Aug. 19, 1947. C. D. ROUCH 2,425,955

BOOT UPPER WITH SHAPED UPPER EDGE

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Fig. 1

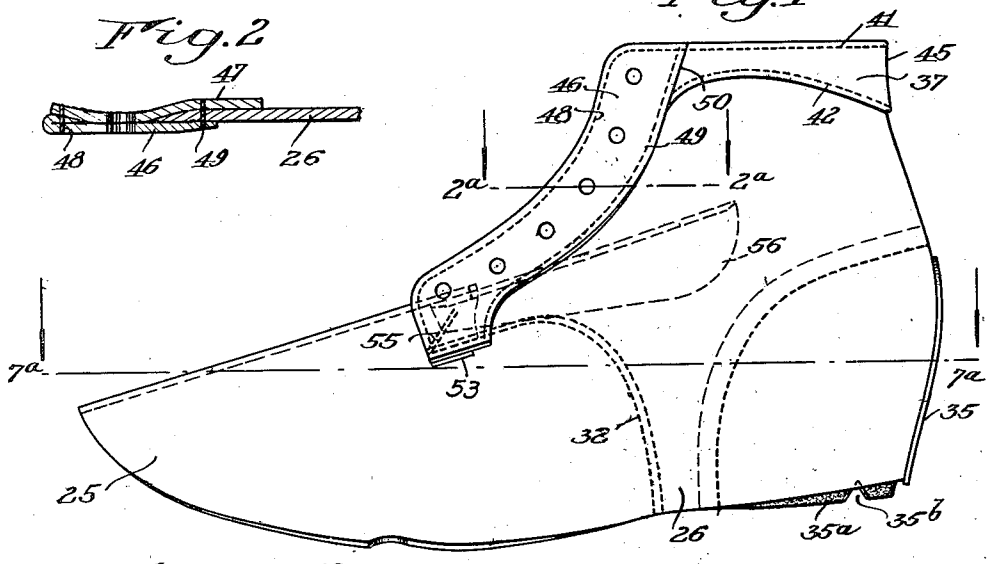


Fig. 2

Fig. 3

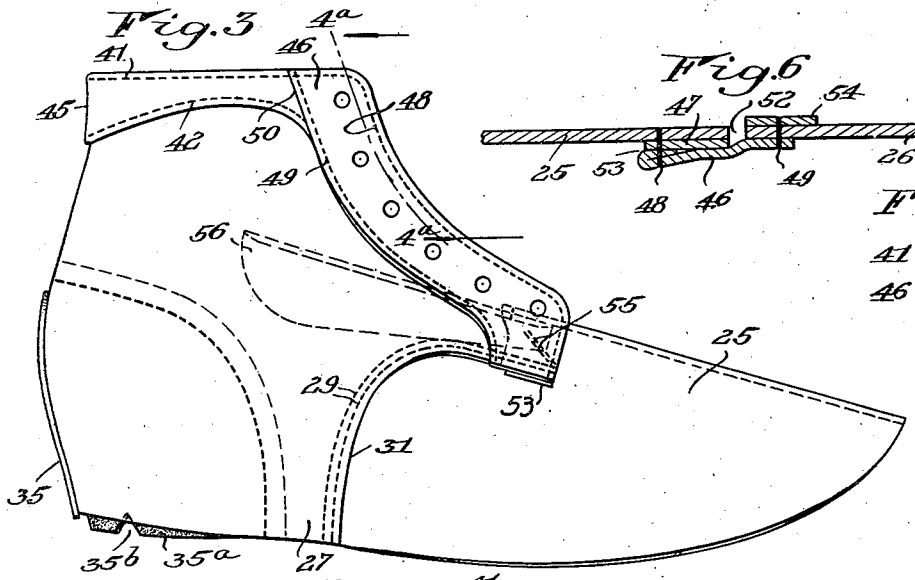


Fig. 6

Fig. 4

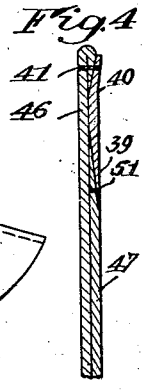
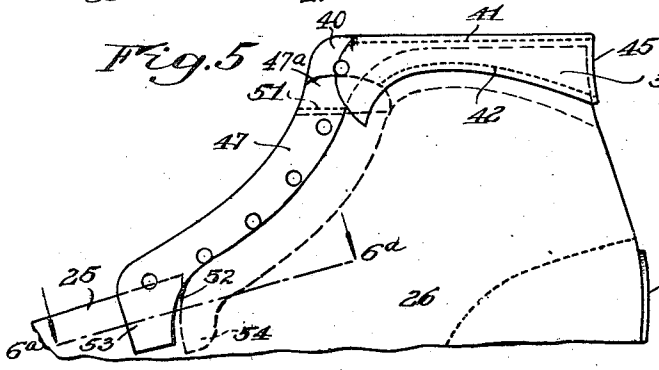


Fig. 5



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Fig. 7

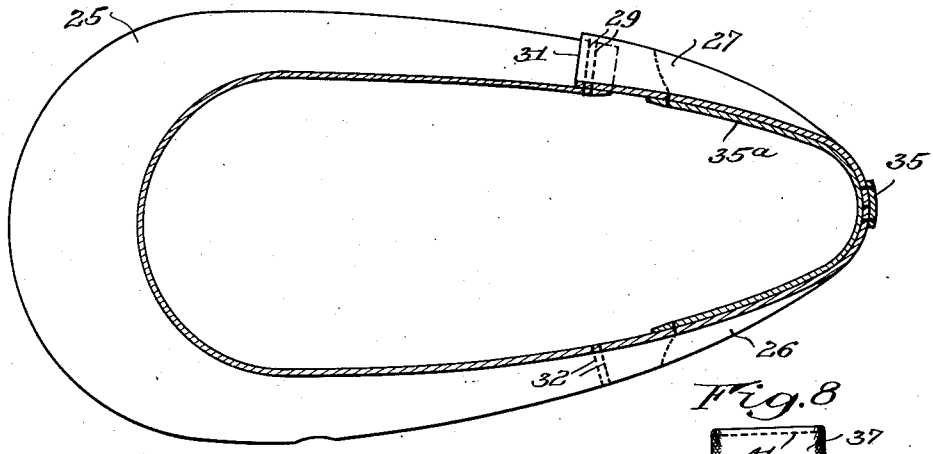


Fig. 8

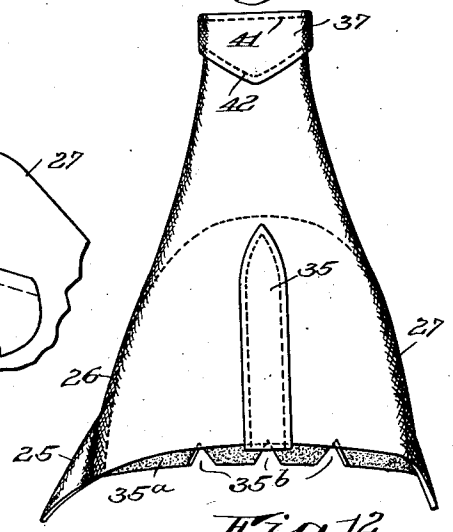


Fig. 11

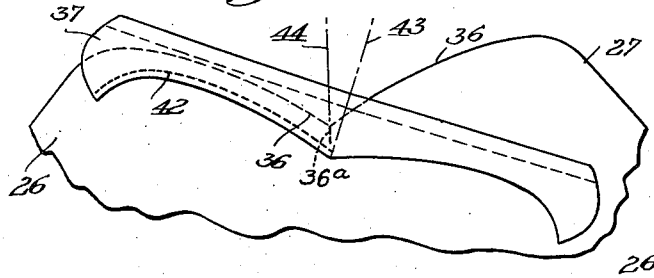


Fig. 9

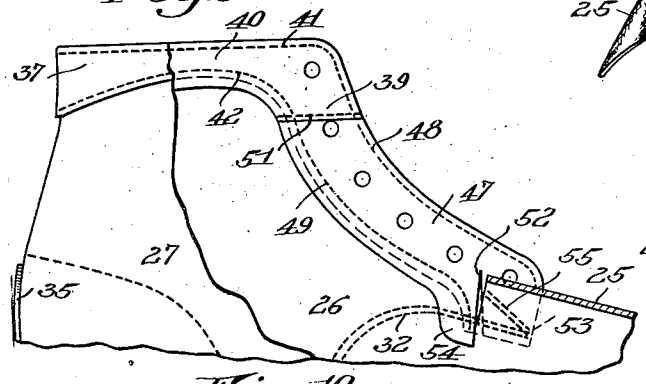


Fig. 12

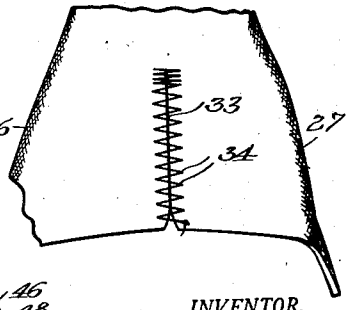
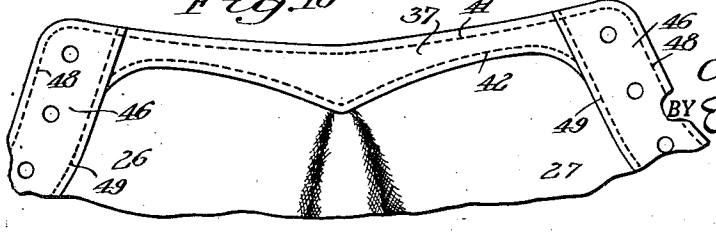


Fig. 10

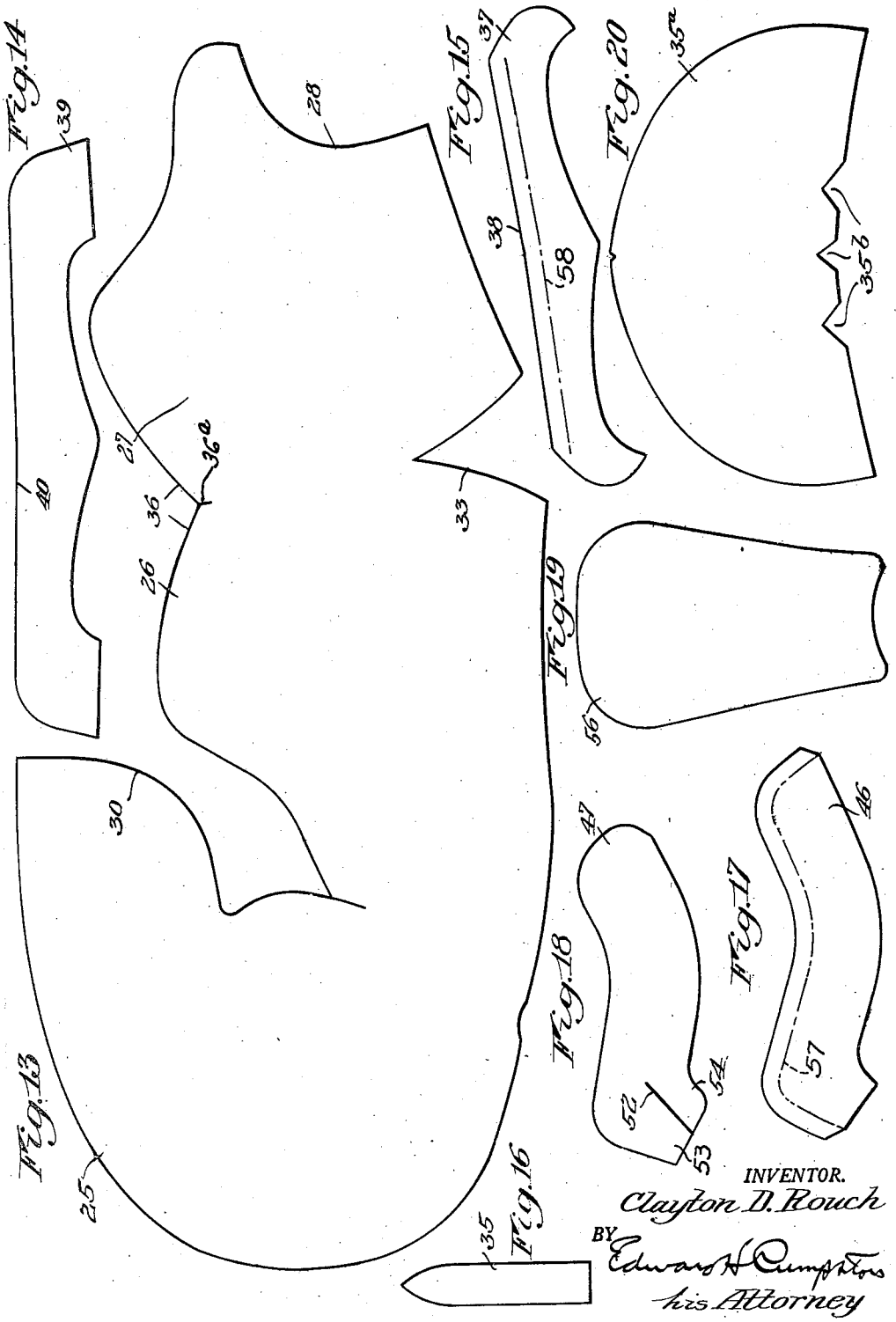


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2,425,955

UNITED STATES PATENT OFFICE

2,425,955

BOOT UPPER WITH SHAPED UPPER EDGE

Clayton D. Rouch, Livonia, N. Y.

Application December 11, 1944, Serial No. 567,558

5 Claims. (Cl. 36—45)

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This invention relates to boot uppers made in part, or in whole, of leather, or the like, one object of the invention being to provide an improved type of upper having a construction which is more simple, rugged and comfortable to the foot and capable of being economically manufactured.

Another object is the provision of a one-piece, substantially unlined upper of the character described, with a minimum of seams and a smooth inner surface conducive to foot comfort and health and particularly suitable for infant's wear.

Another object is to provide an upper of the above character made of leather strongly reinforced by top bands and lace and back stays, to prevent stretching, and having smooth inner surfaces requiring no lining.

To these and other ends the invention resides in certain improvements and combinations of parts, all as will be hereinafter more fully described, the novel features being pointed out in the claims at the end of the specification.

In the drawings:

Fig. 1 is a side elevation of a one-piece, substantially unlined, unlasted upper for the right foot, embodying the present invention, as viewed from the inner side of the foot;

Fig. 2 is an enlarged, sectional view on the line 2*a*—2*a* in Fig. 1;

Fig. 3 is a view similar to Fig. 1 from the outer side of the foot;

Fig. 4 is an enlarged elevation on the line 4*a*—4*a* in Fig. 3;

Fig. 5 is a fragmentary view similar to Fig. 1, but with parts broken away;

Fig. 6 is an enlarged, sectional view on the line 6*a*—6*a* in Fig. 5;

Fig. 7 is a plan view on the line 7*a*—7*a* in Fig. 1;

Fig. 8 is a rear elevation;

Fig. 9 is a view similar to Fig. 3, but with parts broken away;

Fig. 10 is a fragmentary rear view of top portions of the upper in flattened shape;

Fig. 11 is a diagrammatic view of top portions of the upper and top band, partially stitched together and in flat shape;

Fig. 12 is a fragmentary rear elevation with the back stay removed;

Fig. 13 shows the blank for the vamp and quarters;

Fig. 14 shows the blank for the top band lining;

Fig. 15 shows the blank for the top band;

Fig. 16 shows the blank for the back stay;

Figs. 17 and 18 show the blanks for one of the back stays and stay linings, respectively;

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Fig. 19 shows the blank for the tongue, and

Fig. 20 shows the blank for the counter pocket.

The present invention is embodied in the present instance, by way of illustration, in an unlined infant's boot upper made of leather and adapted to be lasted with a sole as a "stuck-on" or cemented boot, although it will be understood that the invention is applicable to boots lasted in other ways as well.

The upper comprises, as shown in Figs. 1, 3 and 13, a vamp **25** and quarters **26** and **27**, all one one piece, the blank shown in Fig. 13 being for a boot for the right foot. The whole upper is thus cut from the base stock in one piece, as shown, and the curved edge **28** is overlapped and secured by stitching **29** to the curved edge **30**, to form the outer ankle seam **31**, which leaves the vamp and quarter portions on the inside of the foot unseamed and smooth, as has been found highly desirable, since the inside of the foot, including the ball joint, is particularly subject to irritation and injury by roughnesses on the inside of the shoe. Stitching, shown at **32**, Fig. 1, on the inside of the ankle, is for appearance and creates no substantial roughness in the shoe. It will also be seen that an upper so constructed is unseamed and smooth over the back cord of the foot, which is also particularly subject to irritation.

To form a perfect heel curve, the upper is deeply notched as at **33** (Figs. 12 and 13), at the center of the heel, from its bottom upwardly to a point adjacent the top of the counter, and the notch edges are smoothly butted and stitched, preferably by "zigzag" stitching **34**, without substantially detracting from the smoothness over the back cord of the foot, and a back stay **35** is stitched on to strengthen the parts and present a finished appearance. A counter pocket piece **35***a*, Fig. 20, is stitched to the inside of the upper at the heel and formed with notches **35***b* along its bottom edge to prevent crimping in lasting.

The top of the upper at its back is a point at which it commonly tends to press upon or "bite" and irritate the back cord of the foot. This is particularly true of a boot and more especially of an unlined, one-piece type of boot, because heavier leather is employed in the absence of lining reinforcements and because pulling in the quarters tightly to conform them to the convex curvature of the back of the heel tends to pull in the leather of the back of the upper at its top and cause it to pinch on the back cord of the foot. I have found that this defect may be successfully overcome by the one-piece construction described above, in combination with means comprising, in

part, a notch 36 (Fig. 13), cut in the top of the upper at the center of the back, between the quarters, and extended by a slit 36a to free and allow the top edges of the quarters to separate and flare outwardly as hereafter described. In cooperation with this notch, I provide a one-piece, leather top band 37 (Figs. 11 and 15), preferably having a substantially straight upper edge 38 folded over in application to the upper, to afford a finished appearance. The dot and dash line 58 in Fig. 15 indicates the line on which the edge of the band is folded. The lower edge of each half of the band is curved to correspond with the top edge of the corresponding quarter, as best shown in Fig. 11. A leather top band lining (Fig. 14) is similarly formed in a single piece 39 with a substantially straight top edge 40, which is assembled to coincide with the top band 37. One-half of the top band 37 and of lining 39 have their curved lower edges laid substantially parallel with the top edge of the corresponding quarter and are stitched to each other and to the quarter, as by stitches 41 and 42 (Fig. 9). The other half of the top band 37 and lining 39 are then similarly stitched to the top edge of the other quarter. Since the angle between the curved edges of the top band 37 is greater than the angle between the curved sides of the notch 36 in the top of the upper, such stitching together of the band and the upper serves to spread outwardly the material of the top portion of the back of the upper as indicated by the spaced positions of the projected center lines 43 and 44 (Fig. 11) of the upper before and after such stitching, respectively, and such assembly of the parts serves to automatically produce an outward flare at the top of the back of the upper, as shown at 45 in Figs. 1 and 3, thereby relieving the pressure, or "bite," of the top of the upper on the back cord of the foot and substantially increasing the comfort of the shoe.

To further increase the strength of the upper, reinforcement is provided for the lacing edges, comprising, preferably, an outside lace stay 46 for each edge (Figs. 1, 3 and 17), and a stay lining 47 (Figs. 9 and 18). The stay and stay lining are marginally stitched together by stitches 48 and are stitched to opposite sides of the edge of the upper by stitches 49, as shown. The dot and dash line 57 in Fig. 17 indicates the line on which the forward edge of the stay is folded under before stitching. At its upper end the stay is also stitched over the forward end of the top band 37, as at 50 (Fig. 1), while the forward end of the top band lining 39 is stitched over the upper end of the stay lining 47, as at 51 (Fig. 9), the inner edges of these lining parts 39 and 47 being skived to a thin edge held close to the inner surface of the upper by the adjacent stitching, so as to avoid any abrupt projection, or roughness, likely to irritate the foot. The upper end of the stay lining 47 is shown at 47a. The stay lining 47 on the inside of the foot has its lower end slit, as at 52, to form two end parts, one of which, 53, is stitched to the corresponding stay 46, and to the outer surface of the upper, while the other part, 54, is stitched to the inner surface of the upper, to smoothly combine the stay and stay lining with the vamp, which is continuous with the quarter of this inner side of the upper. At 55 is a short double line of stitching to reinforce the connection between the lace stay, stay lining and vamp.

At 56 is the usual tongue stitched at its forward end to the inner surface of the vamp.

The one-piece vamp and quarters require but one cut on the base pattern, instead of three cuts, as in the ordinary boot, and obviates any confusion of different sizes in the assembly of such parts. The upper and the various fittings described are well adapted to be laid out, in compactly associated relation, on the base stock, together with the usual marking for the lapping of the parts, in one operation, thereby effecting substantial economies of materials and labor. A shoe upper thus made affords an extremely rugged construction and presents an unseamed and smooth surface and shape to the inside and to the back cord of the foot, which are conducive to comfort and proper foot health and growth, thus eliminating also any necessity for a lining with its attendant disadvantages and expense.

It will thus be seen that the invention accomplishes its objects, and while it has been herein disclosed by reference to the specific details of a preferred embodiment, it is to be understood that such disclosure is intended in an illustrative, rather than a limiting sense, as it is contemplated that various modifications and changes may be made in the construction and arrangement of the parts, within the spirit of the invention and the scope of the appended claims.

I claim:

1. A boot upper comprising quarters in one piece and presenting an unseamed and smooth surface to the back cord of the foot, said upper having a notch in its top at the center of the back thereof with relatively inclined edges, and a top band having opposite lateral halves including therebetween a greater angle than that normally between said notch edges and stitched to said edges of said notch to produce an outflare of the back of the upper and relieve pressure of the top of the upper on the back cord of the foot.

2. A boot upper comprising quarters in one piece and presenting an unseamed and smooth surface to the back cord of the foot, said upper having a notch in its top at the center of the back thereof with relatively inclined edges, and a top band and top band lining each having opposite lateral halves including therebetween a greater angle than that normally between said notch edges, said band and lining being stitched to each other and to opposite sides of the relatively inclined edges of said notch to produce an outflare of the back of the upper relieving pressure of the top of the upper on the back cord of the foot and to reinforce said upper.

3. A boot upper comprising vamp and quarters in one piece stitched together only at the outside ankle seam and presenting an unseamed and smooth surface to the inside of the ankle and back cord of the foot, said upper having a notch therein at the center of the lower edge of the quarters with the notch edges smoothly butted and stitched to form the heel curve, a back stay stitched over said butted edges on the outer side of said upper, a counter pocket stitched to the inner side of the upper and smoothly covering the stitching of said notch edges, said upper having a notch in its top at the center of the back thereof with relatively inclined edges, and a top band having opposite lateral halves including therebetween a greater angle than that normally between said notch edges and stitched to the relatively inclined edges of said top notch to produce an outflare of the back of the upper and relieve pressure of the top of the upper on the back cord of the foot.

4. A substantially unlined, one-piece boot up-

per comprising vamp and quarters in one piece stitched together only at the outside ankle seam and presenting a substantially unseamed and smooth surface to the inside of the ankle and back cord of the foot, said upper having a notch in the lower edge thereof at the center of the heel portion of said upper with the notch edges smoothly butted and stitched to form the heel curve, a back stay stitched over said butted edges on the outer side of said upper, said upper having a notch in its upper edge at the center of the back thereof with relatively inclined edges, and a top band having opposite lateral halves including therebetween a greater angle than that between said notch edges and stitched to the relatively inclined edges of said top notch to produce an outflare of the back of the upper and relieve pressure of the top of the upper on the back cord of the foot.

5. A substantially unlined, one-piece boot upper comprising vamp and quarters in one piece stitched together only at the outside ankle seam and presenting a substantially unseamed and smooth surface to the inside of the ankle and back cord of the foot, said upper having a notch in the lower edge thereof at the center of the heel portion of said upper with the notch edges smoothly butted and stitched to form the heel curve, a back stay stitched over said butted edges on the outer side of the upper, a counter pocket stitched to the inner side of the upper, said notch extending adjacent the top of said counter pocket with said counter pocket smoothly covering the

stitching of said notch edges, said upper having also a notch in its upper edge at the center of the back thereof with relatively inclined edges and a top band having opposite lateral halves including therebetween a greater angle than that between said notch edges and stitched to said inclined edges of said top notch to produce an outflare of the back of the upper and relieve pressure of the top of the upper on the back cord of the foot.

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