

H. B. BORNSIDE.
HEEL AND SOLE PROTECTOR.
APPLICATION FILED NOV. 16, 1910.

1,006,627.

Patented Oct. 24, 1911.

Fig. 1.

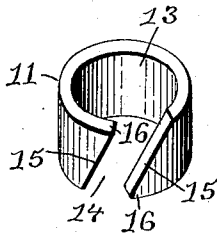


Fig. 2.

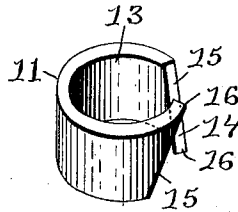


Fig. 3.

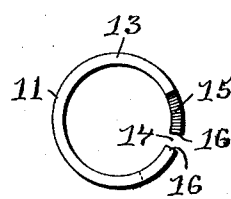


Fig. 4.

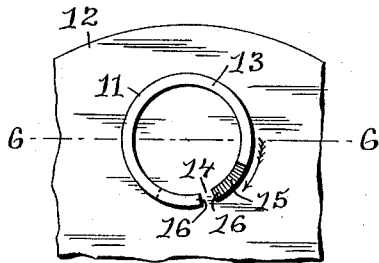


Fig. 5.

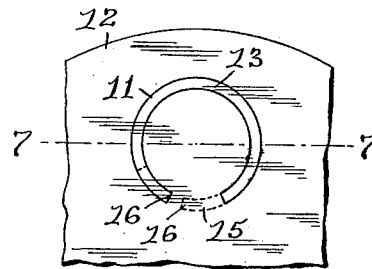


Fig. 6.

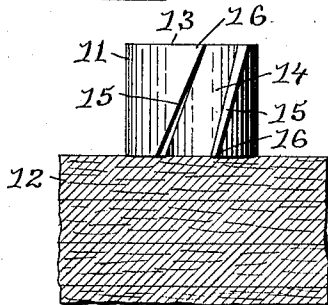


Fig. 7.

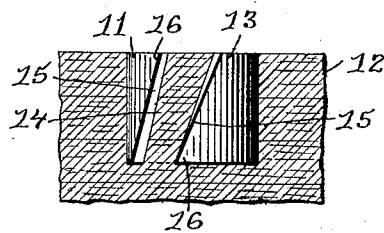


Fig. 8.

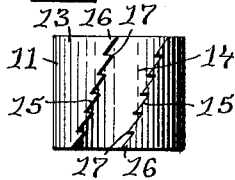


Fig. 10.

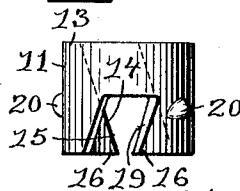
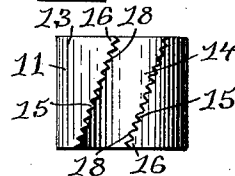


Fig. 9.



WITNESSES:

John M. Muller
L. W. Luther

INVENTOR:

Harry Benjamin Bornside
By Charles H. Luther
ATTORNEY.

UNITED STATES PATENT OFFICE.

HARRY BENJAMIN BORNSIDE, OF PROVIDENCE, RHODE ISLAND.

HEEL AND SOLE PROTECTOR.

1,006,627.

Specification of Letters Patent.

Patented Oct. 24, 1911.

Application filed November 16, 1910. Serial No. 592,681.

To all whom it may concern:

Be it known that I, HARRY BENJAMIN BORNSIDE, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Heel and Sole Protectors, of which the following is a specification.

This invention has reference to an improvement in means for retarding wear on the heels and soles of boots and shoes, and more particularly to an improvement in metal heel and sole protectors for boots and shoes.

Heel and sole protectors as usually heretofore constructed, from a strip of metal bent into various forms, are driven straight into the heel or sole, and are comparatively hard to drive, are liable to tip and be unevenly driven and when straight and smooth are liable, when in use, to work loose and drop out of the heel or sole.

The object of my invention is to improve the construction of a heel and sole protector for boots and shoes whereby the protector is more easily and uniformly driven into the heel or sole of a boot or shoe, and is more accurately, firmly and positively secured or locked in the heel or sole, than has heretofore been done.

My invention consists in the peculiar and novel construction of a metal heel and sole protector having details of construction, whereby, while the protector is being inserted, a turning or rotary movement is given to the protector thereby bringing a point on the protector under the outer surface of the heel or sole, beyond the point of entrance, and firmly securing or locking the protector in the heel or sole, as will be more fully set forth hereinafter, and claimed.

Figures 1, and 2, are enlarged perspective views of my improved heel and sole protector in different positions. Fig. 3, is an end view of the protector. Fig. 4, is a bottom view of a portion of the heel of a shoe, showing the protector in position to be forced into the heel, the arrow indicating the direction in which the protector turns. Fig. 5, is a view similar to Fig. 4, showing the position the protector has assumed after the same has been driven completely into the heel. Fig. 6, is a sectional view taken on line 6, 6, of Fig. 4, showing the protector in position to be driven into the heel. Fig. 7, is a sectional view similar to Fig. 6, showing

ing the turning movement of the protector, as compared with Fig. 6, when the protector is forced completely into the heel. Fig. 8, is a side view of a modified form of protector, the inclined ends being provided with saw teeth. Fig. 9, is a side view of another modified form of protector, having different shape saw teeth, and Fig. 10, is a side view of another modified form of protector having an angular notch.

In the drawing, 11, indicates my improved heel and sole protector and 12, a portion of a shoe heel. The protector 11, is constructed preferably from a strip of metal having a uniform width and the protector is first cut out from the strip in the form of a flat blank of the required length with the ends cut off at parallel angles. The blank is then bent circular in form, as shown in Fig. 3. When completed, the protector is in the form of a cylinder having a circular body 13, open at each end and having a slot 14, extending at an angle from one end to the other and formed by the inclined ends 15, 15, of the blank, each inclined end 15, 15, having a point 16, as shown in Fig. 1. The protector may be formed from a tube having a spiral slot in the side, by cutting off predetermined lengths of the tube.

When used, the protector is placed in position with either end on the sole or heel, as shown in Figs. 4, and 6, and forced into the heel. As the protector is forced in, the inclined ends 15, 15, engage with the tongue of leather not cut by the protector, which coacts with the inclined ends 15, 15, on the protector, to give a rotary or turning movement to the protector, which turns on its center from the position as shown in Figs. 4, and 6, to the position as shown in Figs. 5, and 7. By this turning movement of the protector the point 16, on the inner end of the protector is brought under the outside face of the heel or sole as compared to its entrance point, as shown in Fig. 7, thereby more firmly securing or locking the protector in place. The rotary or turning movement of the protector assisted by the inner point 16, greatly facilitates the insertion of the protector in the heel or sole and the accurate positioning of the same. Also by inclining the ends a larger frictional surface is obtained.

The modified form shown in Fig. 8, has saw teeth 17, 17, formed on the inclined ends

16, 16, which prevent a retrograde movement of the protector, and this is also accomplished by a different form of teeth 18, 18, shown in the modified form in Fig. 9.

5 The modified form shown in Fig. 10, has in addition to the inclined slot 14, an angular notch 19, having the same inclination as the slot 14, and projections 20, 20, on the side. The angular notch 19, assists in the
10 turning movement of the protector and also by having an additional point 16, greatly increases the holding power of the protector. The points 20, 20, on the side also prevent
15 a retrograde movement of the protector. It is evident that the inclination of the slot 14, or the angle of the inclined ends 15, 15, forming the slot 14, in the side of the protector, may be varied, and the protector may be formed from a strip, a tube or by casting
20 and a plurality of the angular notches may be used, without materially affecting the spirit of my invention.

Having thus described my invention I claim as new and desire to secure by Letters
25 Patent:—

1. A heel and sole protector, comprising a cylindrical body open at the ends and having an inclined slot in its side, whereby the
30 protector is given a rotary or turning movement as the same is forced into the heel or sole of a boot or shoe.

2. A heel and sole protector, comprising a cylindrical body open at the ends and having an inclined slot in its side, said slot being
35 formed by two inclined edges of the body.

3. A heel and sole protector, comprising a cylindrical body open at the ends and having an inclined slot in its side, said slot being formed by two inclined edges of the
40 body, each inclined edge terminating in a point.

4. A heel and sole protector, comprising a cylindrical body open at the ends, two inclined edges on the body forming an inclined
45 slot in the side of the protector, and points formed by the juncture of the inclined edges and the ends of the protector.

5. A heel and sole protector, comprising a cylindrical body with open ends, two parallel inclined edges on the body forming an inclined
50 slot in the side and extending from end to end of the protector, and an angular notch in one end having inclined sides, the inclination of the notch coinciding with the
55 inclination of the slot.

6. A heel and sole protector, comprising a cylindrical body with open ends, two parallel inclined edges on the body forming an inclined slot in the side and extending from
60 end to end of the protector, an angular notch in one end having inclined sides, the inclination of the notch coinciding with the inclination of the slot, and points on the
65 side of the protector.

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

HARRY BENJAMIN BORNSIDE.

Witnesses:

L. W. LUTHER,
CHAS. H. LUTHER.