April 18, 1933. S. RIZZO 1,904,085

SHOE AND METHOD OF MAKING THE SAME

Filed Aug. 9, 1930

Fig.1.

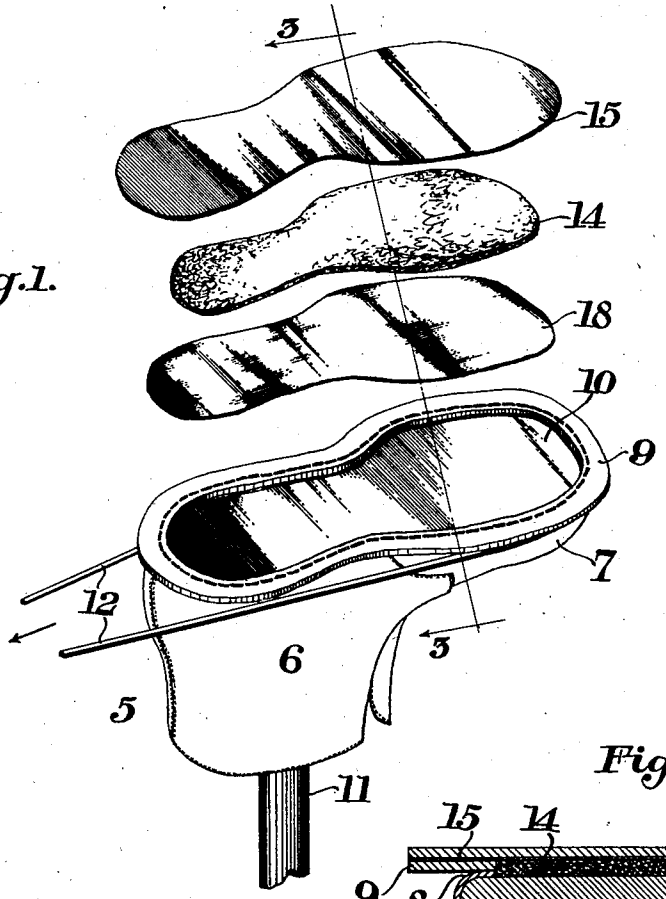
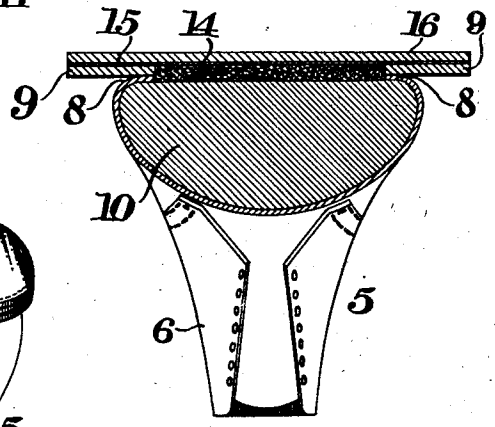


Fig.3.



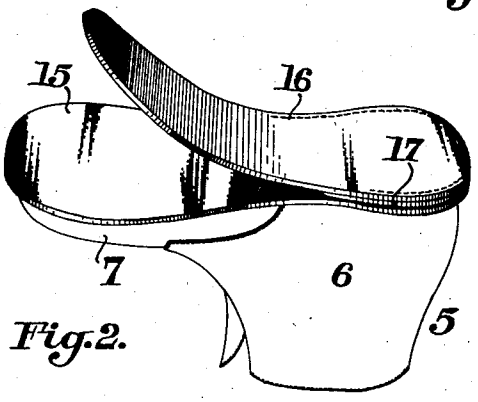


Fig.2.

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UNITED STATES PATENT OFFICE

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SHOE AND METHOD OF MAKING THE SAME

Application filed August 9, 1930. Serial No. 474,138.

This invention relates to shoes and to the method of making them.

In the past in manufacturing one type of shoe, it has been customary to make the upper, then turn in the lower edge of the upper and sew a welt thereto. Thereafter a last was inserted into the upper and successive portions of the edges of the upper with the welt attached thereto were stretched over the sole portion of the last and tacked in the position to which they had been stretched. This stretching and tacking operation was slow, and required the services of a skilled operator and unless care was exercised, the portions of the upper, especially the toe would appear irregular in the finished shoe. Furthermore it was necessary to keep the upper with its attached welt tacked on the last for several hours until the leather adjusted itself to the stretched condition, for it was necessary to remove these tacks before attaching a sole to the upper and unless the leather of the upper had been sufficiently stretched, it would not hold the desired shape until the sole was fastened thereto. In general the patent to Maloney, #1,206,018, patented November 28, 1916, exemplifies certain of the above-mentioned, known operations in the method of making shoes.

In accordance with the present invention, a novel shoe structure and a novel method of making the same has been developed wherein it is unnecessary to tack the upper in stretched relation over the last and wherein it is unnecessary to provide a time interval sufficient for the leather of the upper to assume a permanently stretched position over the last, since according to the present arrangement, the upper is stretched over the last and is immediately held in this position by means forming a part of the finished shoe, so that the sole can be sewed or otherwise attached to the welt and upper as soon as the upper is drawn into proper position over the last.

For a clearer understanding of the invention, reference is made to Fig. 1 which is a perspective view of a shoe upper and attached welt supported on a last with the upper drawn tightly about the last and also indicating the various pieces of the shoe, except the outer sole, arranged in the same relative position which they would occupy in a finished shoe; Fig. 2 is a perspective view of a shoe finished to the point where the sole and its attached heel lift are ready to be fastened thereto and these parts are shown partially in final position; and Fig. 3 is a cross-sectional view of a finished shoe (without the sock lining) taken substantially on the line 3—3 of Fig. 1.

In the drawing 5 generally designates the finished upper of a shoe including the quarter 6 and the vamp 7. According to the present arrangement, the upper 5 is finished including a lining (not shown) and has its lower edges 8 turned in to a position substantially parallel to the position which the sole eventually will occupy, and thereafter a strip of welt 9 is sewed or otherwise attached thereto, according to the usual practice. At this point in the method, a wooden last 10 is inserted in the partially completed shoe and the last with the shoe thereon is then placed on a vertical support 11. Following the known practice, the upper is centered and fastened to the last by a centering tack, not shown, driven into the back of the heel portion of the last through the upper near the back seam, shown at the extreme left of the shoe, as represented in Fig. 1. A filler 14 of felt or like material of a thickness substantially equal to the combined thickness of the edges of the upper and the welt, is then placed within the space between the edges of the welt. It now becomes necessary to draw the lower edges of the upper with the welt 9 attached thereto, tightly over the sole portion of the last 10 to occupy a position substantially as shown in Fig. 1. In the past, it has been necessary to draw successive portions of the unfinished edge of the upper with the welt attached thereto, over the last and to tack each portion in its stretched position. This operation was repeated at successive portions of the edge of the upper and the welt, until the upper has been drawn tightly about the last. Since leather will not readily assume a position to which it has been

stretched, it has been necessary to leave the upper thus tacked on the last for several hours until it has assumed a permanently stretched position with respect to the last. The manual operation of tacking the uppers to the last has been a slow, tedious operation and this, together with the necessity of letting the upper remain on the last for several hours, has materially slowed down production.

In accordance with the present invention, the need for tacking the welt and its attached upper to the last has been entirely obviated by the present construction of the shoe and the method of making it. Instead of manually stretching the different portions of the upper and the welt over the last in succession and then tacking them, according to the present method, it is proposed to employ a loop 12 of wire or other similar material which, after the lasted shoe has been positioned on the support 11, may be placed at the junction of the upper and the welt and thereafter drawn in the direction of the arrow. This may be effected by passing the ends of the wires over a suitable pulley mechanism and attaching them to a pedal, neither of which are herein illustrated. The wire thus constitutes a loop 12 which engages the toe portion and the sides of the unfinished shoe and by a single movement draws the major portion of the edges of the upper with the welt attached thereto, over the sole portion of the last. Since the back of the heel portion of the upper is held snugly against the last by the centering tack and since the wire 12, by engaging the junction of the welt and the upper, forces the side of the heel portion of the upper over the last, it is only necessary for the operator manually to force against the last those side portions of the welt that are not engaged by the loop of wire. In actual practice, it is usually only necessary for the operator to force in the welt at one side of the shoe at a point where the welt arches away from the wire as shown in Fig. 1. While in this stretched condition, a piece 15, to be known as a fastening sole of fabric, leather or other suitable material, is adhesively fastened to the top surface of the welt as best illustrated in Fig. 2 and in Fig. 3. This piece of fabric or fastening sole thus holds the edges of the welt and the upper in the position into which they have been stretched by the loop of wire 12. The fabric of the fastening sole 15 has sufficient strength so that the shoe may be removed from the last, and the service sole 16 including the lift 17 may be permanently attached to the shoe by means of adhesive and stitching or other fastening means through the welt. When the sole is thus fastened to the shoe proper, and otherwise finished, a sock lining 18 is inserted within the shoe to cover the felt filler 14.

A shoe made according to the above method comprises a new article of manufacture in which the fasted sole 14 in addition to holding the upper in its stretched position over the last, serves to reinforce the shoe during use, and cooperates with the sole 16 in keeping the shoe in shape.

What I claim is:

1. The method of manufacturing a shoe which comprises making an upper including a vamp, fastening a welt to the edges of the upper, simultaneously drawing the edges of the vamp with the welt attached thereto toward each other by a uniformly bendable medium engaging a substantial portion of the upper and extending only along the outside of said upper, holding the edges of the upper with the welt attached thereto in fixed relation as drawn, and attaching a sole on said welt.

2. The method of manufacturing a shoe which comprises making an upper including a vamp, fastening a welt to the edges of the upper, inserting a last within the upper, simultaneously drawing the edges of the vamp with the welt attached thereto toward each other over a portion of the last by force conforming to the shape of a substantial portion of the last irrespective of its shape and supplied solely from the outside of said upper, holding the edges of the upper with the welt attached thereto in snug relation with regard to said last, and attaching a sole to said welt.

3. The method of manufacturing a shoe which comprises making an upper, fastening a welt to the edges of the upper, inserting a last within the upper, stretching the upper around the last by drawing a loop from a position outside of said upper to engage the junction of a substantial portion of the vamp and the welt, holding the upper and the welt in such stretched relation, and attaching a sole to said welt.

4. The method of manufacturing a shoe which comprises making an upper including a vamp, fastening a welt to the edges of the upper, inserting a filler between the inner edges of the welt, simultaneously forcing the edges of the vamp and the welt attached thereto toward each other by a uniformly bendable medium engaging a substantial portion of the upper and extending only along the outside of said upper, holding the edges of the upper and the welt attached thereto in fixed relation as drawn, and attaching a sole on said welt.

5. The method of manufacturing a shoe which comprises making an upper including a vamp, fastening a welt to the edges of the upper, inserting a last within the upper, simultaneously drawing the edges of the vamp and the welt attached thereto toward each other over a portion of the last by a loop bendable throughout its length engaging the junction of a substantial portion of the vamp and welt and drawn from a position outside

of said upper, adhesively attaching a fastening sole to the lower surface of said welt to hold the edges of the upper with the welt attached thereto in fixed relation as drawn, and attaching a sole to said welt.

6. The method of manufacturing a shoe which comprises making an upper including a vamp, fastening a welt to the edges of the upper, inserting a last within the upper, placing a filler in the space between the edges of said welt, simultaneously drawing the edges of the vamp with the welt attached thereto toward each other over a portion of the last by a bendable loop engaging the junction of a substantial portion of the vamp and welt and drawn from a point remote from the upper, adhesively applying an inner sole to the lower surface of said welt to hold the edges of the upper in fixed relation as drawn, and attaching a sole to said welt.

In witness whereof, I hereunto subscribe my name this 8th day of August, A. D. 1930.

SAMUEL RIZZO.