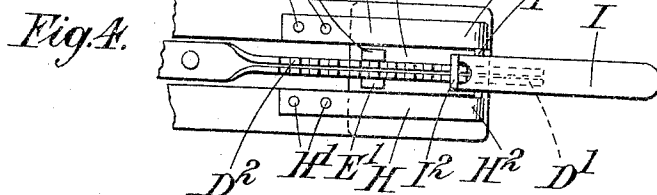
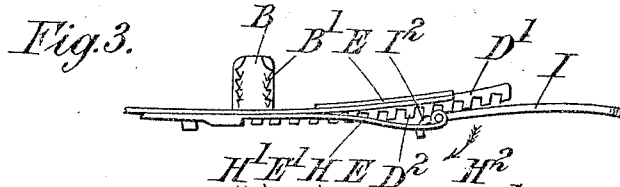
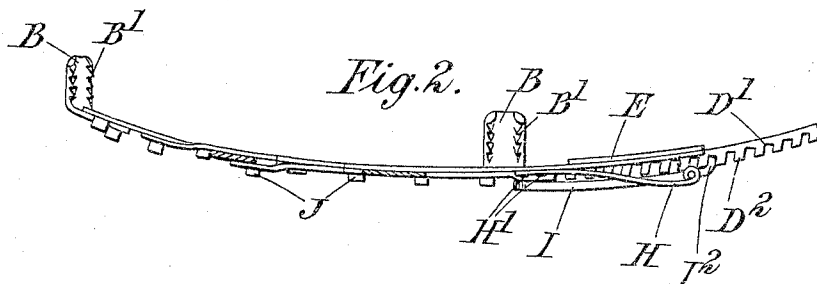
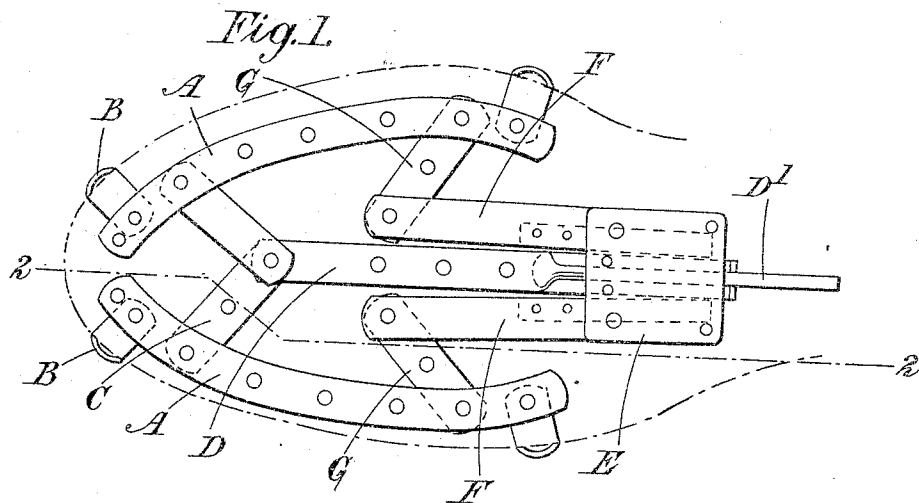


C. WALDSTEIN.
ATTACHMENT FOR BOOTS OR SHOES.
APPLICATION FILED JAN. 19, 1909.

958,984.

Patented May 24, 1910.



Witnesses:
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his Atty.

UNITED STATES PATENT OFFICE.

CHARLES WALDSTEIN, OF CAMBRIDGE, ENGLAND.

ATTACHMENT FOR BOOTS OR SHOES.

958,984.

Specification of Letters Patent.

Patented May 24, 1910.

Application filed January 19, 1909. Serial No. 473,070.

To all whom it may concern:

Be it known that I, CHARLES WALDSTEIN, a subject of the King of England, residing at Cambridge, in England, have invented certain new and useful Improvements in Attachments for Boots or Shoes, of which the following is specification.

This invention relates to attachments for boots or shoes by means of which studs, spikes or the like, such as are used in various games may be readily attached to, or removed from an ordinary boot, thus obviating the necessity for a special boot.

According to this invention in a frame or support carrying studs or other devices or device there is combined with a linkwork of members readily attachable to or removable from a boot or shoe, a tightening and locking device comprising a slot or rack and a lever engaging therewith.

Other features of this invention will be evident from the following description taken in connection with the accompanying drawings, in which—

Figure 1 is a plan view of a frame or support carrying studs showing one method of carrying this invention into effect. Fig. 2 is a section on the line 2—2 of Fig. 1. Fig. 3 is part of a section corresponding to Fig. 2 but showing the device unlocked. Fig. 4 is an under plan view of part of the device shown in Fig. 1 but with the device unlocked.

Like letters indicate like parts throughout the drawings.

Referring to Figs. 1 to 4 two side bars A are provided having pivoted to them clips B. The clips B are provided with teeth B'. Pivoted to the bars A are two links C. The links C are pivoted together and to a rod D. A plate E has riveted to it two strips F. Pivoted to the rods A and the strips F are links G. Two springs H are riveted at one end H' to the strips F (Fig. 4). A lever I has two projections I' which form an axis for it, these projections I' being supported in the free ends H² of the springs H which are bent for this purpose. The lever I is provided with a curved end I².

The free end D' of the rod D is bent to form a narrow strip and a number of teeth D² are cut thereon thereby forming a rack. The rod D' passes between the plate E and the lever I and is guided by two projec-

tions E' on the plate E. Studs J are riveted to the links and other parts of the frame.

The device operates as follows:—With the lever I in the position shown in Figs. 3 and 4 the frame is ready for attachment to the boot or shoe. By pushing the rod D by means of its extension D' to the left the bars A are separated so that the frame is adapted to be attached to a relatively larger sized boot. When the frame is in position on the sole of the boot or shoe the lever I is rotated, against the action of the springs H, from the position shown in Figs. 3 and 4 to the position shown in Figs. 1 and 2, the lever being rotated in the direction indicated by the arrow in Fig. 3. In this rotation the curved end I² engages with one of the teeth D² and pulls the member D and its extension D' from left to right, thereby bringing the bars A toward each other and firmly locking the clips B against the edges of the boot or shoe. The lever I and teeth D² consequently act both as a device for moving and closing the bars together and for finally locking the frame on the boot. It will be evident that the springs H tend to keep the lever I in either the locked or unlocked position.

Frames constructed according to this invention may be employed for attaching devices other than non-slipping ones to the soles of boots or shoes; for example, skate blades: in this case the locking means would be toward one side of the blade the bars being altered in length to allow this.

Various modifications can obviously be made in the method of carrying this invention into effect. For example the linkage shown in Figs. 1 to 4 can be altered so that the lever I lies when locked in the opposite direction and so rests in the arch of the boot. In this case the rack may be rigidly attached to the plate E and the lever pivoted to the link D. Further, instead of spikes or studs other non-slipping devices, for example, the flat bars used in football boots may be carried by the frame.

Although primarily intended for use in connection with the sole of a boot, the frame may be adapted for engagement with the heel, or with the whole under-surface of the boot.

One slot only may be employed instead of a complete rack in the locking devices and

in that case each frame would not be adjustable but only fit one size of boot.

What I claim as my invention and desire to secure by Letters Patent is:—

- 5 1. In a device of the character described, the combination with a pair of rigid bars adapted to be oppositely positioned near the side edges of the shoe sole, of a clip attached to each bar near each end thereof and adapted to engage the rim of the shoe sole, means for permitting the rear ends of the bars to move inwardly within fixed limits, a plate longitudinally arranged intermediate said rear ends, a rod longitudinally movable with reference to the plate, a pair of toggle links pivoted at their outer ends to the side bars near the forward ends thereof, and at their inner ends to said rod, and means for moving the rod longitudinally and locking it in position.
- 20 2. In a device of the character described, the combination with a pair of rigid bars adapted to be oppositely positioned near the side edges of the shoe sole, clips attached to said bars at their forward and rear ends, respectively, and adapted to engage the edges of the shoe sole, bars adapted to rest upon the shoe sole intermediate the side bars and provided with a longitudinal passageway between them, toggle links connecting said intermediate bars with the side bars near the rear ends thereof, other toggle links pivoted together and connected to the side bars near the forward ends thereof, a rod pivoted to the joint of the last named
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toggle links and adapted to be moved longitudinally in the aforesaid passageway and means for locking the rod in position.

3. In a device of the character described, the combination with a pair of rigid bars adapted to be oppositely positioned near the side edges of the shoe sole, clips attached to said bars at their forward and rear ends, respectively, and adapted to engage the edges of the shoe sole, bars adapted to rest upon the shoe sole intermediate the side bars and provided with a longitudinal passageway between them, toggle links connecting said intermediate bars with the side bars near the rear ends thereof, other toggle links pivoted together and connected to the side bars near the forward ends thereof, a rod pivoted to the joint of the last named toggle links and adapted to be moved longitudinally in the aforesaid passageway, said rod being provided with rack teeth, a pair of springs attached to the under surface of the plate and having bearings at their forward ends, and a lever having pintles journaled in the bearings of the springs and provided with a curved end adapted to engage with the rack teeth of the rod to move the rod and lock it in position.
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In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHAS. WALDSTEIN.

Witnesses:

HAROLD WADE,
HARRY B. BRIDGES.