

March 18, 1941.

F. H. WOLFHARD ET AL

2,235,694

FOOTWEAR CONSTRUCTION

Filed Nov. 25, 1938

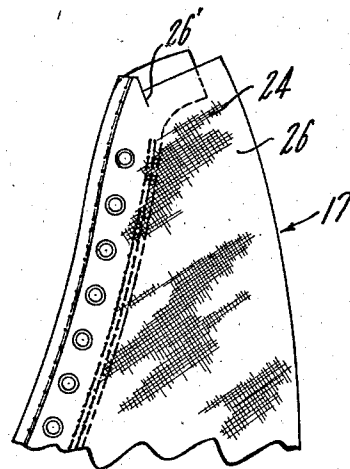
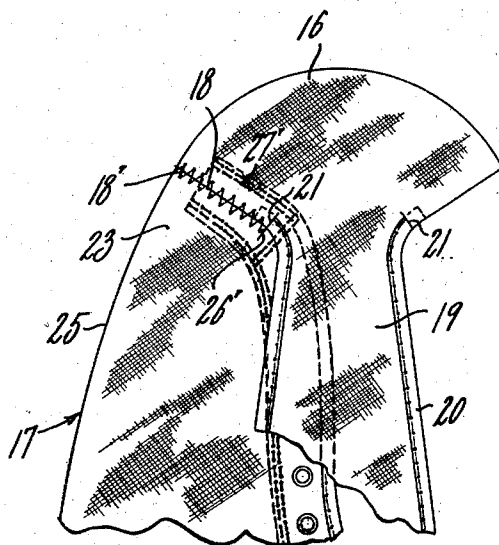
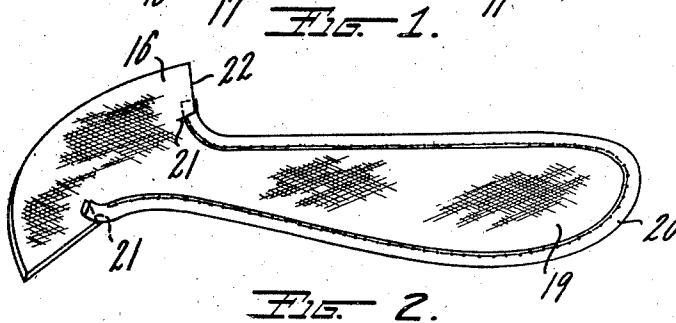
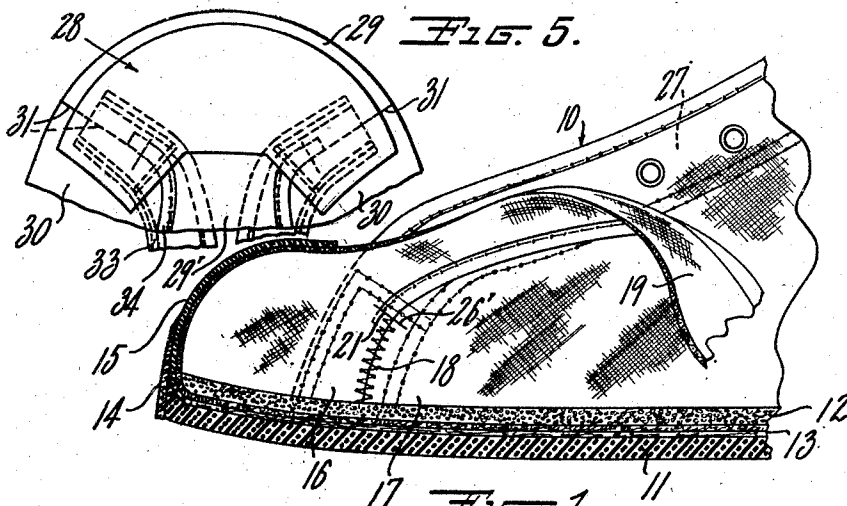


FIG. 4.

INVENTORS
FREDERICK H. WOLFHARD
LEIGHTON C. WOODALL
BY *Gowley & Budding*
ATTORNEYS.

UNITED STATES PATENT OFFICE

2,235,694

FOOTWEAR CONSTRUCTION

Frederick H. Wolfhard, St. Jerome, Quebec, and
Leighton C. Woodall, Notre Dame de Grace,
Montreal, Quebec, Canada, assignors to United
States Rubber Company, New York, N. Y., a
corporation of New Jersey

Application November 25, 1938, Serial No. 242,260

3 Claims. (Cl. 12-146)

This invention relates to an improved footwear construction which provides a relatively smooth inner surface along the union between the vamp and the quarter and eliminates a large ridge at such joint.

Heretofore the adjoining margins of the vamp and the quarter have been overlapped and united by stitching along such margins. As is well known such a lapped seam produces an uneven surface on the interior of the shoe and if such seams occur in areas where the foot of the wearer exerts pressure thereon, the seam frequently causes discomfort to the wearer. Lap seams in the style of shoe commonly known as the lace-to-toe shoe are particularly objectionable in the toe portion of the shoe where a great amount of chafing action occurs between the toe of the wearer and the inside walls of the shoe. In the canvas-lace-to-toe shoe the tongue is usually bound with a strip of binding which extends around the edges and along the seams between the vamp and the quarter on each side of the toe portion of the shoe. Heretofore the binding extended along the seams on the inside walls of the shoe, which further increased the unevenness of the surface at this point and caused chafing.

In accordance with the present invention a smooth seam is formed between the adjoining edges of the vamp and the quarter by uniting these edges in abutting relation, so as to form what is commonly known as the butt seam or joint. In the lace-to-toe shoe construction, the adjoining edges of the vamp and the quarter are slit in the region where the tongue merges with the vamp, and the binding extending around the edges of the tongue is extended through these slits to the outside of the vamp. The binding is secured along the seam between the outside eyelet stay and the outside surface of the seam between the vamp and the quarter. The adjoining edges of the vamp and quarter may be secured together with cross stitching or may be retained in place with cement. In either case the lower end of the binding is removed from the inside walls of the shoe upper, and a smooth interior surface is thereby provided.

The foregoing features and other objects of this invention are set forth in the following description and the accompanying drawing illustrating the front portion of a shoe embodying the invention in which:

Fig. 1 is an inside view of a front portion of a longitudinal section of a shoe illustrating an embodiment of the invention;

Fig. 2 is a perspective inside view of a one piece vamp and tongue;

Fig. 3 is a plan view of the inside surface of the front portion of one section of the quarter;

Fig. 4 is a plan view of the inside surface of the front portion of the other section of the quar-

ter united to the one piece vamp and tongue; and

Fig. 5 is a plan view of the inside surface of the toe portion of an upper showing the tongue and vamp piece united to each quarter section and illustrating a modification of the invention shown in Figs. 1 to 4.

This invention is described and illustrated herein in reference to a canvas shoe of the type commonly known as a lace-to-toe construction and is applicable to either high or low shoes. Referring to the drawing, Fig. 1 is an inside view of a longitudinal cross section of the front portion of a high canvas shoe having an upper 10 whose bottom edges are turned in between an outer rubber sole 11 and a sponge rubber inner sole 12, which elements are assembled with a filling material 13, foxing 14, and toe cap 15 in the usual manner. The upper 10 comprises a vamp 16 which is secured to the front portion of the quarter 17 by a butt seam 18 which produces a smooth inside surface for the shoe. As shown in Fig. 2 the vamp 16 and the tongue 19 are constructed from one piece of material. The tongue is provided with an edge binding 20 which is stitched thereto. Slits 21 are made in the edges 22 of the vamp 16 at the region of merger between the tongue and the vamp. The binding 20 is not stitched to the tongue or vamp beyond the slits. The unstitched ends of the binding 20 are extended through the slits from the inside surface of the one piece vamp and tongue to the outside surface thereof, as shown on the upper edge of Fig. 2 and on both edges of Fig. 4. At the lower edge of the vamp 16, as shown in Fig. 2, the unstitched end of the binding has not been extended through the slit 21.

The combination one piece vamp and tongue 16-19 so constructed is then assembled with the front ends 23 and 24 of the right and left sections 25 and 26, respectively, of the quarter 17. As shown in Fig. 4, the right section 25 is assembled with the one piece vamp and tongue 16-19 and united thereto with cross stitches, or over-edge stitches 18', and the front end of the left section 26 of the quarter is shown in Fig. 3 ready to be assembled with the one piece vamp and tongue in the manner indicated in Fig. 4. A slit 26' is made in the front ends 23 and 24 of the quarter to receive any portion of the binding that might extend beyond the edge of the tongue 19, and to assist in the assembly of the parts.

Figs. 2, 3 and 4 are views of the internal surfaces of the one piece vamp and tongue 16-19, and quarter 17, and as shown in Fig. 4, the unstitched ends of the binding 20 on the edge of the tongue 19 extends through the slits 21 from the inside surface of the shoe upper to the outside surface, and as shown in Fig. 1 the outside eyelet stay 27 is stitched along the upper margin of each quarter section 25 and 26 of the quarter 17. The stay 27 extends downwardly over the

outside of the seam 18 and is stitched to the vamp 16 and the quarter 17 on each side of the seam. In such construction the unstitched ends of the edge binding 20 is secured between the outside surfaces of the vamp and the joined quarter 17 and the inside surface of the outside eyelet stay 27. The free ends of the tongue binding 20 is in this manner prevented from coming in contact with the wearer's foot and chafing it.

10 A modified construction of this invention is shown in Fig. 5, in which the toe tip 28 is placed on the inside of the shoe instead of on the outside, as in the case of the tip 15 shown in Fig. 1. In this construction the vamp 29 and the tongue 29' is of a one piece construction and is joined with the quarter 30 with a butt seam 31 at each side of the vamp. This seam, however, is not necessarily reinforced by cross stitching. The cross stitching may be omitted, and the seam secured together on the inside by means of the inside toe cap 28 which is cemented to the vamp 29 and extends over the seam 31 and on to the inside surface of the quarter 30. The outside eyelet stays 33 are stitched to the upper edges of the quarters and extend downwardly over the butt seam 31 on both sides thereof and is stitched to the vamp and the quarter on both sides of the seam before the inside toe cap 28 is applied. The vamp and the quarter are slit as in the other shoe construction. The tongue binding 34 is extended through the slits in the manner previously described.

In assembling the shoe described in Figs. 1 to 4, the one piece tongue and vamp 16-19 is cut out and provided with the edge slits 21 as shown in Fig. 2. The edge binding 20 is stitched around the edge of the tongue to the point where the slits 21 are made. Preferably that portion of the vamp extending below the slit is folded toward the center of the vamp and the portion of the binding extending beyond the slit is stitched together but not to the one piece vamp and tongue. The extending ends of the binding, although they may contain the edge stitching, are referred to herein as the unstitched ends.

The sections 25 and 26 of the quarter 17 are cut out as shown in Figs. 3 and 4. The eyelet stays 27 are sewed to the upper edges of the quarter, but are left unstitched from a line adjacent to the slits 26' to the lower end of the stays (see Fig. 3). The eyelets are inserted as usual and the one piece vamp and tongue 16-19 are assembled so that the side edges 22 of the vamp are arranged in abutting relation with the front edges of the quarter 17. In order that these edges may be stitched together with greater facility, the material of the quarter above the slits 26' is brought out of alignment with the material below such slits by folding the front end of the stay 27 towards the rear of the quarter. After the stitching 18' has been made the lower end of the quarter 17 and stay 27 is folded back to the position shown in Fig. 4, and the ends of the stays are stitched on each side of the seam 16 to the vamp 16 and the quarter 17 by the stitches 27'.

The modification of the shoe shown in Fig. 5 is assembled in the same manner except that the cross stitches 18' are omitted and the inside toe cap 28 is cemented to the inside of the upper.

While more than one form of the invention has been illustrated and described herein, it will be understood that modifications of details thereof may be made without departing from the spirit of this invention and the scope of the claims appended hereto.

Having thus described our invention, what we claim and desire to protect by Letters Patent is:

1. In a shoe, a sole having an upper attached thereto, said upper comprising a vamp and a quarter cut out in separate pieces, said vamp and quarter having matched abutting edges at the toe enclosing portion of the shoe, said matched edges extending downwardly to the sole of the shoe and being secured together with a butt seam construction, and an outside eyelet stay extending entirely over said butt seam and stitched to said vamp and quarter on opposite sides of said seam to thereby reinforce same.

2. In a shoe of the lace-to-toe construction, a sole having an upper attached thereto said upper comprising a one piece vamp and tongue and a separate quarter united thereto, said piece having a slit on each side thereof extending inwardly from the edge in the region where the vamp merges with the tongue, said tongue having an edge binding extending through said slit from the inside of said piece to the outside thereof, said vamp having side edges extending from the tongue portion downwardly to said sole, said quarter having front edges matched in abutting relation with said side edges of said vamp and a slit in said front edges opposite said slit in said one piece vamp and tongue, eyelet stays stitched to each front edge of said quarter and extending downwardly over the outside of said entire butt seam construction, and the edges of said stays being stitched to said quarter and vamp on each side of said butt seams to reinforce said seams and to conceal the ends of said tongue binding.

3. The method of making shoes comprising the steps of cutting out a one-piece vamp and tongue, slitting the opposite edges of said piece near the region of merger of the vamp and tongue, binding the edges of the tongue by stitching a strip of binding thereto along such edges up to and terminating at the slits, extending the ends of the binding through the slits from the inside surface of the piece to the outside, cutting out a quarter with front edges corresponding to the side edges of the vamp, slitting the front edges of the quarter, stitching outside eyelet stays to said quarter to a point adjacent to said slits therein and leaving the ends of said stays unstitched, arranging the side edges of the vamp in abutting relation with the front edges of the quarter so that the slits in the quarter and the one-piece vamp and tongue are substantially in line, folding the front end of the stays and the front ends of the quarter extending above said slits backward at said slits and toward the rear portion of said quarter, and securing said abutting edges of said quarter and vamp together with cross stitches to form butt seams, and stitching the unstitched ends of the eyelet stays on each side of said seam to the quarter and the vamp.

FREDERICK H. WOLFHARD.
LEIGHTON C. WOODALL.