

(No Model.)

E. H. NOBLE.
INSOLE.

No. 472,713.

Patented Apr. 12, 1892.

FIG. 1.

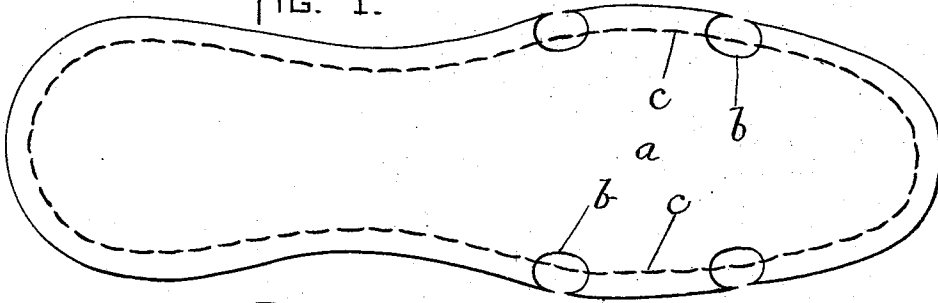


FIG. 2.

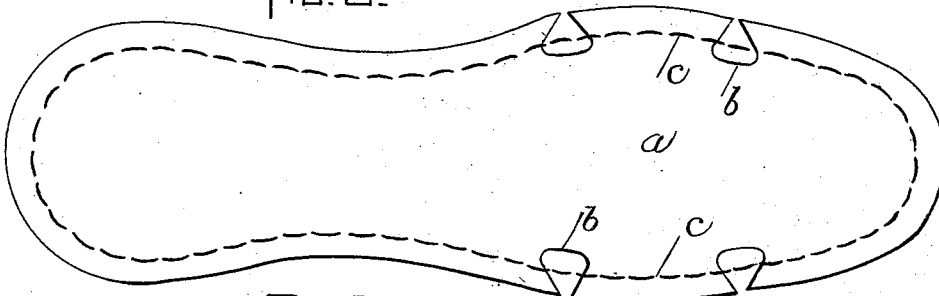


FIG. 3.

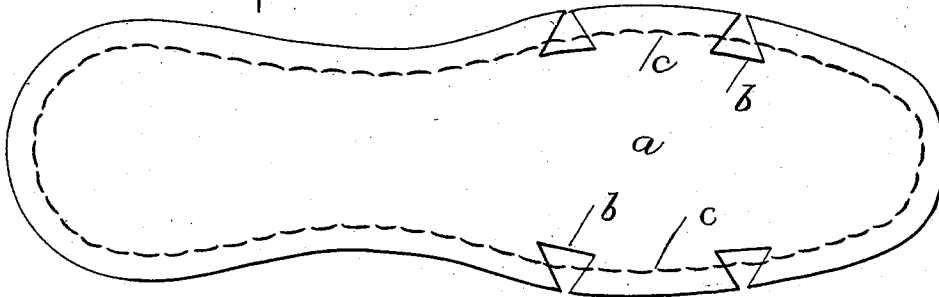
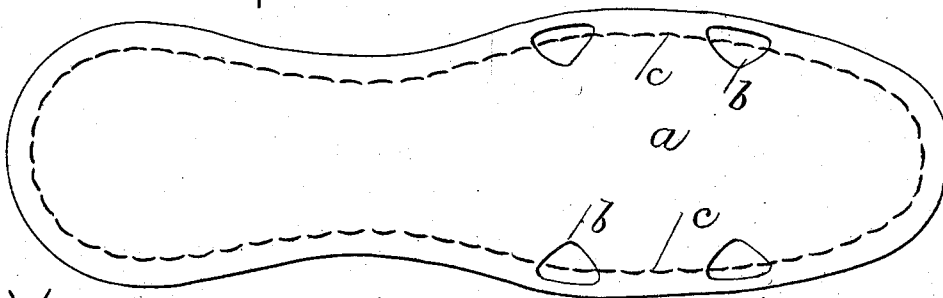


FIG. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

EDWARD H. NOBLE, OF SALEM, MASSACHUSETTS.

INSOLE.

SPECIFICATION forming part of Letters Patent No. 472,713, dated April 12, 1892.

Application filed October 5, 1891. Serial No. 407,679. (No model.)

To all whom it may concern:

Be it known that I, EDWARD H. NOBLE, of Salem, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Inner Soles, of which the following is a specification.

This invention relates to inner soles for boots or shoes; and it has for its object to provide an improved inner sole calculated to give more flexibility to the sole of the boot or shoe of which it forms a part.

The invention consists in an inner sole having recesses, as hereinafter described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 represents an inner sole embodying my invention. Figs. 2, 3, and 4 represent similar views showing different forms of the gaps or recesses.

The same letters of reference indicate the same parts in all the figures.

In carrying out my invention I take an inner sole *a* and stamp or cut out of it gaps or recesses *b* of the forms shown in the drawings. These recesses may be cut in the edge of the inner sole bordering on the ball of the foot. The object of these recesses is to increase the flexibility of the sole. To accomplish this result I find it is necessary to make the recesses *b* of sufficient width at the place where the line of stitches or other fastenings crosses them to allow of at least the length of one stitch or fastening between their sides or the length of parts of two of said stitches or fastenings. The line of the stitching or fastening uniting the outer and inner soles is shown by the dotted line *cc* in the drawings.

I am aware that an inner sole has been made having a plurality of slits in its edges. These slits have no breadth, and are consequently bridged over by a stitch or fastening, so that the slits are rendered inoperative, and the inner sole is so stiffened at its edges that it might as well have no slits at all. By making the recesses *b* so that their sides will not be joined by one stitch or fastening I am enabled to impart that flexibility to the inner sole which is so desirable.

It is well known that a stiff inner sole attached continuously all around its edge to the outer sole forms, as it were, a brace to the said outer sole and stiffens the shoe, and it

will be readily seen that an inner sole provided with narrow slits on its side edges and attached continuously to the outer sole all around its edge has very little, if any, more flexibility than an inner sole having an unbroken edge. My invention provides an inner sole which is not attached to the outer sole at certain places alongside of the ball of the foot, and which is therefore adapted to bend with the foot in walking and does not form a stiff brace to the outer sole.

To enable the inner sole to present a nearly-continuous edge as a support for the upper of the boot or shoe, thereby preserving its symmetry, I prefer to use the forms of the recesses *b* shown in Figs. 1, 2, and 3, although that shown in Fig. 4 may be used without material objection.

I am aware that an inner sole has been made with a long gap in its side. This form will certainly give flexibility to the shoe; but the long gap where the inner sole is not attached to the outer sole deprives the upper of support and causes an undesirable sagging of the latter, thus destroying the symmetry of the finished shoe. This objection is entirely obviated by my improved inner sole.

My improved inner sole, while providing the desired flexibility, also enables the shoe to be tapped or repaired without any possibility of the method used for repairing becoming useless for want of the necessary support from the inner sole.

It will be seen that my improvement tends to increase the comfort of the shoe to the wearer and to promote the durability of the shoe by giving elasticity and service to whatever means are used in fastening the parts of the shoe together.

I have shown my improved inner sole as provided with the recesses *b* alongside of the ball part of the foot; but it will be obvious that the recesses may be placed at any other part of the sole, if desired, and the recesses may be of other forms beside those shown in the drawings.

The improved inner sole is particularly superior to all other inner soles previously provided for this purpose of giving flexibility to the shoe in that it will not necessitate any material additional cost to make any shoe that is now made hard and stiff flexible and

comfortable, and the use of said improved inner sole also obviates the necessity of making the shoe hand-sewed or providing it with a welt in order to gain flexibility.

5 As before stated, I consider the principal feature to be the provision of recesses in the side of the inner sole which are adapted to receive one or more stitches or parts of
10 stitches or other fastenings between their sides, the same being of such small size at the edge of the inner sole as not to cause any material break in the continuity of said edge.

If desired, the gaps or recesses may be made entirely inside of the edge of the inner sole,
15 leaving the said edge absolutely continuous, as shown in Fig. 4, instead of being cut open at the edge, nearly the same flexibility being secured by this form as by those shown in
20 the other figures without cutting through the edge of the sole. This form more perfectly preserves the symmetry of the upper, as will readily be seen.

I claim—

1. The improved inner sole having a plu-
25 rality of short recesses formed in each side thereof and transversely of the sole and in the line of the stitches or fastenings secur-

ing said sole, each of said recesses being of varying width, its widest portion being wider than one of the stitches or fastenings or parts
30 of stitches or fastenings uniting the inner and outer soles, leaving the edge of the sole substantially continuous or unbroken, for the purpose set forth.

2. The improved inner sole having a plu-
33 rality of short recesses formed in each side thereof and in the line of the stitches or fastenings securing said sole, each of said recesses being wider than one of the stitches or fastenings or parts of stitches or fasten-
40 ings uniting the inner and outer soles, the material of the said inner sole outside the line of stitches or fastenings projecting or extending between the recesses and the edge of the sole to form a support for the shoe-upper.
45

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 26th day of September, A. D. 1891.

EDWARD H. NOBLE.

Witnesses:

C. F. BROWN,

A. D. HARRISON.