(No Model.)

# I. E. BOOTH.

SOLE.

No. 590,564. Patented Sept. 28, 1897.

Fig. 1.

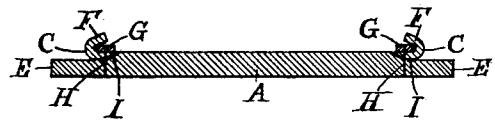



Fig. 2.

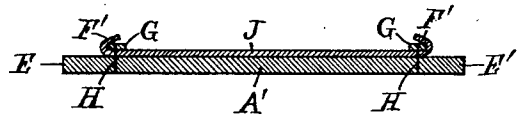



Fig. 3.

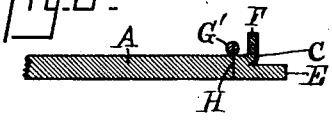



Fig. 4.

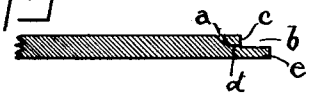
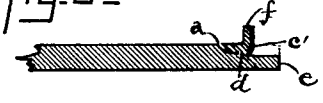



Fig. 5.




Witnesses.

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# UNITED STATES PATENT OFFICE.

IRVING E. BOOTH, OF ROCHESTER, NEW YORK, ASSIGNOR TO THE UNION WELT INSOLE COMPANY, OF SAME PLACE.

## SOLE.

SPECIFICATION forming part of Letters Patent No. 590,564, dated September 28, 1897.

Application filed February 6, 1897. Serial No. 622,369. (No model.)

*To all whom it may concern:*

Be it known that I, IRVING E. BOOTH, a citizen of the United States, and a resident of the city of Rochester, county of Monroe, and State of New York, have invented certain new and useful Improvements in Insoles for Shoes, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a cross-section of an insole embodying my invention. Fig. 2 is a cross-section showing a modified form of my said invention. Fig. 3 is a partial cross-section showing still another modification; and Figs. 4 and 5 are cross-sections of portions of insoles, illustrating the art prior to my invention.

This invention is an improvement in insoles for welt-shoes. It consists, mainly, in providing a support or guide-strip for the channel-guide of the inseaming-machine ordinarily used in the manufacture of shoes, but without making a cut into the insole as a channel for said channel-guide.

In Fig. 4 is shown the ordinary method of preparing a welt-insole which has a cut or channel *a* near its edge to receive the channel-guide of the sewing-machine, and a recess *b* on its edge to form a shoulder *c*, against which the upper and welt are drawn by the stitches of the thread *d*, which pass through the welt, the upper, and the outer face of the shoulder *c* and into the channel *a*. The channel-guide in sewing the parts together runs in the channel *a*, while the needle of the sewing-machine penetrates the face of the shoulder *c* through a portion of the insole to the bottom of the channel *a*.

In using the form of insole shown in Fig. 4 it is necessary to use a piece of leather of sufficient thickness to form a proper shoulder after the removal of the strip from the edge, which leaves the shoulder *c* and a projecting feather *e*. As leather is expensive, it is desirable to produce an insole of the minimum thickness and without waste of the leather itself in preparing it for use. Consequently another form of insole has been in use. (Shown in Fig. 5.) This latter form of insole has the feather *e* and the channel *a*, as in the form shown in Fig. 4; but the edge of the insole is split inwardly in a plane substantially parallel with the planes of the surfaces of the insole, thus forming two flaps, of which the feather *e* is one. The other flap, *f*, is turned upwardly from the feather *e*, and thus forms a shoulder *c'*; but a thinner piece of leather may be used for an insole of this character, since the height of the shoulder *c'*, formed by turning up the flap *f*, is greater in proportion to the thickness of the insole than in the case of the form shown in Fig. 4.

In the manufacture of welt-shoes it is highly important that the feather *e* should be stiff, and splitting of the edge of the insole to produce the feather tends to render it too flexible and weak. In the manufacture of welt-shoes this feather remains on the inside of the upper and presses against it. If the feather is stiff, this pressure will cause the upper to remain against the welt, but if the feather is weak it will curl or bend and the upper can draw away from the welt, producing an unsightly shoe.

In order to save leather, reduce waste, and thus permit the use of a high grade of leather with the least expense, I have produced my present invention, in which I dispense with the channel *a* (shown in Figs. 4 and 5) and leave the insole of its maximum strength. I also provide a fixed abutment for the channel-guide of the inseaming-machine which permits the needle to pass from the bottom of a shoulder on the outer edge of the insole, produced as hereinafter described, through a sufficient thickness of material to make a strong seam, while at the same time leaving a stiff feather on the insole.

Referring to Fig. 5, it would not be safe to omit the use of the channel *a* and rest the channel-guide against the inner side of the flap *f*, because said flap would yield to the pressure of the channel-guide and the position of the stitches would vary according to the amount of bending of said flap. Nor would the stitches pass through a sufficient thickness of the leather to form a strong seam; but by my invention, without cutting a channel in the insole, I produce a fixed abutment for the channel-guide, as above stated, without weakening the insole by cutting a channel into its surface.

In Fig. 1 is shown one form of my device, in which the sole A is split inwardly from the edge in a plane substantially parallel to the surfaces of the sole, thus leaving a feather E and a flap F, which may be turned upwardly from the feather E and inwardly over the sole. The outer portion of the flap F thus produces a shoulder C for the purpose above explained. Upon the upper surface of the sole is laid a guide-strip G of leather or of other suitable material, which runs substantially parallel to the edge of the sole and a little nearer the middle thereof than the bottom of the slit which creates the feather E and flap F. This guide-strip G is fastened to the sole by stitches H, which pass through the guide-strip and the sole. The channel-guide of the inseaming-machine rests upon the upper surface of the insole and against the inner edge of the guide-strip G, or if said guide-strip is wide enough to have an edge movable away from the insole the channel-guide may pass under the edge of said guide-strip. The stitches I I of the inseaming-machine pass from the bottom of the slit which separates the feather E from the flap F to the inner lower edge of the guide-strip or to a point under the same, thus passing through a sufficient thickness of leather of the insole A to give strength to the seam.

In Fig. 1 my insole is formed of two parts only—a single thickness of leather A, to form the insole, and a guide-strip G. In Fig. 2 is shown an insole constructed according to my invention, in which A′ is a thickness of leather, and J is a layer of fabric or of other suitable equivalent material provided with a guide-strip G upon the upper surface of the layer J and fastened to the same and to the insole A′ by the stitches H. The edge of the layer of fabric turns upward and rests against the outer edge of the guide-strip G in the same manner as shown in Fig. 1. The layer of fabric J may be cemented or otherwise fastened to the insole A′, or may be fastened to the same only by the stitches H. The edge F′ of said layer, however, is separated horizontally from the insole A′ to produce a feather E (the edge of the insole A′) and the bent edge F′. By either of these constructions the flap F or F′ may be turned up from the other flap, which constitutes the feather E or E′, and the guide-strip G provides a fixed abutment for the channel-guide of an inseaming-machine without cutting a channel in the sole, and a shoulder is formed on the edge of the sole to which the upper is drawn, whether the device is used as the outer sole of a turned shoe or as the insole of a welt-shoe.

In Figs. 1 and 2 the guide-strip G is rectangular in cross-section; but I do not limit my invention to a guide-strip of this form, and, for example, I show in Fig. 3 a guide-strip G′, cylindrical in cross-section, which is fastened to the upper surface of the insole in such a position as to form an abutment, above described.

The cylindrical guide-strip G′ may be made in still other ways, as by using a large under thread in the sewing-machine, and I intend by my claims to cover the use of any form of guide-strip laid upon the surface of the sole and sewed to the same in position to form an abutment for the channel-guide of the inseaming-machine.

What I claim is—

1. An insole having the edge separated to form two flaps and having a guide-strip sewed to the surface of the insole parallel to and so far from the edge thereof as to permit one of said flaps to be turned up from the other flap, whereby a fixed abutment is formed for the channel-guide of an inseaming-machine without cutting a channel into the insole, and a shoulder is formed on the edge of the insole to which the upper is drawn, substantially as described.

2. An insole split inwardly from the edge to form two flaps and a guide-strip sewed to the surface of the insole parallel to and so far from the edge thereof as to permit one of said flaps to be turned up from the other flap, whereby a fixed abutment is formed for the channel-guide of an inseaming-machine without cutting a channel into the insole, and a shoulder is formed on the edge of the insole to which the upper is drawn, substantially as described.

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Witnesses:
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