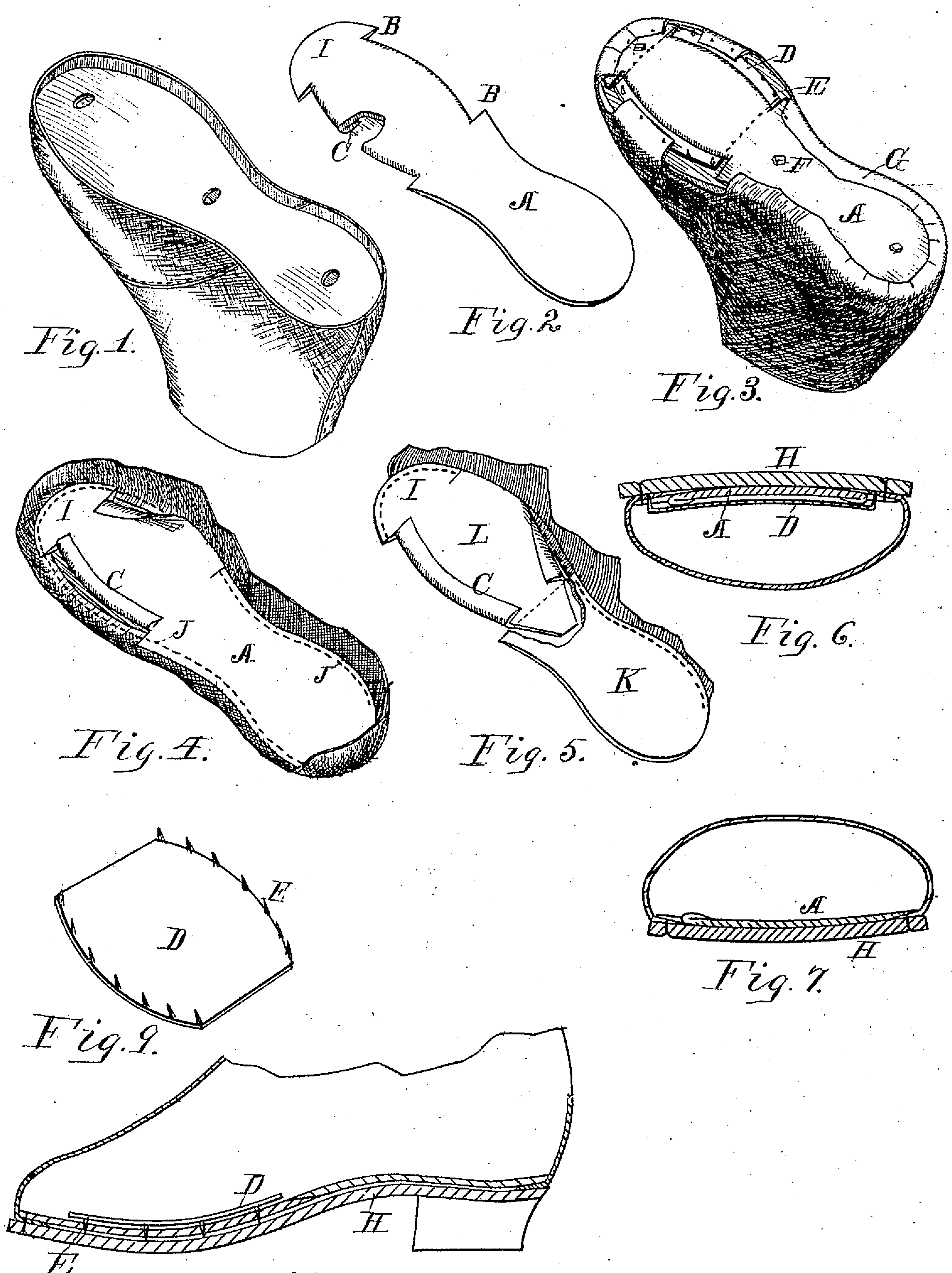
(No Model.)

W. ROGERS.

SHOE.

No. 284,066 Patented Aug. 28, 1883.



WITNESSES: Fig. 8.

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WARNER ROGERS, OF CINCINNATI, OHIO.

SHOE.

SPECIFICATION forming part of Letters Patent No. 284,066, dated August 28, 1883.

Application filed May 28, 1883. (No model.)

To all whom it may concern:

Be it known that I, WARNER ROGERS, of Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Shoes, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 is a perspective view of the under side of the last surrounded by the upper preparatory to placing slip-sole on the same. Fig. 2 is a view of the new and improved form of slip-sole or permanent inner sole, partly in section. Fig. 3 is a view of the inner sole placed on the last and the upper lasted thereto; Fig. 4, view of the inside or upper side of the inner sole after the inner sole, upper, and outer sole have been stitched together and before the flaps have been turned down, as in the finished shoe; Fig. 5, same view, showing the inner sole made in two parts; Fig. 6, cross-sectional view of shoe after the sole and upper have been stitched and before the retaining-plate has been removed; Fig. 7, same with retaining-plate removed and the side flaps of the inner sole pasted down onto the line of stitching; Fig. 8, vertical longitudinal section of shoe preparatory to removing the retaining-plate, and Fig. 9, view of retaining-plate.

The object of the present invention is to provide a way for making a shoe with a permanent insole without lasting the vamp to the forward part of the said insole by means of tacks, this inner sole being so made that only the rear half of it and around the toe is stitched to the outer sole and vamp, while the ball is left free without having the stitches exposed.

It is a well-known fact to manufacturers and users of the shoe that if both the insole and outer sole are stitched together, with the upper between, the sole becomes stiff, owing to the fact that the inner sole acts as a brace when the ball of the foot bends the same. This constant bending motion of the sole has tendency, owing to the binding and rubbing of the two soles, to gradually wear the stitching or cut the soles along the line of the stitching, thereby greatly destroying the efficiency, durability, and flexibility of the shoe. It is also well known that where the vamp is lasted by means of tacks to the ball of the inner sole, (where there is the most pressure from the foot and the most wear on the shoe,) and the tacks clinched and exposed on the upper side of the inner sole, these tacks work up through the inner sole as the shoe wears and become a great annoyance to the wearer, and often inflict permanent injury to the foot. It is a great desideratum, therefore, to produce a shoe which shall have the upper along the forward half of the shoe sewed onto the outer sole, but not to the inner sole.

In former applications for patents I provided for stitching an insole to the upper and to the outer sole along the rear half of the shoe, and in afterward placing a slip-sole in the forward half and pasting the same over the line of stitching. I find that while the shoe can by that means be successfully made in a cheap and efficient way, it is, in a measure, difficult to make a neat rounded toe, since there is no resisting or forming medium on the inside of the upper to which the upper can conform.

It is the object of this invention to make proper provision for these features, so that the insole will be made of one single piece extending through the entire length of the shoe, and have, when completed, the said insole stitched to the vamp and outer sole only along the rear half of the shoe and at the rounded toe portion, allowing the insole along the ball of the foot to be free from the outer sole and vamp, thereby making an easy flexible shoe to the foot, a durable article for wear, and a product which can be cheaply and quickly produced. To accomplish this purpose I first prepare for each shoe an inner sole, as shown by the blank A, Fig. 2, of the proper size and form, and midway between the ends, and near the forward end on each side, I cut a transverse slit, B, so as to permit a flap, C, to be turned under, as shown.

D in Fig. 3 shows a plate or pliable piece somewhat narrower than the bottom face of the last, but wider than the insole at the inturned portion. This plate is of sufficient length that it does not project forward nor to the rear of the slits B, or the inturned portion. The two outer edges of the plate are provided with pins E. Before the shoe is ready to be lasted, the plate D is placed on the last, with the pins E upturned, and the insole A put onto the last, over the plate, as shown in Fig.

2, with the folded-in wings C turned under and resting on the plate. The insole is then secured to the last by means of the pegs or nails F. The vamp is then turned down and lasted, as shown at G, to the insole, and also secured to the pins E on the plate along the inturned part C of the insole. It will be observed that the edges of the plate do not extend out far enough to interfere with the line of stitching, and that the inturned portion of the insole will prevent the stitching from uniting the insole to the sole and vamp. The nails F are then withdrawn, and the outer sole, H, placed on the lasted shoe.

It will be noted that the toe of the insole I serves, as in the ordinary shoe, to make the contour for the forward part of the shoe, and this part is, during the stitching operation, as well as the rear half, secured permanently to the vamp and sole. The outer sole being secured to the shoe, the last is removed, when it is ready to be sewed, the line of stitching J passing around the inturned portion C, as shown more fully in Fig. 4. This being done, the plate D is withdrawn, exposing the insole, as shown in Fig. 4. The inturned leaf or fold C is then turned down onto the vamp and pasted.

In some instances it may be preferable to form the insole of two parts, as shown in Fig. 5. In that event I prefer to have the rear piece, K, lapped over the forward part, L, at the unity point. In this case the forward piece has also its edges folded under in all respects like the single piece A, and the process of manufacture the same as though the insole were made of one piece.

I desire particularly to call attention to the fact that by the method of lasting as herein shown no tacks will be exposed in that part of the sole on which the ball rests, as by the old method, since the retaining-plate or the pliable piece holds the edges of the vamp, without making it necessary to resort to tacks, along the ball of the permanent inner sole.

I am aware that it is not new, broadly, to cut away or indent a portion of the inner sole along the ball, so that the line of stitches will not pass through the inner sole along this portion; but my method of lasting has never been used in connection with such inner soles, so as to avoid the use of tacks in the forward part of the inner sole. It is therefore immaterial whether the inner sole is indented, inturned, or cut away along the ball so far as it relates to my method of lasting the upper to the permanent inner sole and to the removable piece, this method of lasting being one of the principal features of the present invention, in addition to the more specific manner of constructing the inner sole with transverse slits and inturned flaps, as herein set forth.

What I claim as new is—

1. The inner sole, formed preparatory to being placed in the shoe, with the transverse slits B in the edges, extending entirely through the sole, opposite each other, and having the inturned leaves or flaps, substantially as herein set forth.

2. In the process of manufacturing shoes, first placing a removable lasting-piece on the last, and over this the permanent inner sole having the slitted sides and the inturned flaps, so that its cut-away and inturned parts are directly over the said removable piece, and in lasting the upper to the permanent inner sole, along the rear part of the inner sole, and around the parts, and to the removable lasting-piece, along the inturned or cut-away portion of the inner sole, and tacking the outer sole to the inner sole, and in sewing the upper and the inner and the outer soles together along the rear half and around the toe portion of the shoe, and in only stitching together the outer sole and the upper along the ball of the shoe, and then withdrawing the lasting-piece and turning back the leaves or flaps, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of May, 1883, in the presence of witnesses.

WARNER ROGERS.

Witnesses:
LOUIS REEMELIN,
J. W. MCDONALD.