C. D. BIGELOW.

TOE-PROTECTORS FOR BOOTS AND SHOES.

No. 185,479. Patented Dec. 19, 1876.

Fig. 1.

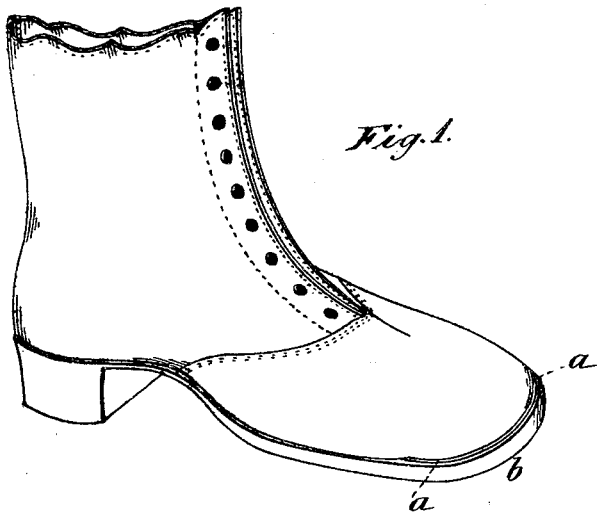


Fig. 2.

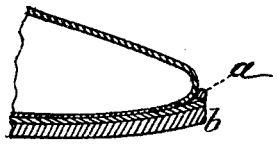


Fig. 3.

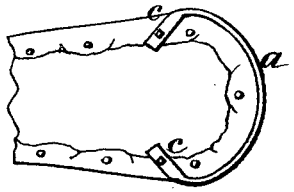


Fig. 4.

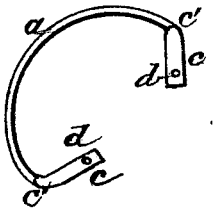


Fig. 5.

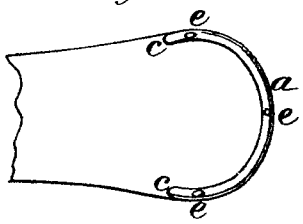
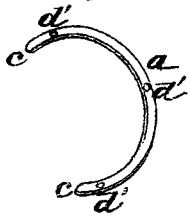


Fig. 6.



Witnesses;
Floyd Norris
S. W. Howard

Inventor;
Charles D. Bigelow
by Johnson & Johnson
Atty's

UNITED STATES PATENT OFFICE.

CHARLES D. BIGELOW, OF NEW YORK, N. Y., ASSIGNOR OF ONE-THIRD HIS RIGHT TO THE BAY STATE SHOE AND LEATHER COMPANY.

IMPROVEMENT IN TOE-PROTECTORS FOR BOOTS AND SHOES.

Specification forming part of Letters Patent No. **185,479**, dated December 19, 1876; application filed October 16, 1876.

To all whom it may concern:

Be it known that I, CHARLES D. BIGELOW, formerly of Brooklyn, but now of the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Wire Toe-Protectors for Boots and Shoes; and I do hereby declare that the following is a full, clear, and exact description thereof, 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, and to letters of reference marked thereon, which form a part of this specification.

My toe-protector is made of a piece of wire of suitable diameter and form for its purpose, which I bend to conform to the curve of the shoe-toe and fasten in several ways in place, so that it shall fit snugly in the outer junction-groove of sole and upper, to serve as a toe-protection. The methods of fastening I shall hereinafter specify. I may state here, however, that the protector is fastened to the under side of the lasted shoe before the sole is put on, to the middle or half sole, or to the outsole itself.

In the accompanying drawings, Figure 1 represents a view, in perspective, of a shoe with my metallic wire protection applied; Fig. 2, a longitudinal vertical section of the same; Fig. 3, a bottom view of a lasted shoe, showing the application of my protection and its fastening; Fig. 4, a perspective of the protection detached and as ready for the trade; Fig. 5, a top view of a middle sole or half-sole, showing a modified form of my protection attached; and Fig. 6, a view of such modified form of protector when unattached and ready for sale.

The toe-protector *a*, in the instance shown in Figs. 1, 2, 3, and 4, is a piece of wire bent to conform to the curve of the shoe-toe sole *b*, and also bent at a suitable angle at both its ends inwardly, for the purpose of forming bracing fastening ends *c*, which are flattened and perforated, as shown. This flattening out at the ends is done by stamping from one side, so as to leave small shoulders *c' c'*, which fit well against the edge of the lasted shoe. These ends are flattened for the obvious reason that they are the only parts which are between the sole and upper, and which, if inserted in their cylindrical form, would bulge the inner sole and be otherwise inconvenient. The protector thus described may be fastened by tacks driven through the perforations *d* to the lasted shoe. In the case of a pump-sole this form is used also. It is obvious that if the ends were bent in the plane at a right angle they would form hinges, whereby the protection might leave its place; but in the construction described and shown the protection is firmly braced and prevented from rising or turning. In Figs. 5 and 6, which represent a modified form of my invention, I bend the wire protection *a*, as before, to conform to the curve or outline of the shoe-toe, but omit the flattening and inward bending of the ends, since, being for application to a half or a middle sole, such bracing is rendered unnecessary, because the protector is thus provided with a carrying means, whereby it may be braced by fastenings at any point. I prefer in such case to pierce the protector *a* at *d' d' d'*, near its ends and at its middle, as shown, and to fasten it by rivets *e e e* to the middle sole, which are clinched. Its ends *c c* are merely rounded or tapered to avoid any sharp points. This latter form I design to sell to the trade with the rivets or without.

The curve of the bend may be altered by the shoe-manufacturer or artisan to suit any alteration in the prevailing style of curve.

The wire is preferably of brass, but may be other suitable metal, and may be japanned or otherwise colored, to assimilate to the color of the shoe.

The fastening of the protector being assured in either of the above ways, it is obvious to those skilled in the art that the manufacture of the boot or shoe is proceeded with and completed as usual, the sewing, pegging, wire or screw fastening not being in the least disturbed.

I claim—

1. A toe-protector made from wire, of suitable size and form, and adapted to be secured in position around the toe of a boot or shoe, substantially as shown, for the purpose described.

2. A toe-protector made from a cord of wire bent to conform to the outline of the toe of a boot or shoe, having its ends flattened and bent inward at a suitable angle, so that they may be permanently secured to the sole, with its body portion resting within the junction-groove of the sole and upper around the toe, all substantially as shown, for the purpose specified.

3. A wire toe-protector, bent to conform to the outline of the toe of a boot or shoe, provided with perforations adapting it to be secured to the sole around the toe, all substantially as shown and described.

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

CHARLES D. BIGELOW.

Witnesses:
A. E. H. JOHNSON,
J. W. HAMILTON JOHNSON.