

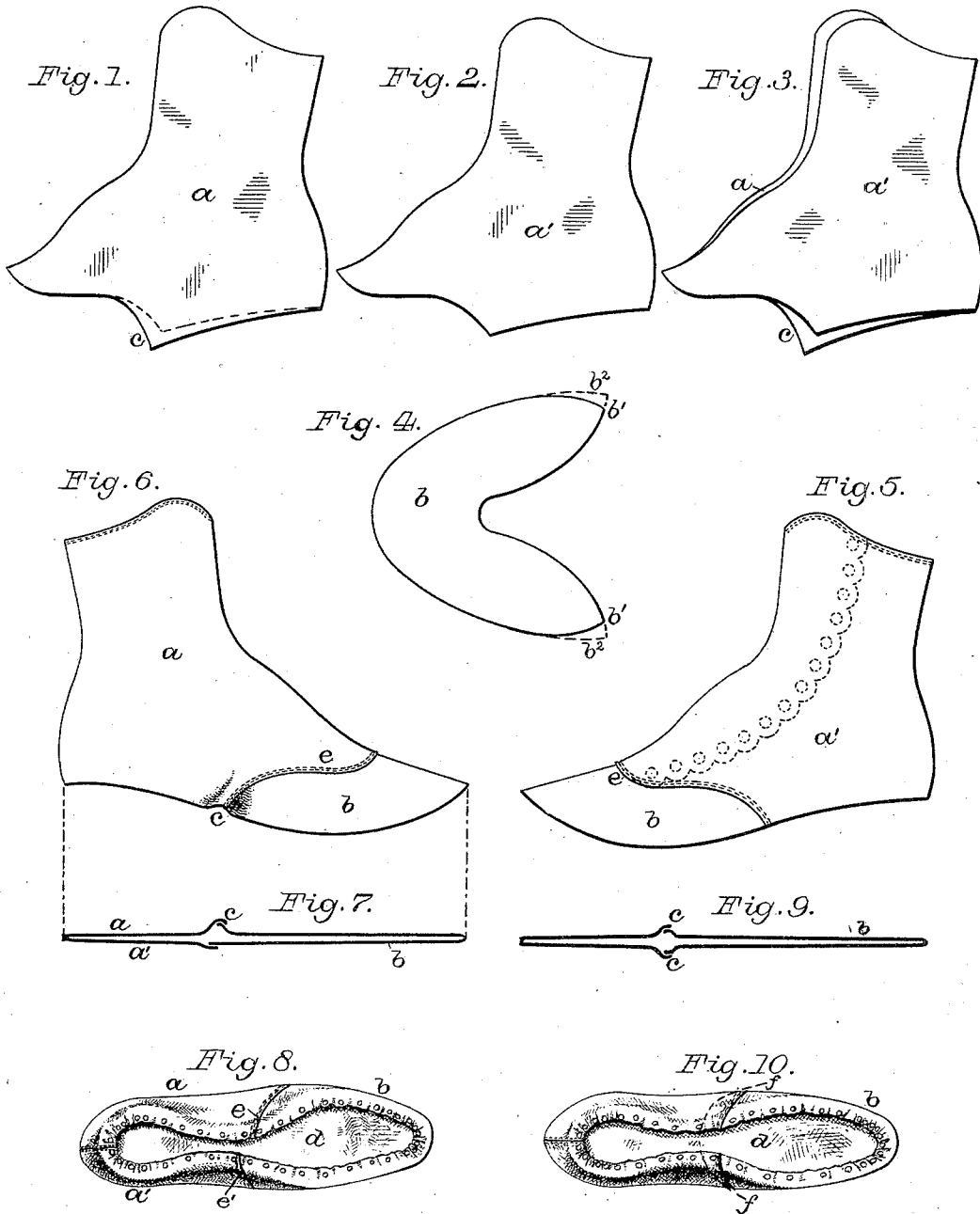
(No Model.)

W. NORTON.

MANUFACTURE OF BOOTS OR SHOES.

No. 302,930.

Patented Aug. 5, 1884.



Attest:

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UNITED STATES PATENT OFFICE.

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MANUFACTURE OF BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 302,930, dated August 5, 1884.

Application filed April 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM NORTON, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have invented a new and useful Improvement in the Manufacture of Boots and Shoes, of which the following is a specification.

My said improvements have special value only in that class of boots and shoes which, because of the delicate character of the stock employed therein, as well as the presence of a seam between the vamp and quarters adjacent to the shank and at both sides thereof, and across the instep, precludes the application of stretching-strains necessarily incident to the operation of "lasting" as practiced with ordinary stock, and by which the latter is so pulled and stretched, as to obtain a practically-perfect conformity of the boot or shoe with the last at the inner side of the shank, as in right and left goods, or at both sides of an extra high arched shank, as in straight goods. As a type of stock of the delicate character referred to, I will refer to such kid as is commonly used for ladies' fine shoes; and the only goods in which my improvement is applicable are such as have a vamp-seam extending from one side of the shoe at the forward portion of the shank upward and forward over the instep, and thence downward and rearward on the opposite side of the shoe. In view of the fact that the kid-stock referred to cannot with safety be "lasted"—like calf-stock, for instance—it is obvious that the cut of the kid-stock can only be relied upon for obtaining a close fit at the inside of the shank, and, so far as my knowledge extends, this has only heretofore been done in the class of goods referred to by inserting a gore-piece, and the consequent employment of one or more extra seams at the inner side of the shoe at the shank; and the objects of my invention are to obviate said extra seam or seams and the cost and labor incident thereto, as well as the objectionable appearance incident to the insertion of a gore-piece, and, still further, to obtain a practically-perfect fit at the inner side of the shank without unduly straining either the stock or the seam by which the vamp and quarter are

united. To accomplish those ends, I have devised a novel cut in the quarters of the shoe, in that, instead of having the inner and outer quarters, as heretofore, in "right and left goods" of the same contour at the lower front lines thereof—or, in other words, at the vamp-seam lines—I extend the lower front line of the inside quarter beyond the corresponding portion of the outside quarter, and employ therewith a vamp having its rear line of a corresponding contour on both sides of the shoe, thus providing for an integral fullness of stock at the inner side of the shoe at the shank greater than at the opposite or outer side. In a straight shoe having the usual high arched shank a lesser degree of fullness is required at either the inner or outer sides; but to provide equally therefor, the quarters and the vamp are so cut by me that both quarters will have at their lower front ends an integral triangular portion thereof overlapped by the vamp, (as when laid flatly thereon,) and also so that when said vamp is properly stitched to said quarters the said integral triangular portions will afford the requisite integral fullness. In some cases at the vamp-seam in both varieties of shoe, the vamp-stock overlies or is stitched upon the surface of the quarter-stock, and in other cases the quarter-stock in like manner overlies the vamp; but either way the triangular portions of the quarter provided by my novel cut contain sufficient stock to afford the integral fullness requisite to enable a close smooth fit at the shank without unduly straining the stock or the seam.

To more particularly describe my invention, I will refer to the accompanying drawings, in which Figure 1 is a side view of my inner quarter. Fig. 2 is a similar view of my outer quarter. Fig. 3 illustrates the outer quarter as laid flatly upon the inner quarter for more fully exhibiting the difference between them. Fig. 4 is a top view of my vamp laid out flatly. Fig. 5 is a side view of the outer side of my upper when its parts are united. Fig. 6 is a side view of the inner side of my upper. Fig. 7 is a bottom view of the upper, Figs. 5 and 6. Fig. 8 is a bottom view of the same upper as when lasted and upon a last, and ready to receive the sole and its ad-

5 jacent parts. Fig. 9 is a bottom view of an upper embodying my improvements as constructed for a straight shoe. Fig. 10 is a bottom view of the straight shoe-upper, Fig. 9, lasted and upon a last.

10 Referring to Figs. 1 and 2, it is to be understood that the inner quarter, *a*, and the outer quarter, *a'*, at the tops and at their upper front lines are as heretofore, and that each differs from the other at those points only so far as is usually deemed necessary for the proper reception and application of the usual flap which contains the button-holes, as is indicated in dotted lines in Fig. 5.

15 It will be observed that the inner quarter, *a*, at its front lower portion, has a curved dotted line, outside of which is the corner portion, *c*, and that when the outer quarter, *a'*, is flatly laid upon the inner quarter, *a*, there is exposed of the latter this corner portion, *c*, having an outline which is approximately triangular, and it is this extension of surface in the inner quarter, as compared with the outer quarter, which provides for and furnishes the requisite fullness of the stock at the inner side of the shoe adjacent to the shank, when the front lower edges of the two quarters have been uniformly stitched to the vamp *b*. This fullness, afforded by the integral triangular portion *c* on the inner quarter, is clearly illustrated in Figs. 6 and 7; and it will be seen from Fig. 8 that when said upper is placed upon the last *d*, said fullness enables the lower front portion of the inner quarter to readily conform to the adjacent portion of the last, notwithstanding the excessive concavity at the inner side of the last at the shank as compared with the outer or opposite side thereof.

20 In right and left shoes my improvement is readily recognized, from the fact that the vamp or instep seam *e* at the inner side of the shoe is located in advance or in front of the opposite end of the same seam at *e'*, as is clearly shown in Fig. 8. It will also be seen that the vamp-seam at *e*, when the shoe is worn, will be located closely at the rear of the joint of the large toe, which renders a shoe embodying my improvements unusually comfortable to the wearer, because said seam is opposite that portion of the foot where its inward curve is the most abrupt, and therefore said portion of the seam cannot bear with undue pressure upon the foot.

25 In a straight shoe, as shown in Figs. 9 and 10, the same provision is made for fullness as at *c*, but to a slightly-less degree, and on both sides of the shoe. Straight shoes are usually made with much higher arched shanks than right and left shoes, and therefore each side of the quarter must be provided with almost as much fullness as at the one side of a right-and-left shoe, which has a lower arch. In the straight shoes the inner and outer ends of the vamp-seam are opposite to each other; but I have shown in dotted lines in Fig. 8 at *f*, where said seam ends would be located if

the usual cut had been employed, said dotted lines being as much at the rear of the seams as the greatest width of the triangular integral portions *c*, by which the desired fullness is obtained. The change in cut as made by me, although seemingly slight, is in fact a radical one, and necessarily involves a novel mode of operation in machine-stitching the quarters to the vamp. Heretofore the front lower cut of the two quarters has not only been uniform, but the rear cut of the vamp has been so closely conformed thereto that, while being stitched by a machine, the vamp could flatly overlies the quarters, or the quarters flatly overlies the vamp, so that the seam, although curved, could be practically run in stitching as if it were a straight seam. My vamp *b* has uniform outlines at both sides at its rear; but I have so far changed the usual cut thereof that its points or corners *b'* are somewhat contracted inwardly as compared with the prior cut, which is indicated at the dotted lines *b''*. It will be seen that by my fullness *c*, I carry the adjacent corner of the vamp farther forward toward a wider portion of the foot, and hence the width of the vamp at its points *b'* is less than if the fullness had not been provided for on the quarter.

30 It will be seen that in stitching my vamp to my quarters the edges of the vamp at its rear end will, in a right-and-left shoe, properly overlies or underlies, as the case may be, the outer quarter wholly, and the upper front portion of the inner quarter, so as to enable so much thereof to be sewed precisely as heretofore, but that the integral triangular portion *c* must then be moved away from the vamp, so as to bring the lower front corner of the inner quarter coincident with the lower rear corner of the vamp, and I therefore have to perform the stitching in a novel manner, in that, instead of making the vamp-seam by a continuous run of the machine, the latter must be stopped when the apex of the triangular portion *c* is reached, the needle left resting in its depressed position, and then I am obliged to draw the quarter rearward at its lower edge until the lower front line thereof is coincident with the corresponding line of the vamp, whereupon the stitching is resumed while the lower corners of the vamp and quarter are maintained in proper coincidence.

35 Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A shoe-upper having a single seam at each side thereof between the vamp and the quarters, and the integral fullness *c* of the quarter at said seam at one or both sides of the upper, substantially as described, and for the purposes specified.

2. In a right or left shoe upper embodying an inside quarter, an outside quarter, and a vamp joined to said quarters by a vamp-seam across the instep, the inside quarter having its front lower line extended forward of the

corresponding line of the outside quarter, substantially as described, whereby a sufficient fullness is afforded at the inner side of the shoe at the shank to secure a close fit without
5 unduly straining the stock or the vamp-seam, as set forth.

In testimony whereof I have signed my name

to this specification in the presence of two subscribing witnesses.

WILLIAM NORTON.

Witnesses:

J. H. ADAMS,
E. PLANTA.