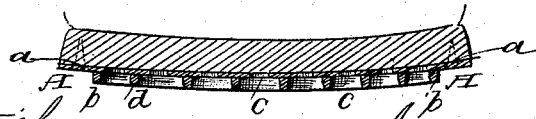
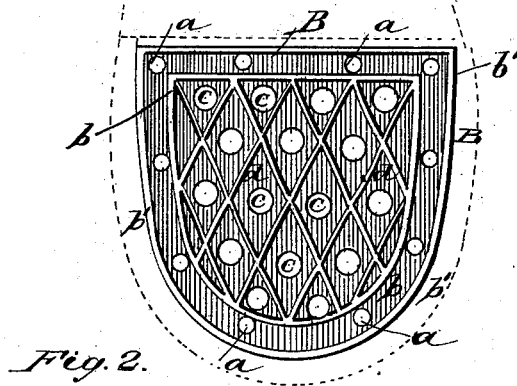
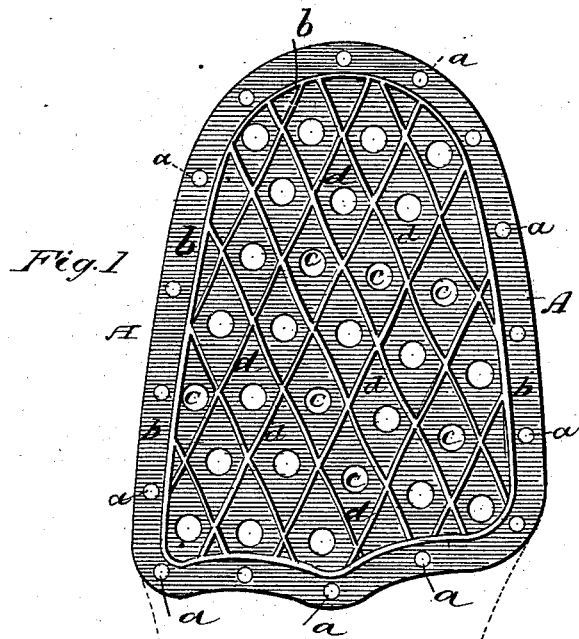


J. W. CLARSON.
Soles for Boots and Shoes.

No. 216,380.

Patented June 10, 1879.



Witnesses

Ed. G. Dietrich

August Peterson

Inventor

James W. Clarson
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UNITED STATES PATENT OFFICE.

JAMES W. CLARSON, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN SOLES FOR BOOTS AND SHOES.

Specification forming part of Letters Patent No. **216,380**, dated June 10, 1879; application filed March 11, 1879.

To all whom it may concern:

Be it known that I, JAMES W. CLARSON, of Baltimore, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Soles for Boots and Shoes; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a plan view, and Fig. 2 is a cross-section.

Similar letters of reference indicate corresponding parts in both the figures.

My invention relates to metallic protectors for the soles and heels of boots and shoes; and consists in the detailed construction of a metallic plate or sub-sole, provided with perforations and an interlaced webbing on the under side, and adapted to be secured upon the leather sole and heel of boots and shoes, substantially as hereinafter more fully set forth, and pointed out in the claim.

In the drawings, A is the plate or protector which is used upon the sole, and B is the heel-plate. Each of these plates is cut from thin sheet metal, of a configuration to conform to the shape of the sole and heel, and provided with a series of small holes, *a a*, along the edge, for their attachment by screws or rivets upon the boot or shoe. Running parallel to the edge of plate A, on the inner side of the perforations *a*, is a raised web or flange, *b*, inside of which is a series of perforations, *c c c*, separated from each other by wave-like ridges *d d*, which intersect or cross each other, as clearly shown in the drawings, so as to divide the under side of the sole into a series of lozenge-shaped sections, each of which is perforated in its center. Each of these ribs or

flanges may be made either of wire or narrow strips of metal, soldered or otherwise firmly secured upon the under side of the sole, or they may be formed by corrugating the plates A B in suitably-constructed molds or dies. I prefer to construct the heel-plate B with a doubler outer flange, *b b'*, between which the perforations *a* for securing the heel-plate upon the heel are arranged.

My improved protector admits of the proper ventilation of the sole-leather by means of its perforations *c c*, while at the same time the interlacing ribs *d d* form a web that will prevent slipping upon ice or other smooth surfaces.

I am aware that protectors for the soles of boots and shoes consisting of perforated metallic plates are old, and also that protectors of this class have been made with rows of obtuse pyramidal protuberances between the perforations; but by substituting an interlacing wave-line web, *d*, for the protuberances referred to a boot or shoe provided with my improved protector may be worn without injury to carpets or matting, as the web will not catch therein in walking over them.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

A protector for soles of boots and shoes, consisting of a sheet-metal plate of the required contour, provided with a raised web, formed by interlacing ridges *d* and perforations *c* in the sunken or depressed lozenge-shaped sections between the ridges, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

JAMES W. CLARSON.

Witnesses:

W. S. WILKINSON,
JAS. C. G. UNDUCT.