Oct. 19, 1926. 1,603,624

G. A. MINER

BOOT AND SHOE

Filed August 16, 1924

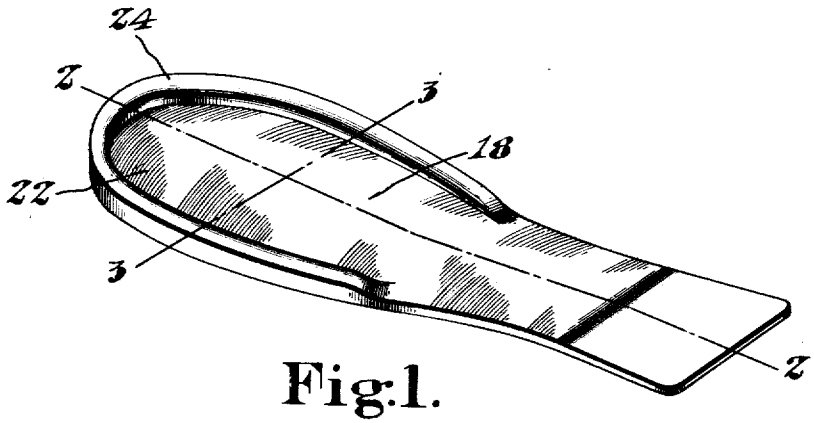



Fig.1.

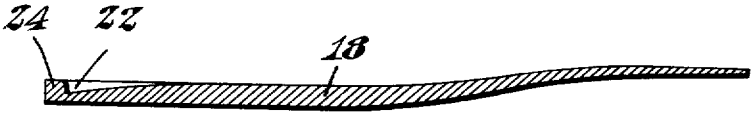



Fig.2.

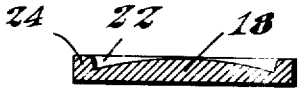



Fig.3.

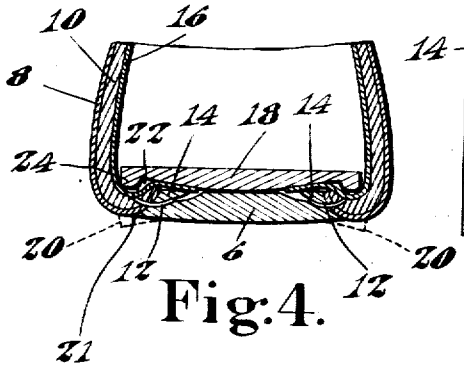



Fig.4.

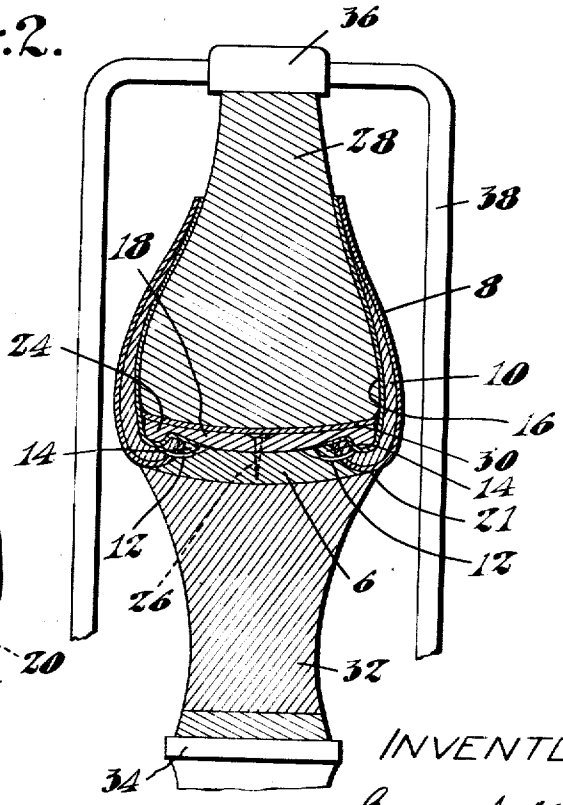



Fig.5.

INVENTOR.

George A. Miner

By his Attorney

Nelson W. Howard

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# UNITED STATES PATENT OFFICE.

GEORGE A. MINER, OF GLEN ROCK, NEW JERSEY, ASSIGNOR TO UNITED SHOE MACHINERY CORPORATION, OF PATERSON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

## BOOT AND SHOE.

Application filed August 16, 1924. Serial No. 732,460.

This invention relates to improvements in boots and shoes and is illustrated in its application to the manufacture of turn shoes, although its utility is not necessarily limited thereto.

In the manufacture of turn shoes, the upper, counter and sole are originally lasted wrong side out and the upper and counter are attached to the sole by stitches which extend through the material at the base of the usual channel flap projecting from the sole. A subsequent trimming operation removes some of the surplus upper and counter material which projects beyond the seam and the shoe is then turned right side out, a shank piece is inserted, and the shoe is relasted. If a wood heel is to be applied to the shoe, it is customary preliminarily to prepare the heel seat of the shoe by trimming away the marginal portion of the heel end of the sole and the heel seat is then either pounded up by hand or subjected to heavy molding pressure between cooperating dies to shape it to conform to the concave heel seat face of the wood heel. The use of dies for applying heavy pressure to the heel seat has heretofore been highly undesirable on account of the difficulty in properly compressing and shaping the material in the vicinity of the seam which unites the upper and the counter to the sole. The molding pressure may also be further resisted by the presence of upper and counter stock which must project somewhat beyond the seam and which thus produces excessive thickness of the heel seat at the seam. Because of the above-mentioned difficulties the shaping of the heel seat portion of turn shoes for the reception of wood heels in such a manner as to provide the desired tight joint between the inturned portion of the shoe upper and the rim of the heel has been troublesome, has called for highly skilled workmen and has been correspondingly expensive.

In view of the foregoing, one object of the present invention is to improve the construction of shoes for the purpose of facilitating the formation and maintenance of a tight joint between the rim of a heel, such as a wood heel, and the adjacent portion of the upper of a shoe to which the heel is to be attached, a joint which will be tight not only when the shoe is new, but which will remain tight when the shoe is worn.

With this object in view, the invention, in one aspect, consists in the provision of a shoe in which the inside of the heel seat portion of the sole is overlayed by a piece of material having a marginal recess and the lower marginal portions of the upper and the counter are stitched together at the heel and project into said marginal recess. This recess provides space to receive the projecting material adjacent to the seam around the heel seat, and thus facilitates the shaping of the heel seat of the sole to the requisite convex contour to conform to the shape of the heel seat face of a heel such as a wood heel and therefore renders it easier to obtain the desired tight joint between the rim of the heel and the upper. When using a layer of material recessed as above described, it is not necessary to mold the heel seat by the use of dies subjected to heavy pressure, or even to do any considerable amount of pounding up, but that sufficient pressure may be applied by the wood heel clamp used in the heel attaching operation.

In another aspect, the invention consists in the provision of means such as a bead-like formation of substantial width extending around the inner side of the inturned portion of the upper and counter of a shoe to afford a firm seat for the rim of a heel such as a wood heel, so that a tight joint will be formed between the rim of the heel and the upper. As herein shown, a marginal bead is formed for this purpose upon a shank piece for a turn shoe which, as is usual, is inserted into the heel seat portion of the shoe. With this arrangement, when the shoe is worn, the foot of the wearer will cause the bead to press the upper into close contact with the rim of the heel. This bead fits within the groove or depression which extends along the inner side of the inturned portion of the upper and counter at the heel seat and is preferably formed by recessing the shank piece, being consequently of solid construction, integral with the shank piece.

The bead is located directly above the rim of the heel so that the upper and counter are backed up by the bead in such a manner as to form a firm and solid seat for the rim of the heel, and the upper and counter material is constantly compressed between the bead and the heel as long as the shoe is being worn. In this way, the bead provides for a joint between the upper and the heel which will remain tight as long as the shoe lasts.

In a still further aspect, the invention provides a new article of manufacture consisting of a prepared shank piece for turn shoes formed with a marginal bead arranged to support the inturned portions of the upper and counter to provide a firm seat for the rim of a heel such as a wood heel.

The invention will best be understood from the following description, reference being had to the accompanying drawings, in which:—

Fig. 1 is a perspective view showing the lower or sole-engaging face of an improved shank piece or "tuck" for turn shoes made in accordance with the present invention.

Figs. 2 and 3 are sectional views taken along the line 2—2 and line 3—3, respectively, of Fig. 1.

Fig. 4 is a cross-sectional view showing a portion of the heel end of a turn shoe after the upper and counter have been turned and the improved shank piece has been inserted, but before the shoe has been relasted, and

Fig. 5 is a cross-sectional view of a shoe which has been turned and relasted, a wood heel being shown clamped in place upon the heel seat of the shoe by means of a heel attaching clamp.

In the turn shoe shown in Figs. 4 and 5 of the drawings, the sole is indicated at 6, the upper at 8 and the counter at 10. The inturned lower portions of the upper and counter are secured to the sole by means of stitches 12 which pass through the material at the base of the channel flap 14 of the sole as is usual in the manufacture of turn shoes with sewed heel seats. A lining 16 covers the inner side of the counter and overlies the trimmed edges of the counter and upper and the channel flap. As shown, the shoe has been turned and a shank piece or "tuck" 18 has been placed inside the shoe. The sole 6 was originally formed with a feather having considerable thickness at its outer edge as indicated by dotted lines at 20 in Fig. 4.

As herein shown, and in accordance with the usual practice, the heel seat portion of the sole has preliminarily been prepared for the reception of a wood heel by skiving the outer margin at the heel end of the sole to trim away the greater portion of the feather so as to produce a thin edge such as that indicated at 21 to facilitate the final shaping of the heel seat so that it may more easily be made to conform to the contour of the heel seat face of the heel.

In order to provide a tight joint between the heel and the upper, the illustrated shank piece 18 is prepared by cutting away a portion of its lower or sole-engaging face so as to provide a marginal recess 22 and a solid marginal bead 24, as shown clearly in Figs. 1, 2 and 3. As a result of the recessing operation the lower face of the shank piece, within the bead, is so shaped that ample opportunity is provided to receive the portions of the upper, counter and sole which are held together by the seam, thus enabling the heel seat more readily to be shaped to fit the heel. The marginal bead 24 is so shaped and arranged as to lie within and fill the groove or depression formed at the inner side of the inturned portions of the upper and counter at the heel seat, in this way backing up the upper and counter so that a firm and solid seat is provided for the rim of the wheel. Except for the recess and the bead above described, the shank piece 18 is of the usual construction, the sides and end of the forward portion thereof being skived or beveled in the usual manner. A tack such as shown at 26 may be employed temporarily to secure the shank piece to the sole.

In Fig. 5 the shoe is shown mounted upon a "second" last 28 provided with the usual metal heel plate 30. A wood heel 32 is clamped in place against the heel seat of the shoe by means of a wood heel attaching clamp such as that disclosed in United States Letters Patent No. 1,502,014, issued July 22, 1924, in the name of F. E. Bertrand. As shown, the clamp comprises a heel tread face supporting member 34 and a cooperating member 36 carried by a yoke 38 and movably threaded into clamping engagement with the top of the cone of the last. When pressure is applied to the clamp member 36, the material in the vicinity of the seam which unites the upper and the counter to the sole will be received in the recess 22 in the shank piece and the heel seat will be readily shaped to conform to the cavity in the heel without the necessity of using cooperating dies and operating them under heavy pressure. The bead 24 will be forced downwardly against the inturned portions of the upper and counter by the clamping pressure, thus forcing the upper at the periphery of the heel seat closely against the heel so that a firm and solid seat is provided for the rim of the heel and a tight joint is formed between the heel and the upper. When the shoe is worn the bead 24 will be pressed against the inturned portions of the upper and counter by the foot

of the wearer of the shoe and the tight joint between the heel and the upper will be maintained throughout the life of the shoe.

Having described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. A shoe comprising a sole, an upper and a counter stitched to the sole at the heel of the shoe, and a layer of material overlying the inside of the heel seat portion of the sole, said material having a marginal recess formed therein and the stitched-together portions of the upper, counter and sole projecting into said recess.

2. A shoe comprising a sole, an upper and a counter having their lower margins inturned and stitched to the sole at the heel of the shoe thereby forming a channel along the inner side of the inturned portion of the counter, and a rib-like formation of substantial width shaped to fill said channel to facilitate the formation of a tight joint between the upper and the rim of a heel attached to the shoe.

3. A shoe having a layer of material overlying the heel seat portion of the sole at the inside of the shoe and a bead-like formation extending along the margin of the under side of said layer in alinement with the upper edge portion of a heel attached to the shoe and having a downwardly facing bearing surface of substantial width to hold the inturned portions of the upper and counter in close contact with the portion of the seat face of the heel adjacent to the edge of said face.

4. A turn shoe having a sewed heel seat and a solid filler of substantial width for the channel extending along the inner side of the inturned portion of the upper and counter at the heel seat to hold said portion of the upper in close contact with the edge of a heel attached to the shoe.

5. A turn shoe comprising a sole having a heel attached thereto, an upper and a counter inturned at the heel seat of the shoe and united with the sole, and a shank piece having a marginal bead for holding said inturned portion of the upper in close contact with the rim of the heel.

6. A turn shoe comprising a sole having a heel attached thereto, an upper and a counter inturned at the heel seat of the shoe and stitched to the sole, and a shank piece having an area of reduced thickness at its heel end shaped to receive the stitched-together portions of the upper, counter and sole, and said portions projecting into said recess to facilitate the formation of a tight joint between the inturned portions of the upper and counter and the rim of the heel.

7. A turn shoe comprising a sole having a heel attached thereto, an upper and a counter inturned at the heel seat of the shoe and stitched to the sole, and a shank piece having a portion of its sole-engaging face cut away to receive the stitched-together portions of the upper, counter and sole and having a rib-like formation surrounding said recess for holding the adjacent inturned portions of the upper and counter in close contact with the rim of the heel.

8. A turn shoe comprising a sole having a heel attached thereto, an upper and a counter inturned at the heel seat of the shoe and stitched to the sole, and a shank piece having a marginal bead and a recessed sole-engaging face for facilitating the formation of a tight joint between the rim of the heel and the adjacent inturned portions of the upper and counter.

9. As a new article of manufacture, a prepared shank piece for turn shoes having one of its faces recessed to receive the stitched-together portions of the upper, counter and sole.

10. As a new article of manufacture, a prepared shank piece for turn shoes formed with a marginal bead arranged to support the inturned portions of the upper and counter to provide a firm seat for the upper rim of a heel.

11. As a new article of manufacture, a prepared shank piece for turn shoes having its sole-engaging face recessed to receive the stitched-together portions of the upper, counter and sole and provided with a marginal bead arranged to back up the inturned portions of the upper and counter at the heel seat to form a tight joint between the said portions and the rim of a heel attached to the shoe.

12. As a new article of manufacture, a prepared shank piece for turn shoes having a bead-like formation shaped to fill the channel formed at the inner side of the inturned portion of the upper and counter at the heel seat to facilitate the formation of a tight joint between said portion and the rim of the wood heel attached to the shoe.

In testimony whereof I have signed my name to this specification.

GEORGE A. MINER.

of the wearer of the shoe and the tight joint between the heel and the upper will be maintained throughout the life of the shoe.

Having described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

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2. A shoe comprising a sole, an upper and a counter having their lower margins inturned and stitched to the sole at the heel of the shoe thereby forming a channel along the inner side of the inturned portion of the counter, and a rib-like formation of substantial width shaped to fill said channel to facilitate the formation of a tight joint between the upper and the rim of a heel attached to the shoe.

3. A shoe having a layer of material overlying the heel seat portion of the sole at the inside of the shoe and a bead-like formation extending along the margin of the under side of said layer in alinement with the upper edge portion of a heel attached to the shoe and having a downwardly facing bearing surface of substantial width to hold the inturned portions of the upper and counter in close contact with the portion of the seat face of the heel adjacent to the edge of said face.

4. A turn shoe having a sewed heel seat and a solid filler of substantial width for the channel extending along the inner side of the inturned portion of the upper and counter at the heel seat to hold said portion of the upper in close contact with the edge of a heel attached to the shoe.

5. A turn shoe comprising a sole having a heel attached thereto, an upper and a counter inturned at the heel seat of the shoe and united with the sole, and a shank piece having a marginal bead for holding said inturned portion of the upper in close contact with the rim of the heel.

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8. A turn shoe comprising a sole having a heel attached thereto, an upper and a counter inturned at the heel seat of the shoe and stitched to the sole, and a shank piece having a marginal bead and a recessed sole-engaging face for facilitating the formation of a tight joint between the rim of the heel and the adjacent inturned portions of the upper and counter.

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12. As a new article of manufacture, a prepared shank piece for turn shoes having a bead-like formation shaped to fill the channel formed at the inner side of the inturned portion of the upper and counter at the heel seat to facilitate the formation of a tight joint between said portion and the rim of the wood heel attached to the shoe.

In testimony whereof I have signed my name to this specification.

GEORGE A. MINER.

## Certificate of Correction.

Patent No. 1,603,624. Granted October 19, 1926, to GEORGE A. MINER.

It is hereby certified that error appears in the printed specification of the above-numbered patent requiring correction as follows: Page 2, line 91, for the word "wheel" read *heel;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 11th day of October, A. D. 1927.

[SEAL.]

M. J. MOORE,
*Acting Commissioner of Patents.*

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