(No Model.)

# G. L. PREBLE & E. P. WORTH.

## INNER SOLE FOR BOOTS OR SHOES.

No. 553,422. Patented Jan. 21, 1896.

*Fig. 1.*

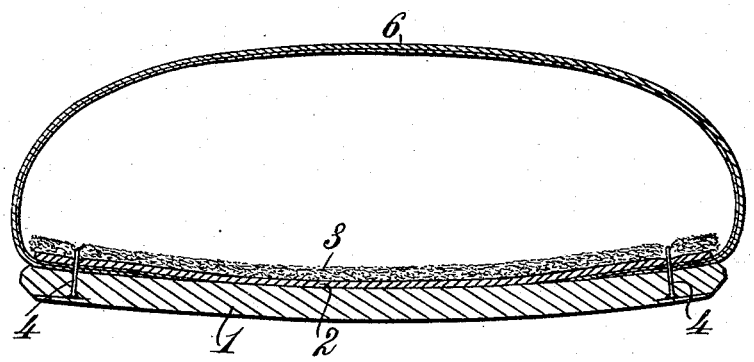



*Fig. 2.*

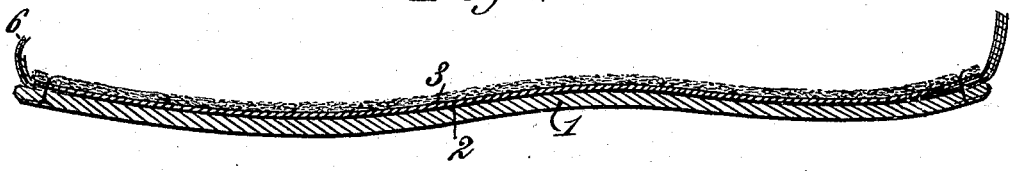
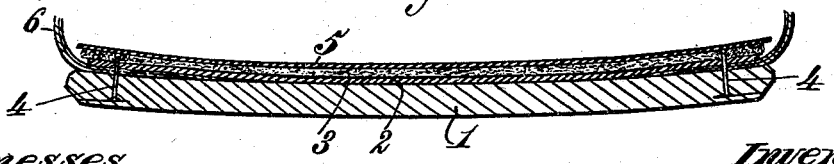



*Fig. 3.*

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# UNITED STATES PATENT OFFICE.

GEORGE L. PREBLE, OF LYNN, AND ELVIN P. WORTH, OF BOSTON, MASSACHUSETTS.

## INNER SOLE FOR BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 553,422, dated January 21, 1896.

Application filed February 23, 1894. Serial No. 501,228. (No model.)

*To all whom it may concern:*

Be it known that we, GEORGE L. PREBLE, residing at Lynn, and ELVIN P. WORTH, residing at Boston, Massachusetts, citizens of the United States, have invented new and useful Improvements in Inner Soles for Boots or Shoes, of which the following is a specification.

Our present invention relates to improvements in boots and shoes; and it consists of an improved boot or shoe embodying in its structure an outsole, an upper, a bottom layer of leather and an upper layer of felt cemented together to form an integral insole, and suitable fastenings for uniting the insole with the upper and outsole.

The object of our present invention is to provide an improved boot or shoe embodying in its structure an insole which combines the well-known advantages of the usual leather insole with the softness and flexibility sought to be obtained by the several forms of insole heretofore proposed as constructed of woven fabrics, not leather.

Our invention is illustrated in the accompanying drawings, in which—

Figure 1 is a transverse sectional view of a portion of a boot or shoe embodying our present invention. Fig. 2 is a detail longitudinal sectional view omitting the upper. Fig. 3 is a detail transverse sectional view showing a modification.

Referring to the drawings, 1 represents the outsole and 6 the upper, which may be of any suitable material.

The numeral 2 represents the lower layer of the insole, which is made of leather and which, owing to the felt backing hereinafter described, may be and is much thinner than the other leather inner sole.

The lower layer, 2, forms what we term the "body" of the insole, the function being to retain the seam or row of pegs, wire or other fastening which unites the insole with the outsole.

The numeral 3 represents the upper layer of the insole, which is made of felt and is cemented to the lower layer by suitable cement to form an integral sole.

The function of the upper layer, 3, is to strengthen and support the lower layer, 2, while the shoe is being made or repaired to form a comfortable and elastic tread for the shoe and to protect the feet of the wearer from the seam or row of pegs or other fastenings which unite the outsole, upper and insole.

When our improved shoe is constructed upon a McKay or "through-and-through" machine, so called, the seam is drawn below the surface of and embedded in the upper layer, as shown at 4, and when pegs, screw-wire or other metallic fastenings are used the same are clinched below the surface of the upper layer, 3, which in either case forms a perfect protection for the foot from any ridge or unevenness caused by the fastenings.

In a shoe provided with our improved insole a lining is not essential, although, if desired, a lining 5 of this leather or other suitable material may be provided which is cemented to the insole in the usual manner.

We are aware that it has been heretofore proposed to provide machine-sewed shoes with an insole of canvas or other woven fabric, as shown in United States Letters Patent to Hawkins, No. 316,780; but said shoe is clearly distinguishable from the shoe of the present application in that the insole has no leather body capable of retaining nails or pegs, so that when the first sole is worn off the shoe is valueless. The above distinction is also applicable to cases in which it has been proposed to provide an insole with a body of paper or porous pasteboard, as illustrated in United States Letters Patent to Williams, No. 89,105, or an insole of lamb's wool, as shown in Patent to Bliss, No. 497,067.

We are also aware that it has been proposed to form the body of the insole of burlap and tarred paper, as shown in Letters Patent to Buckingham, No. 351,849; but such device is clearly distinguishable from the present invention in that the combination of material named, if of sufficient compactness to retain pegs or nails, would impart such rigidity to the insole as to render it unfit for any but the coarsest and heaviest grades of work. We are further aware that it has been heretofore proposed to provide different forms of inner sole to be placed loosely in the finished

shoe upon, but without connection with, the insole proper, and such devices are clearly distinguishable from the present invention in that they are not embodied in the structure of the shoe, and their construction in no way affects the appearance, flexibility or durability of the shoe.

It is a fact well known by those skilled in the art that the peculiar properties of leather are such that when formed into an insole of the usual thickness it will retain the fastenings which secure it to the outsole and upper better than any other known material; but we are not aware that it has been known prior to our present invention that such peculiar properties could be retained in an inner sole formed of a thin sheet of leather by reinforcing the same with a layer of felt cemented thereon and uniting it with the outsole and upper, as hereinbefore described.

It is a well-known fact that when the sole of the boot or shoe is united to the upper by the through-and-through-sewing method the sole cannot advantageously be mended or renewed by tapping when worn out, for the reason that the same mode of sewing cannot be resorted to, and there is nothing capable of holding pegs, nails or screws; but our improved insole will hold either pegs, nails or screws as securely as though wholly made of leather, and the tapping of such worn-out soles becomes possible with their use.

Other advantages of our present construction are that while produced at a less cost than the usual leather insole it possesses all the advantages, together with increased lightness and flexibility, besides securing all the more important advantages sought to be secured by devices embodying a combination of materials and not leather.

We therefore claim as our invention and desire to secure by Letters Patent—

As a new article of manufacture, a boot or shoe comprising an upper, an outsole, a bottom layer of leather of sufficient thickness to retain nails or pegs when backed by a felt upper layer, said felt upper layer cemented to the lower layer to form an integral insole, and suitable fastenings for uniting the insole with the upper and outsole, substantially as described.

In testimony whereof we have hereunto set our hands and affixed our seals in presence of two subscribing witnesses.

GEORGE L. PREBLE. [L. S.]
ELVIN P. WORTH. [L. S.]

Witnesses:
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