(No Model.)

S. M. STREET.

METALLIC SOLE PROTECTOR.

No. 281,209. Patented July 10, 1883.

Fig. 1.

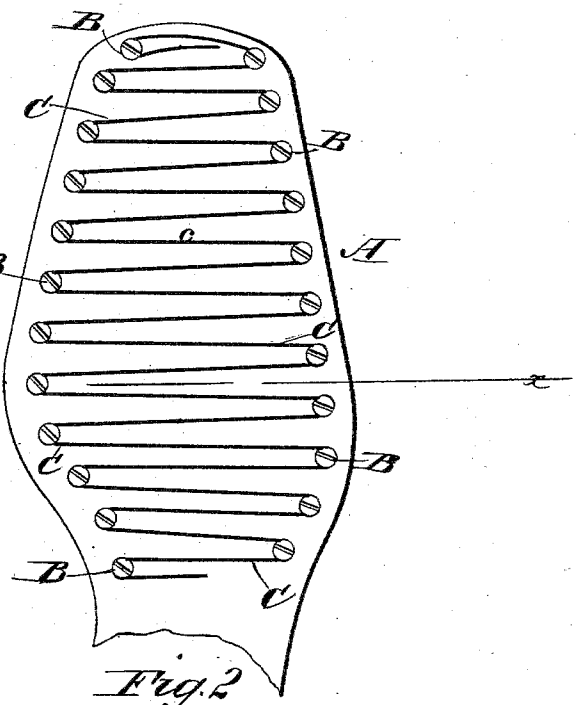


Fig. 5.

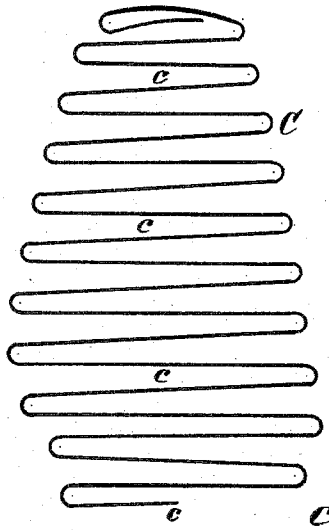


Fig. 2

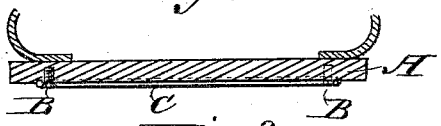


Fig. 3.

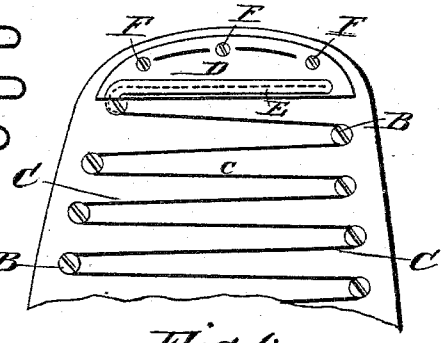
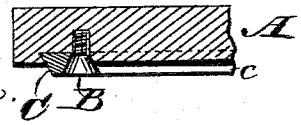


Fig. 4



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UNITED STATES PATENT OFFICE.

SAMUEL M. STREET, OF DALTON, GEORGIA.

METALLIC SOLE-PROTECTOR.

SPECIFICATION forming part of Letters Patent No. 281,209, dated July 10, 1883.

Application filed November 21, 1882. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL M. STREET, of Dalton, in the county of Whitfield and State of Georgia, have invented certain new and useful Improvements in Metallic Protectors for Boot and Shoe Soles; of which the following is a full, clear, and exact description.

My invention relates to improvements in protectors for the soles of boots and shoes, by which they are protected from wear, and still are pliable and easy to the foot of the wearer; and it consists of a protector formed of a wire bent alternately forward and backward to pass across the sole of the boot or shoe, to which it is secured by means of a series of screws placed at a short distance from the edge of the sole in the loops formed by the wire.

It also consists of a toe-plate which covers the end of the wire, and also protects the tip of the shoe from wear.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a face view of a boot or shoe sole, showing the metallic protector as applied. Fig. 2 is a cross-section of the sole shown in Fig. 1, taken on the line *x x*. Fig. 3 is a part of Fig. 1, showing the toe-plate attached. Fig. 4 is a sectional view of the sole, showing the protector and the manner of securing it to the sole; and Fig. 5 is a view of the wire protector ready for attachment to the sole.

A wire or other metallic strip, *c*, of any suitable form in cross-section, is bent alternately forward and backward in substantially parallel lines connected by loops at the ends, as shown in Fig. 5, by any suitable machine, to form a metallic protector, C, for attachment to the sole A of a boot or shoe of the ordinary construction, the bends or loops formed by the wire being at a little distance from the edge of the sole A and a short distance apart from each other, as shown. A series of screws, B, is screwed into the sole A, and so arranged in relation to each other that the screws B on one side of the sole A are opposite the spaces between the screws B on the other side, the wire passing alternately back and forth and around the screws B on each side of the sole A, and at the last of the screws B is firmly secured, thus making a serpentine metallic protector for the sole A. It is preferable to have the sole A of a single thickness of leather; but more thicknesses may be used, if desired, and the wire *c* of the protector C may be partially or wholly embedded in the sole. The wire *c* may be round, square, or pyramidical in cross-section; but I prefer the latter shape, as shown in Fig. 4, as the broad base gives a better hold for the heads of the attaching-screws B. The wire *c* should be made of steel, as, being hard, it is better adapted to retain its shape and place upon the sole A; but it may be made of iron or other material.

A metal toe-plate, D, (shown in Fig. 3,) is provided with a groove, E, on its under side, which covers and secures the end of the wire *c* of the protector C, and is also provided with apertures, through which screws F are inserted that secure the toe-plate D to the sole A. If it is desired, the plate D may be of such size and shape as to extend over the tip of the shoe to prevent the toe from wearing. This form of the plate D is especially adapted for children's shoes.

I do not confine myself to the serpentine shape of the metallic wire protector, as it may be so arranged that the wire *c* shall pass square across the shoe. Neither do I confine myself to the use of screws for fastening it upon the soles A, as nails, rivets, or other suitable means may be used.

It will be readily seen that this metallic protector makes the sole durable, does not interfere with the natural flexibility and elasticity of the leather sole, and allows it to conform itself to the natural bend of the foot in walking, and, being stiff crosswise, it prevents the sole from running over to the side.

A protector made, as described, of wire has many advantages over plate protectors, as it gives a firm and secure hold, keeping the foot from slipping, and it is also much more pleasant in use, as it does not impair the natural flexibility of the leather sole.

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

1. As an improved article of manufacture, a protector for the soles of boots and shoes,

consisting of a wire bent alternately forward and backward, and having substantially the contour of a boot or shoe sole, as set forth.

2. The metallic wire protector C, in combination with the toe-plate D, substantially as shown and described, and for the purposes set forth.

3. In a protector for the soles of boots and shoes, a toe-plate, D, provided with a groove, E, on its inner surface, substantially as specified.

4. In a protector for the soles of boots and shoes, the sole A, screws B, metallic protector C, and toe-plate D, having the groove E, substantially as shown and described.

SAMUEL MURLEY STREET.

Witnesses:
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J. H. GORDON.