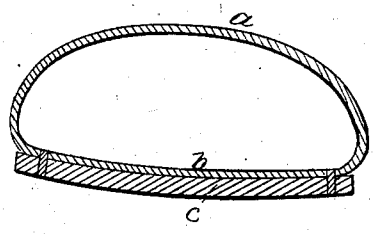
PALMER & HOUGHTON.

Shoe-Upper.

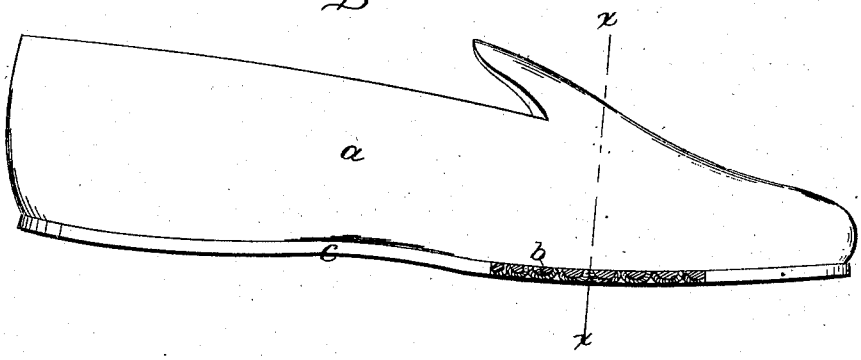
No. 98,793.

Patented Jan. 11, 1870

A.



B



C. W. Palmer
Chas. Houghton
by their Attys
Crosby Halsted & Gould

Witnesses
S. B. Ridder.
M. W. Frothingham.

United States Patent Office.

CHARLES W. PALMER, OF LYNN, AND CHARLES HOUGHTON, OF BOSTON, MASSACHUSETTS.

Letters Patent No. 98,793, *dated January* 11, 1870.

IMPROVED FELT SHOE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, CHARLES W. PALMER, of Lynn, in the county of Essex, and CHARLES HOUGHTON, of Boston, in the county of Suffolk, all in the State of Massachusetts, have invented an Improved Shoe; and we do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of our invention, sufficient to enable those skilled in the art to practise it.

Letters Patent No. 87,063 were granted on the 16th day of February, 1869, to one of us, (C. W. PALMER,) for an improved felt shoe. Such shoe is made seamless, or in one uncut piece, (being felted into shape,) and the sole is formed of greater thickness than the upper, to enable it to sustain the greater wear, to which its position subjects it.

Our present invention relates to a seamless felted shoe, and to the manner of rendering the sole thereof enduring.

The invention consists in a seamless felt shoe, fashioned in one piece, and to a uniform thickness throughout, to the sole of which is applied, by stitches or other suitable fastening-devices, an auxiliary or outer sole, preferably made of leather, or of some other material more enduring than felt.

The drawing represents a shoe, embodying our improvement.

A shows a section on the line *x x*.

B is a side view of the shoe, the outer sole and upper being slightly broken away, to show the fastenings.

a denotes the upper, and *b*, the sole, they being made of felt, or rather of fibres felted into shape, to form a shoe, by the ordinary process of felting, as employed, for instance, in forming hats, there being no seam or division of any kind.

The sole *b* is to be made of the same, or substantially the same thickness as the upper.

To its under surface is fastened the outer sole *c*. As before observed, this outer sole is preferably made of leather, but leather, board, or other material, possessing the proper degree of rigidity and flexibility, may be used.

The sole may be formed of any degree of thickness, in accordance with the wear to which the shoe is to be subjected. It may be fastened by stitches running through and through, from the outer surface of the outer sole to the inner surface of the inner sole, (the sewing being effected by the well-known McKay sole-sewing machine,) or nails, pegs, or other fastenings may be used.

It will be obvious that a shoe thus made is adapted to some extent to out-door wear, as well as a house-shoe, and that while it possesses the desirable qualities of softness, and capability of yielding to the form of the foot, the auxiliary sole renders it as enduring to wear as is an ordinary leather shoe.

The freedom of the main part of the shoe from seams gives to it a neat appearance, and there are no stitches to break or give way.

By making the wearing-sole of leather, or similar material, the shoe is better adapted to out-door walking, as the outer sole better withstands pressure upon stones, or other uneven substances.

It will be obvious that a heel may be similarly applied to the felt shoe, either in addition to the leather sole, or directly to the felt.

We claim a shoe, made as described, that is, with its upper, *a*, and the part *b*, which forms its inner sole, felted in one seamless piece, and of uniform thickness, and having an auxiliary or outer sole, *c*, made of leather or other suitable material.

CHAS. W. PALMER.
CHS. HOUGHTON.

Witnesses:
FRANCIS GOULD,
J. B. CROSBY.