H. MICHELSEN.

PRESSER FOOT FOR SHOE SOLE STITCHING MECHANISMS.

APPLICATION FILED OCT. 27, 1909.

957,697. Patented May 10, 1910.

Fig. 1

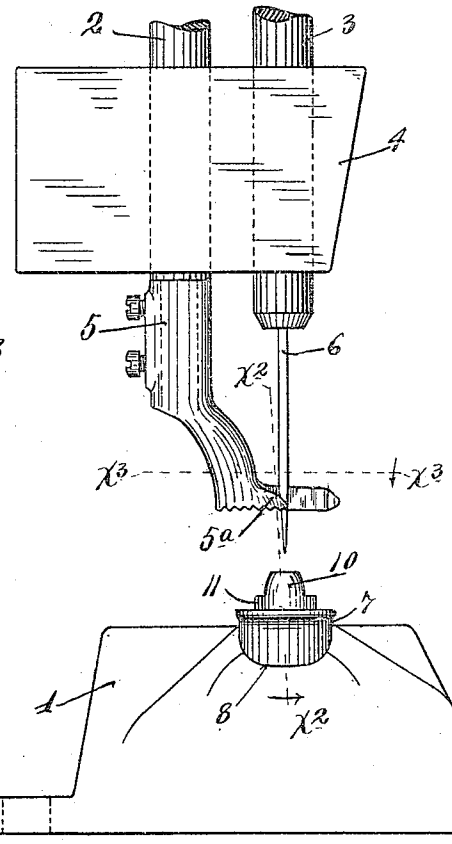


Fig. 4

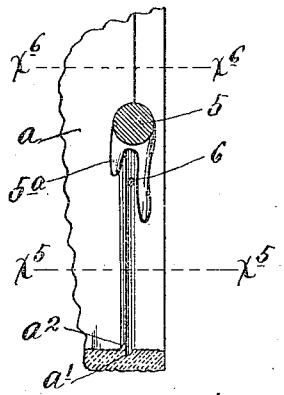


Fig. 5

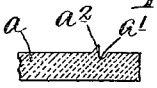


Fig. 6

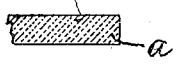


Fig. 3

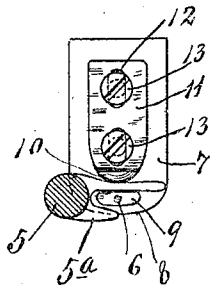
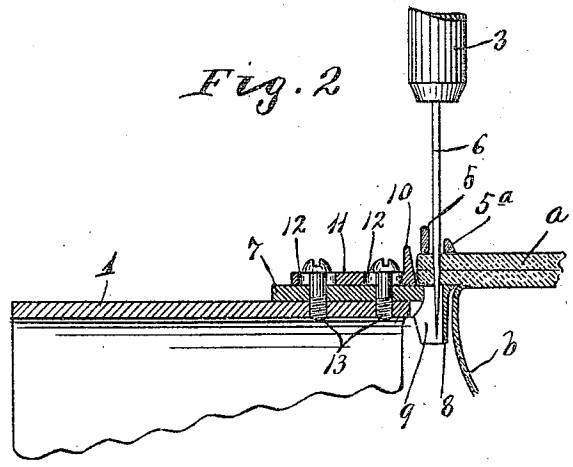


Fig. 2



Witnesses.
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PRESSER-FOOT FOR SHOE-SOLE-STITCHING MECHANISMS.

957,697. Specification of Letters Patent. **Patented May 10, 1910.**

Application filed October 27, 1909. Serial No. 524,813.

To all whom it may concern:

Be it known that I, HANS MICHELSEN, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and useful Improved Presser-Foot for Shoe-Sole-Stitching Mechanism; 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.

My invention has for its object to provide certain improvements in shoe sole stitching mechanisms and, to this end, the invention consists of the novel devices and combinations of devices hereinafter described and defined in the claim.

In the accompanying drawings, which illustrate the invention, like characters indicate like parts throughout the several views.

Referring to the drawings, Figure 1 is a view in side elevation, showing portions of the machine with my improved presser foot and sole guide applied thereto; Fig. 2 is a transverse vertical section taken on the line x^2 x^2 of Fig. 1; Fig. 3 is a horizontal section taken on the line x^3 x^3 of Fig. 1; Fig. 4 is a plan view, showing a portion of a shoe sole and illustrating the action of the improved presser foot thereon; Fig. 5 is a transverse vertical section taken on the line x^5 x^5 of Fig. 4; and Fig. 6 is a transverse section taken on the line x^6 x^6 of Fig. 4.

Of the parts of the machine, the numeral 1 indicates the so-called machine cap, the numeral 2 the presser bar, the numeral 3 the needle bar, the numeral 4 a guide for the said bars 2 and 3, the numeral 5 the presser foot and the numeral 6 the needle.

The character *a* indicates the sole and *b* indicates the vamp of the shoe.

As is well known, it is universal practice to form an undercut crease in the bottom of the sole in which to embed the stitches. In Figs. 4, 5 and 6, this crease is indicated at a^1 and the upturned rib made in forming the said crease is indicated at a^2. Hitherto, the presser foot has been constructed to run at one side of the upturned rib a^2 and it has been necessary, after this sole has been stitched, to pound this rib down upon the stitches by means of a hammer or other suitable tool. As one important feature of novelty, I provide the presser foot with a cam acting toe or projection 5^a, which extends obliquely across the upturned rib a^2 and, in the stitching action, turns the said rib back into the crease a^1, thereby covering the stitches and restoring the said rib to its normal position. This device, therefore, not only saves work, but produces a better finished piece of work than has hitherto been done by a hand operation.

Rigidly secured on the upper portion of the machine cap 1, at the inner edge portion thereof, is a so-called needle plate 7 which has a depending curved guard flange 8 and a large needle passage 9.

The sole *a* of the shoe is adapted to rest upon the upper portion of the guard flange 8, as shown in Fig. 2, and the guard flange 8 will hold the shoe vamp *b* out of engagement with the needle in the sewing action. Hitherto, needle plates with the segmental guard flanges have been provided, but in the customary arrangement the upper portions of the latter are curved upward while, in the present instance, the upper portion of the said guard flange is flat, that is, lies in a horizontal plane. Also, there has hitherto been provided a sole guide which has been set directly under a portion of the presser foot and, hence, has necessarily been made very thin and, in fact, of considerably less thickness than the thickness of a shoe sole capable of being sewed on the machine. As an important feature of improvement over this arrangement, I provide a sole guide so arranged that it is never positioned directly under any portion of the presser foot and, hence, is made of such height that, in the normal sewing action, its upper portion will project above the lower or operative surface of the presser foot. As shown in the drawings, this sole guide 10 has an oblique operative face that is rounded on its sole engaging surface and is preferably formed integral with a small clip or bar 11 having longitudinal slots 12 through which screws 13 are passed and screwed into the machine cap 1. These screws 13 rigidly secure both the needle plate 7 and the sole guide in working positions and permit adjustments of said guide 10 toward and from the needle, as required, to set the same for guiding shoe soles where the stitches are to be run at greater or less distance from the edge of the sole.

By reference particularly to Fig. 2, it will be noted that when the sole is clamped by the presser foot, on to the flat upper surface of the guard flange 8, the sole guide 10 pro-

jects above the under surface of the presser foot, so that there is no danger or possibility of forcing the edge of the shoe sole over the said guide 10. In the old arrangement of the sole guide, it frequently happened that the sole would be forced over the sole guide and, in fact, very great care had to be taken to prevent very frequent occurrence of this action. In actual practice, the efficiency of the present improved guide has been demonstrated.

What I claim is:

In a sewing machine, the combination with a needle, of a presser foot having relatively long and relatively short toes, the former projecting forward of the needle at one side thereof and the latter extending obliquely across the stitching line at the rear of the needle and engageable with the upturned rib of a stitching crease formed in the shoe sole and adapted to press the same back into the crease over the formed stitches.

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

HANS MICHELSEN.

Witnesses:

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