

W. A. TURNER.
SHOE.
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989,084.

Patented Apr. 11, 1911.

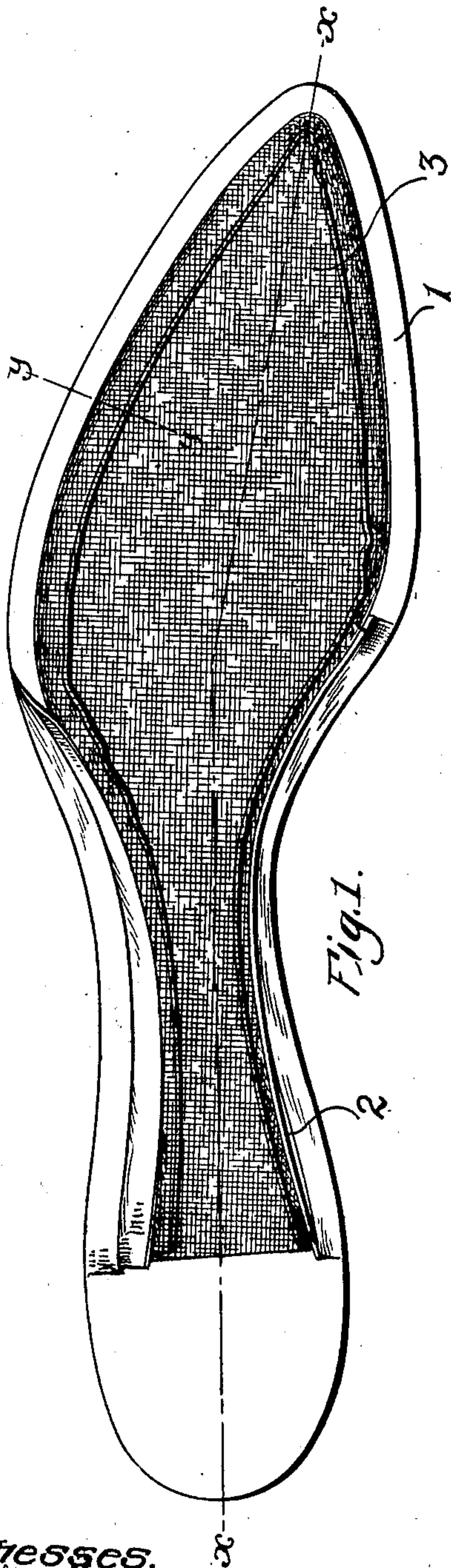


Fig. 1.

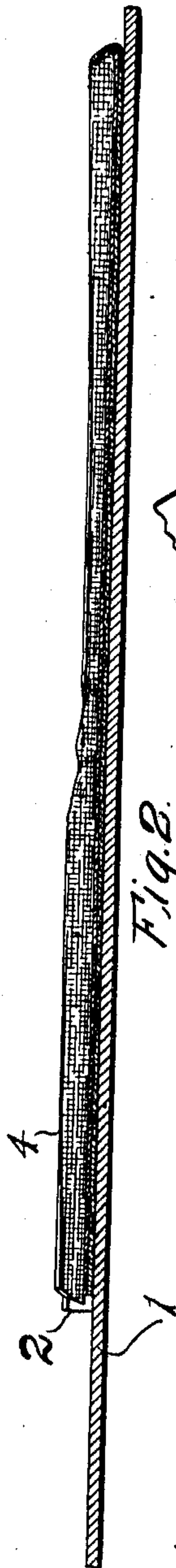


Fig. 2.

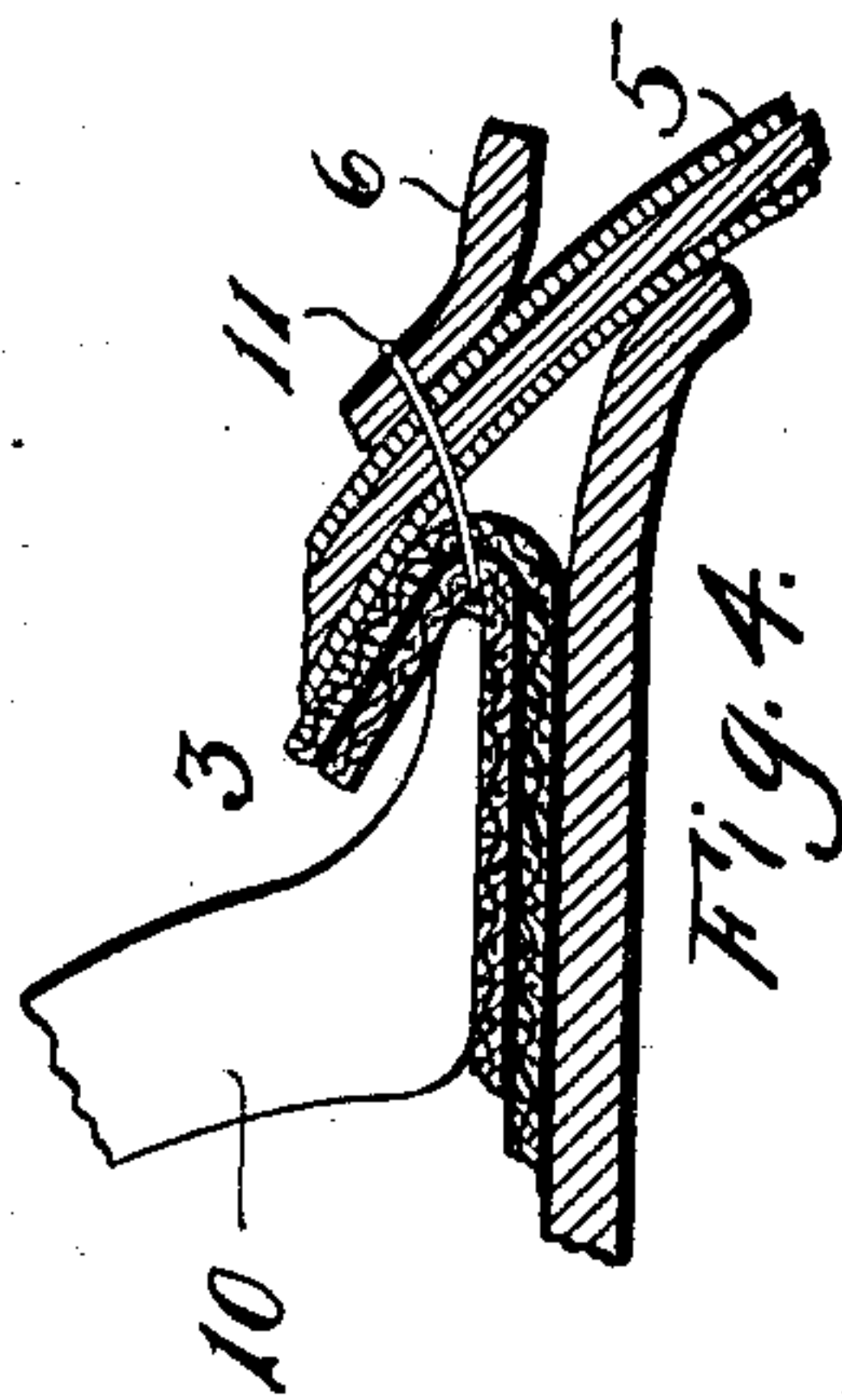


Fig. 4.

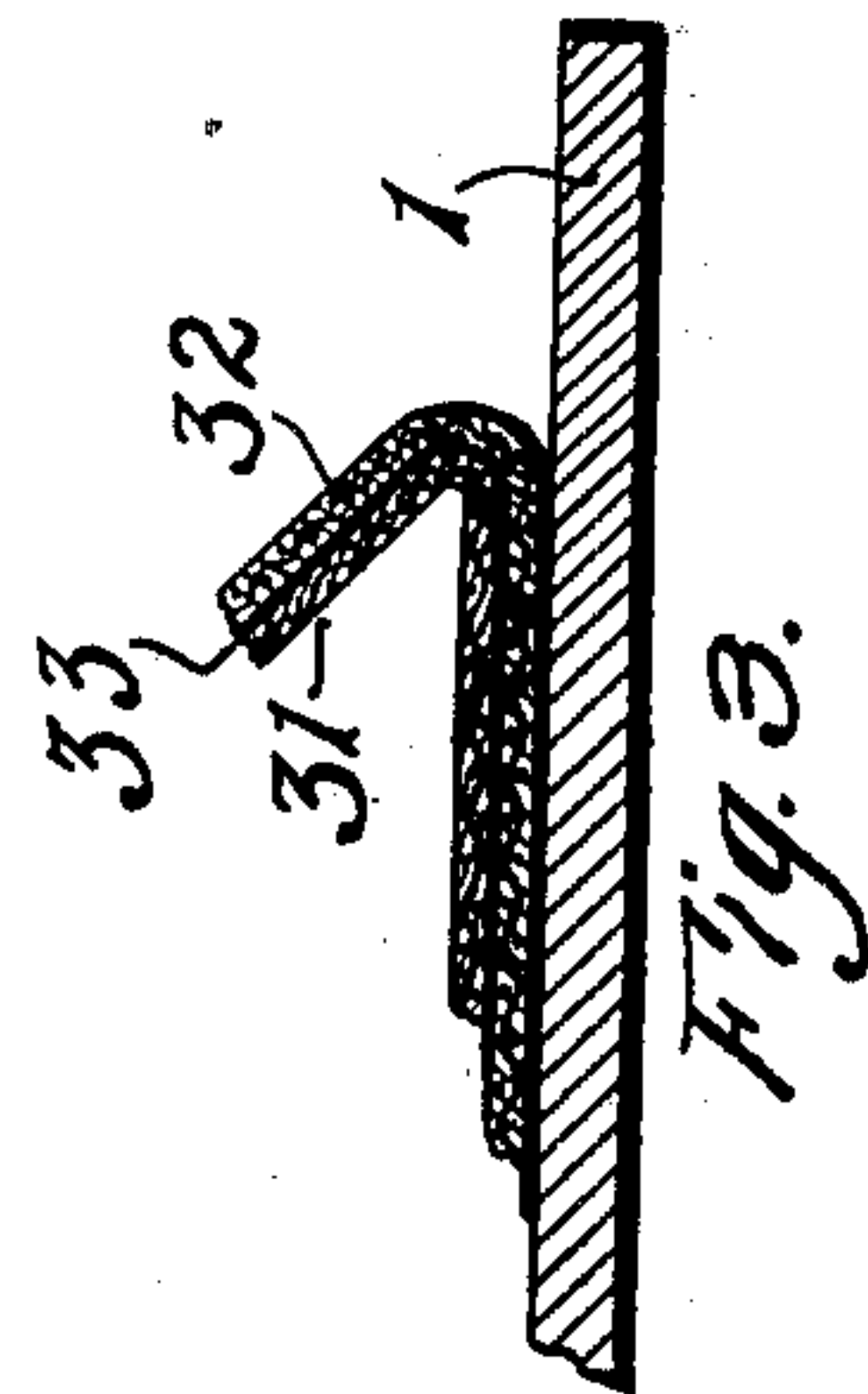


Fig. 3.

Witnesses.
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UNITED STATES PATENT OFFICE.

WILLIAM A. TURNER, OF PORTLAND, MAINE.

SHOE.

989,084.

Specification of Letters Patent. Patented Apr. 11, 1911.

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To all whom it may concern:

Be it known that I, WILLIAM A. TURNER, a citizen of the United States, residing at 29 Plum street, Portland, county of Cumberland, State of Maine, have invented certain new and useful Improvements in Shoes, of which the following is a specification.

This invention relates to welt shoes, and particularly to an inner sole and fastening member for welt shoes. In shoes of this sort it is particularly desired to secure flexibility without a loss of strength. This I have accomplished through the use of a certain novel construction of fastening member, together with the arrangement of the same in such relation to the inner sole as to develop great flexibility in advance of the shank. The construction and relation of these parts will be more fully disclosed in the specification which follows.

In the drawings which form a part of this specification I have shown as an illustrative embodiment of the invention a construction which I find well adapted to practical use, such portions of the welt shoe being shown as seem desirable to make the construction clear to those skilled in the art.

Throughout specification and drawings like reference numerals are employed to indicate corresponding parts and in the drawings: Figure 1 is a plan view of my molded fastening member and sole, Fig. 2, a longitudinal sectional view, Fig. 3, an enlarged detail of such section at the toe portion, and Fig. 4, an enlarged section showing the position of the flange of the fastening member in stitching the welt.

A leather inner sole 1 is shown as having a between substance 2 channeled up at each side of its shank portion. This between substance 2 is preferably present as it adds materially to the strength and form of the shoe at this place, but is not necessary as the canvas fastening member might be permanently stitched to the sole 1 and hold the welt and upper without any other fastening.

The fastening member 3 is composed of two layers 31 and 32 of canvas or other fabric united by an interposed layer of cementing rubber, or like material 33. The member 3 is prepared by cementing together the two layers of canvas 31 and 32 while flat, and is then molded over a form while wet in a molding machine into the shape shown in Figs. 2 and 3. In this molding a marginal flange 4 is turned up about the edge of the

member 3 and molded back into an acute angle with relation to the body portion of the member 3. The member 3 after drying on a hot drum becomes a permanently formed fastening member having a sharply inclined flange of the same thickness as the body portion, the whole being flexible longitudinally, but stiff or resisting laterally, along the line of the fold. The fastening member 3 is preferably lightly cemented to the sole 1 along the shank and has preferably also its flange 4 cemented to the between substance 2 of the sole 1 if the sole 1 is provided with this feature. In advance of the shank, however, the molded fastening member is entirely free of the sole 1.

5 is an upper and 6 a welt strip. These are the only parts of the shoe necessary to be shown for the purpose of illustrating the assemblage of the parts.

In assembling a shoe containing the features of my invention the textile fastening member 3, molded as described above, preferably is fastened by cementing to the shank of the inner sole 1 as suggested. The fastening member and inner sole are then lasted to the upper 5 with the usual welt strip 6. During this operation the guide foot 10 of the stitching machine is run along the inside of the folded flange 4 following the acute angle of the crease formed at the juncture of the flange 4 with the main body 3. As has been explained, the fastening member 3, on account of the molding of the two sheets 31 and 32 and the interposed cement has a considerable resisting quality along the line of this fold and affords a considerable line of resistance against which the guiding foot can bear. This permits the laying of the stitching 11 in the proper place along this flange which, when thus stitched, has an ample strength to hold the welt strip and the upper.

With the shoe thus constructed there is great flexibility of the sole in advance of the shank as there is only the comparatively thin and flexible material of the fastening member 3 combined with the edges of the upper and the welt strip. This makes a seam which is not as stiff as if formed through a fold of textile as the stiffening effect of such a corrugation is avoided. If between substance 2 is channeled up on the leather sole at the shank of the shoe, both the canvas and the leather between substances are included in the stitching, thus

affording great rigidity and strength at the central portion upon which so much strain is brought. The forward portion of the inner sole 1, which overlies the fastening member 3 is entirely free. The ball and toe portions of the foot of the wearer, therefore, rest on this portion which is free to move or play in the shoe over and above the tops of the seams. This prevents any buckling or wrinkling of the parts and relieves very largely the strain upon the stitching which is present where a leather element is included in the stitching or the stitching passes through a ribbed or folded canvas element.

My fastening member 3 may be formed of any suitable flexible material and may be united by any suitable means, although I find that the vulcanizable cementing is of great assistance in producing a permanent molding of the fastening member.

Various modifications may be made in the structure, in the shoe and in the assembly and arrangement of the parts, in the manners of fastening, all in accordance with the spirit of my invention if within the limits of the appended claims.

What I therefore claim and desire to secure by Letters Patent is:—

1. A sole construction for a welt shoe comprising a relatively stiff upper foot contacting member and a lower, flexible, textile, welting member having its margin molded into an upturned flange at the shank, ball and toe to form a stitching line and united to said upper foot contacting member at the shank only.

2. A welt shoe comprising an upper, a welt strip and an inner sole consisting of a relatively stiff upper foot contacting mem-

ber having heel, shank, ball and toe areas, and having a lower flexible, textile, welting member having its margin molded into an upturned flange and free from the foot contacting member along the ball and toe, said welt strip being stitched to the upturned flange of said molded, flexible, textile, welting member only, at the ball and toe.

3. A welt shoe comprising an upper, a welt strip and an inner sole consisting of a substantially stiff upper foot contacting member having heel, shank, ball and toe areas, and a lower flexible, textile, welting member having its margin molded into an upturned flange and united to said upper foot contacting member at the shank only and free therefrom along the ball and toe, said welt strip being stitched to the upturned flange of said molded, flexible, textile, welting member only, at the ball and toe.

4. A welt shoe comprising, an upper, a welt strip, an inner sole comprising an upper foot contacting member and a lower flexible textile welting member united thereto at the shank only and having its margin folded or turned up at the shank, ball and toe to form a stitching line, a between substance formed on said upper member at its shank only and adjacent to said fold and adapted to be pierced therewith in stitching together said upper, welt strip and sole and an outer sole united to said welt strip.

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

WILLIAM A. TURNER.

Witnesses:

MARY E. ELDER,
HAROLD S. ELDER.