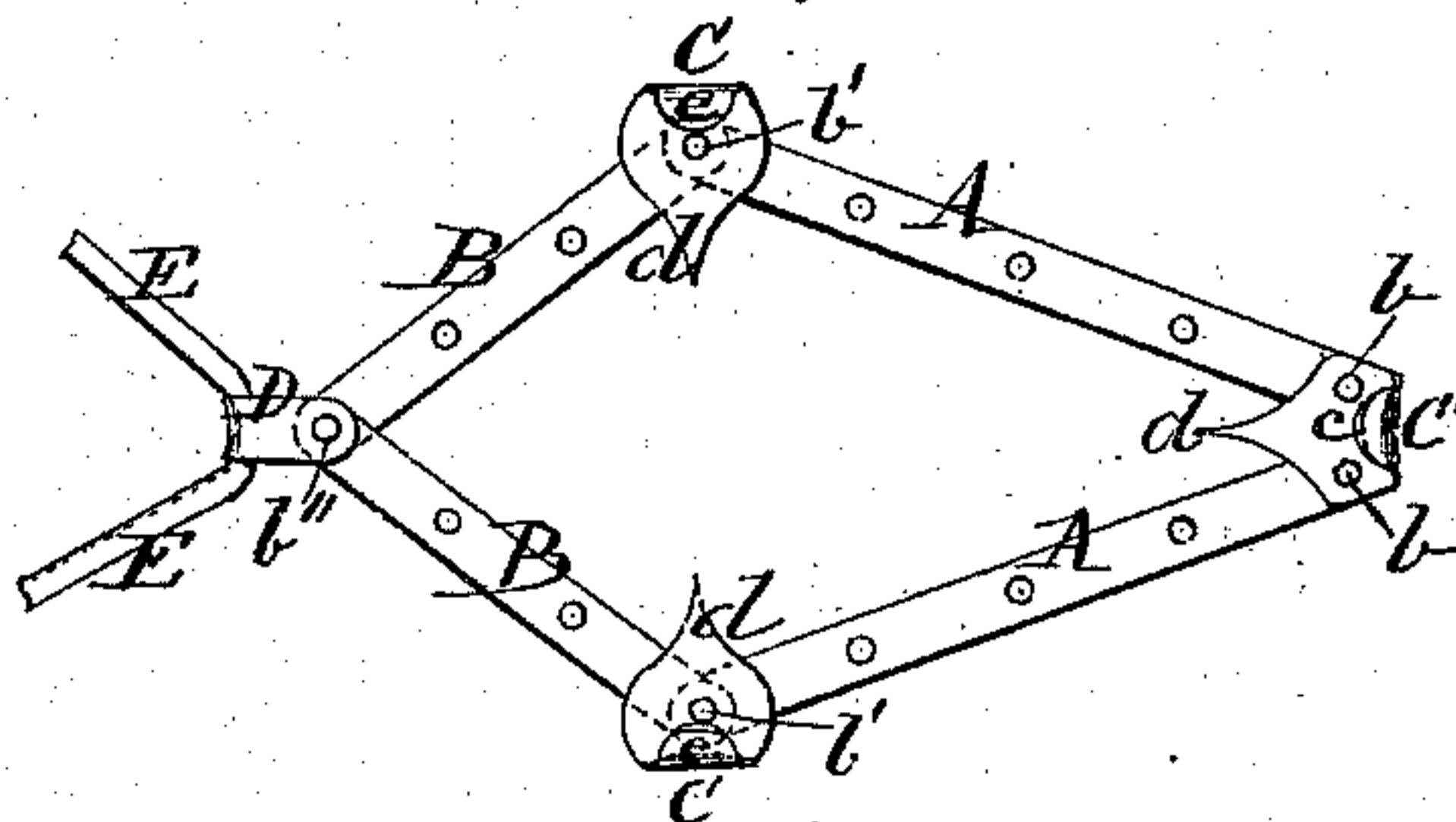


FIG. 4.



Attest:
Philip Mauro
Notary Public

Inventor:
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by Apollon
his attorney.

UNITED STATES PATENT OFFICE.

HENRY BLAND, OF LUTON, COUNTY OF BEDFORD, ASSIGNOR TO WILLIAM BROWN LASSCELL, OF LONDON, ENGLAND.

ICE-CREEPER, &c.

SPECIFICATION forming part of Letters Patent No. 252,349, dated January 17, 1882.

Application filed November 23, 1881. (No mod l.) Patented in England August 29, 1881.

To all whom it may concern:

Be it known that I, HENRY BLAND, a subject of the Queen of Great Britain, and residing at Luton, county of Bedford, England, have
5 invented an Ice-Creeper or Device to be Applied to a Boot or Shoe to Prevent Slipping, (for which I have obtained a patent in Great Britain, numbered 3,760, dated August 29, 1881,) of which the following is a specification.

10 My said invention relates to a peculiar construction and arrangement of a removable expanding and contracting appliance to be worn on a boot or shoe in order to afford a better foothold or prevent persons slipping when
15 walking or running; also, to the mode of attaching or securing the same. The said appliance is also suitable for use in games—such as cricket, foot-ball, tennis, and the like—or as an ice-creeper.

20 My improved appliance consists, essentially, of four narrow thin steel links or strips jointed to three clamps at their extremities and to a metal loop or connecting-piece at the rear end, the whole forming an expanding light
25 frame. The front clamp is bent over so as to take a firm hold of the toe of the sole, and the two side clamps are similarly bent over, so as to embrace firmly the two opposite sides of the sole near the waist of the boot or shoe. The
30 two longer links, forming the front portion of the appliance, are provided with conical steel spikes to improve the foothold; while the two shorter links, forming the rear portion of the appliance, and which may or may not be provided with spikes, act as toggle-jointed levers,
35 which, when drawn back toward the heel, tend to produce a simultaneous gripe of the three clamps upon the toe and the two opposite sides of the sole near the waist, such gripe being
40 brought or maintained in action by the aid of a strap or its equivalent passing through the metal loop attached to the rear joint and carried upward slightly, so as to pass round the back of the boot or shoe just above the heel of
45 the wearer. This strap may be supported in its proper position, if found desirable, by a second looped strap passing across the instep, through the loops of which strap the tightening-strap is passed. The above-described ex-
50 panding appliance can be readily removed and

replaced, and will fit various sizes of boots or shoes, while the spikes, being secured to the metal strips or links by riveting or otherwise, will be much more firmly held upon the foot than when they are simply inserted into the
55 leather sole direct. Moreover, all injury to the sole and the changing of the boot or shoe for the particular purpose required is entirely obviated.

In order that my said invention may be fully
60 understood, I shall now proceed more particularly to describe the same, and for that purpose shall refer to the several figures on the explanatory sheet of drawings hereunto annexed, the same letters of reference indicating
65 corresponding parts in all the figures.

Figure 1 of my drawings represents an under side plan view of one form of my improved appliance fitted to the sole of an ordinary boot or shoe and adapted for use in cricket and
70 other like games where it will be subjected to severe strains. Fig. 2 is a corresponding side elevation of the same appliance detached. Fig. 3 is a side elevation of a boot or shoe, drawn to a smaller scale, showing the mode of securing
75 the said appliance and the arrangement of the securing-straps. Fig. 4 is a plan showing the upper surface, or that next the sole of the boot or shoe, of a slightly modified and lighter construction of the said appliance as adapted for
80 ordinary walking purposes or as an ice-creeper.

A A and B B are the four narrow thin steel links or strips. C, C, and C' are the three clamps. D is the metal loop through which the fastening-strap or its equivalent, E, is
85 passed. *a a* are the holding steel spikes secured into the two longer links, A A, as shown in Fig. 1, and in some cases also into the shorter links or toggle-jointed levers, B B, as shown in Fig. 4. The front ends of the links A are each
90 separately connected by a joint-pin, *b*, of its own to the front or toe clamp, C', while the rear ends of the same links are jointed to the outer ends of the shorter links, B B, as well as to the side clamps, C C, by other joint-pins, *b'*,
95 passing through the two links and clamp. The contiguous or inner ends of the shorter links, B B, are jointed together and to the metal loop D by the joint pin *b''*. The several joint-pins *b b' b''* may be so shaped as to form
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holding-spikes in themselves, as shown in the drawings. The clamps each consist of a piece of metal bent up into the form of a hook or hooks at *c*, the base *d* of the clamp fitting against the under side of the sole and receiving the joint-pins *b b* or *b'*. These several clamps are each made self-adjusting by being left free to swivel or turn more or less on the joint-pins, and consequently fit the edge of the sole both at the toe and sides with great accuracy. The hooked part *c* overlaps slightly the projecting surface of the sole at the part below the upper-leather of the boot or shoe.

E is the main securing-strap or its equivalent, which passes through the metal loop *D* and is then carried backward and upward slightly, so as to pass round the back of the boot or shoe just above the heel of the wearer, this strap being maintained in position, if found desirable, by the looped cross-strap *F*, passing over the instep, as will be clearly understood on referring to Fig. 3. The appliance having been sufficiently expanded or opened out to admit of the several hooks of the clamps passing over the edge of the sole, it is, when adjusted in its proper position, readily and effectively secured onto the boot or shoe by simply tightening the strap *E*, which, by drawing backward the joint of the toggle-levers *B B*, causes the appliance to contract laterally and its clamps to gripe forcibly the edges of the sole. The appliance can be instantly loosened and removed when no longer required for use by simply releasing the strap *E*.

Although I prefer to connect each of the two side clamps, *C C*, with the links or strips *A* and *B* by a single joint-pin, *b'*, as shown, and to connect in like manner the contiguous or adjoining ends of the shorter links, *B B*, with the metal loop *D* by a single joint-pin, *b''*, it is obvious that the two separate joint-pins, as shown in the front clamp in Fig. 1, may be used, if desired, in all cases.

Having now described and particularly ascertained the nature of my said invention and the manner in which the same is or may be used or carried into effect, I would observe, in conclusion, that what I consider to be novel and original, and therefore claim, is—

A device to be applied to a boot or shoe to prevent slipping, comprising two long spiked links, jointed at their front ends to a toe-clamp and at their rear ends to side clamps, two shorter strips jointed to said side clamps and to a metal loop, and a fastening strap or device connected with said metal loop, all combined and operating substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY BLAND.

Witnesses:

CHAS. MILLS,

WM. GORTON,

Both of 47 Lincoln's Inn Fields, London.