

No. 788,354.

PATENTED APR. 25, 1905.

K. ENGEL.
SHOE.

APPLICATION FILED JULY 8, 1904.

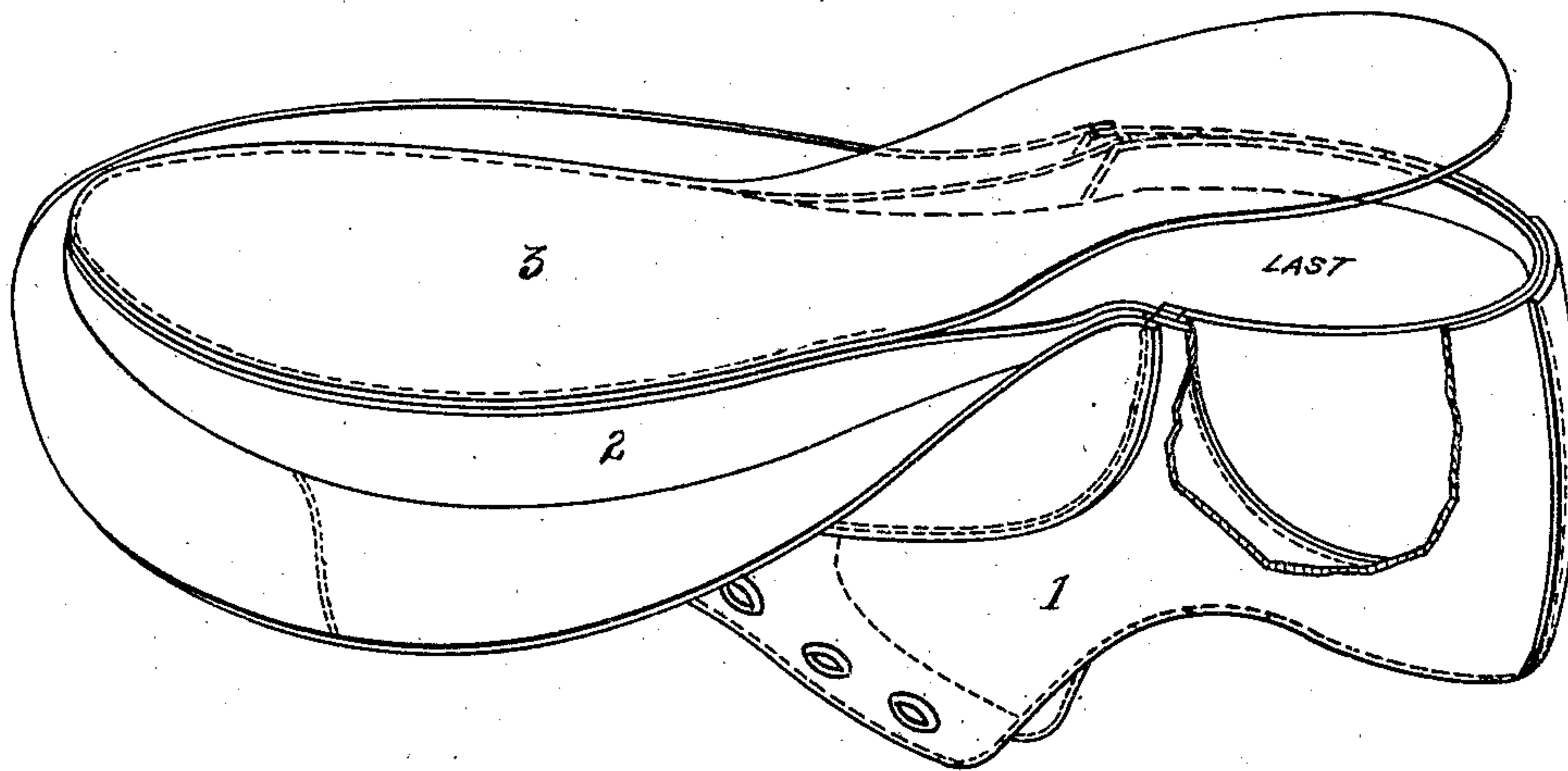


Fig. 1.

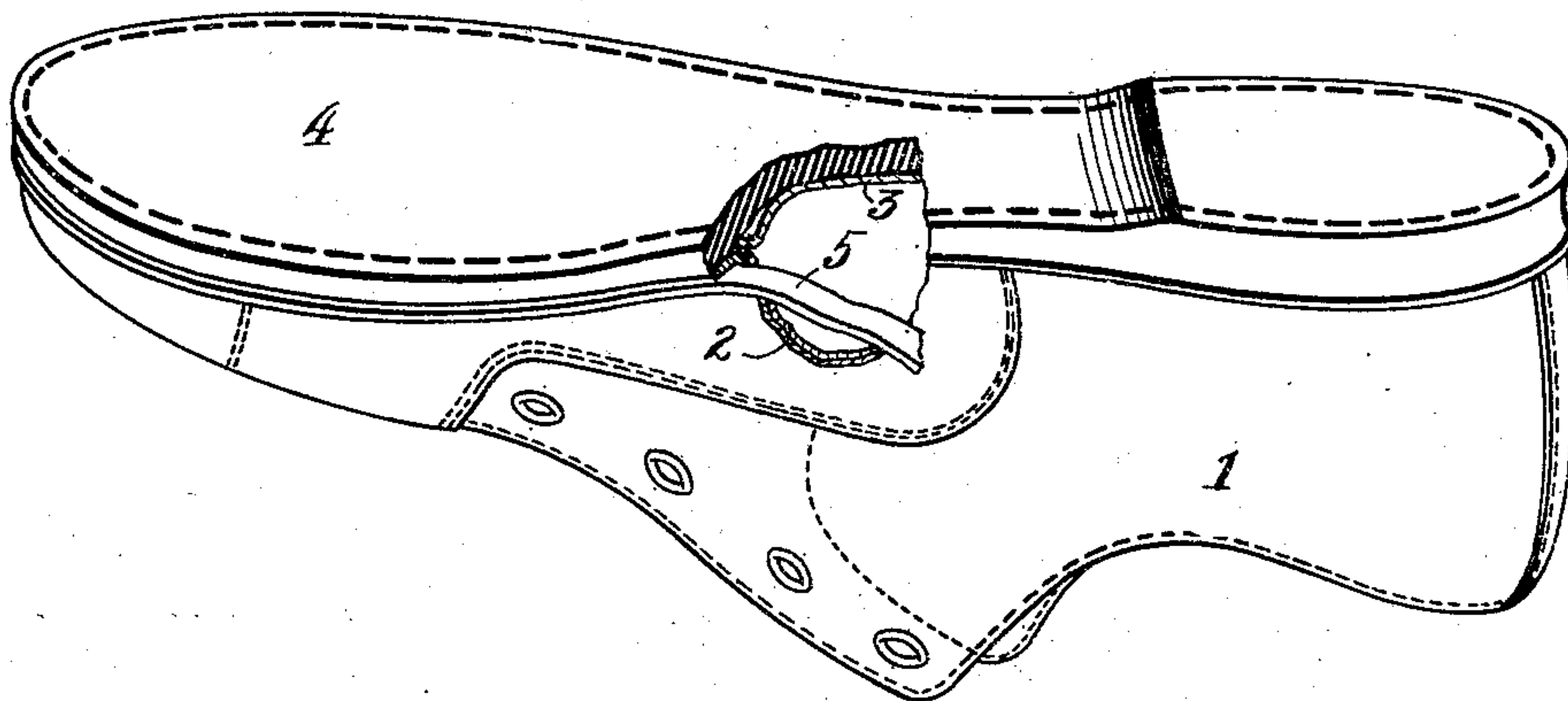


Fig. 2.

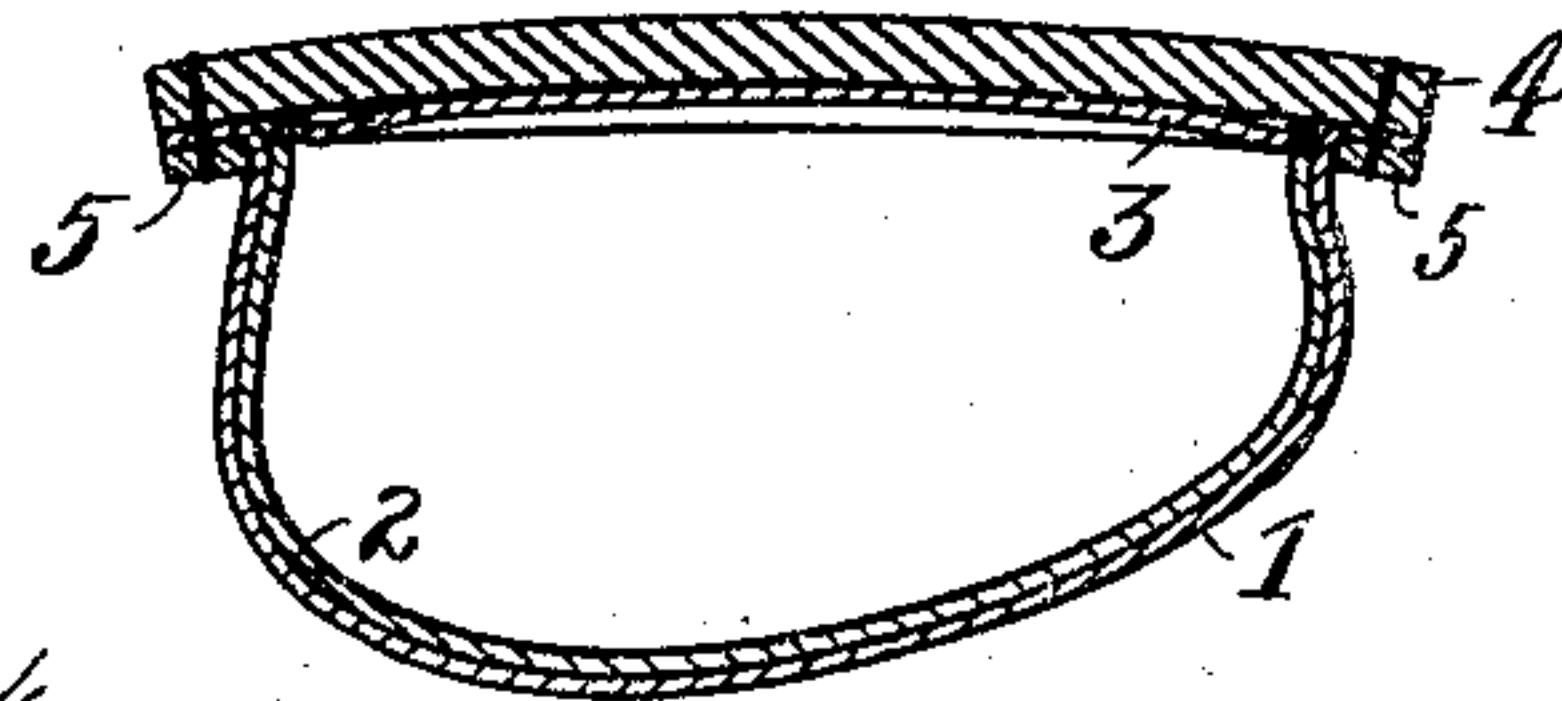


Fig. 3.

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UNITED STATES PATENT OFFICE.

KARL ENGEL, OF LYNN, MASSACHUSETTS.

SHOE.

SPECIFICATION forming part of Letters Patent No. 788,354, dated April 25, 1905.

Application filed July 8, 1904. Serial No. 215,762.

To all whom it may concern:

Be it known that I, KARL ENGEL, a subject of the German Emperor, residing at Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Shoes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to an improvement in shoes, and more particularly to that class of shoes known as "stitch-downs," in which the upper is turned outwardly and stitched down to the sole. One of the principal objections in the past to this form of shoe has resided in the fact that after the stitches on the tread-surface of the sole were worn through the seam was liable to open, particularly along the ball, this being due apparently to the bending back and forth of the sole at this point under the lateral strains of the pressure of the foot upon the upper in walking. Practically considered, this objection has been such as to prevent the use of this method of making shoes except in the very cheapest grades of work.

According to the present invention it is proposed to produce a new form of shoe in which the upper is turned outwardly and stitched down to the sole completely around the shoe and in which additional means are provided for resisting the lateral pressure of the foot, thereby reinforcing the strength of the outseam with a further seam of stitches uniting the lining of the fore part of the upper with the sock-lining of the sole by a seam, making the upper-lining and sock-lining of material preferably stronger than is ordinarily used for this purpose, so they shall be able to take a portion of the strain of the foot upon the shoe, and thereby to relieve the outseam of a considerable portion of the strain which would otherwise be brought thereon. The sock-lining is sewed to the upper-lining around the fore part and is pasted down upon the heel portions of the sole, in which portion of the shoe the outseam alone is sufficiently strong to bear the strains exerted thereon. The shoe has the advantages over the ordinary stitch-

down of increased strength and durability, and the shoe presents a neat and pleasing appearance and as well secures manifest economies in its construction. One of the features which recommend this form of shoe is the simplicity of the process of manufacture.

The present invention consists in the improved shoe hereinafter described, and particularly defined in the claim.

Referring to the accompanying drawings, illustrating the invention, Figure 1 is a perspective view of the shoe-upper on the last, showing the seam of stitches uniting the sock-lining and upper-lining. Fig. 2 is a similar view showing the sole attached, a portion of the shoe being broken away to show the construction; and Fig. 3 is a transverse section through the fore part of the shoe.

The method of making the shoe of the present invention is as follows: The upper 1 is made in the usual way. The upper-lining 2 around the fore part is made shorter than the upper, so that its lower edge extends approximately to the surface of the sole. The sole sock-lining 3 is made of the shape and size of the inside of the sole, and the fore part of the sock-lining is secured to the edge of the upper-lining by a seam of stitches, the edges of the sock-lining and upper being brought together and united by a seam. The size of the upper-lining and the size of the sock-lining are nicely designed, so that when the last is put in the upper the fore part of the sock-lining and the upper-lining secured thereto will closely and tightly fit the last. The sock-lining is made of rather thicker and stronger material than is ordinarily employed for sock-linings, but of material altogether different from that used in insoles, being preferably made of the same material that the upper-lining is made of. The parts being assembled on the last, the sole 4 is placed on the bottom of the last and temporarily secured thereto in the usual manner, after which the edges of the upper and the counter portion of the upper-lining are turned outwardly and stitched down to the sole, the seam extending entirely around the sole. A strip or welt 5, of leather, is fed in by the sewing-machine, which unites the upper and sole and is attached

at the same time, so that the seam passes through the welt and outwardly-turned edges of the upper and counter portion of the upper-lining and the edge of the sole. The heel portion of the sock-lining is pasted to the sole and is not secured to the upper-lining. The shoe thus made is pleasing in appearance and strong and substantial in construction and may be made by comparatively unskilled operators.

The upper-lining and sock-lining may be made of sheepskin in the smaller sizes of shoes and of heavy drilling in the larger sizes; but the invention is not limited to these materials, as others may be used, if desired.

In the illustrated embodiment of the invention the counter portion of the upper-lining is formed of a stiffer material than the remainder of the lining and forms a counter-stiffener for the shoe. It is within the contemplation of the invention, however, to provide a separate counter-stiffener, if desired, the lower edge of which will be turned outwardly with the lining, of which so far as the present invention is concerned it may be deemed a part, and secured to the edge of the sole, as hereinbefore described. By turning the lower edge of the counter portion of the upper-lining outwardly

its capacity to resist the pressure of the foot is increased. 30

Having thus described the invention, what is claimed is—

A shoe consisting of an upper, upper-lining, sock-lining, sole and welt, the upper-lining extending around the fore part to but not beyond the sock-lining and extending around the counter portion down for the full width of the upper, the upper-lining and sock-lining being united at their edges around the fore part by a continuous strong seam of stitches to take a substantial portion of the strain of the foot on the shoe, said parts being of such size that they are stretched tightly over the last during the construction of the shoe, the entire edge of the upper and the edge of the counter portion of the upper-lining being turned outwardly and secured to the edge of the sole by the welt and a seam of stitches extending entirely around the sole, substantially as described. 40 45 50

In testimony whereof I affix my signature in presence of two witnesses.

KARL ENGEL.

Witnesses:

HORACE VAN EVEREN,
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