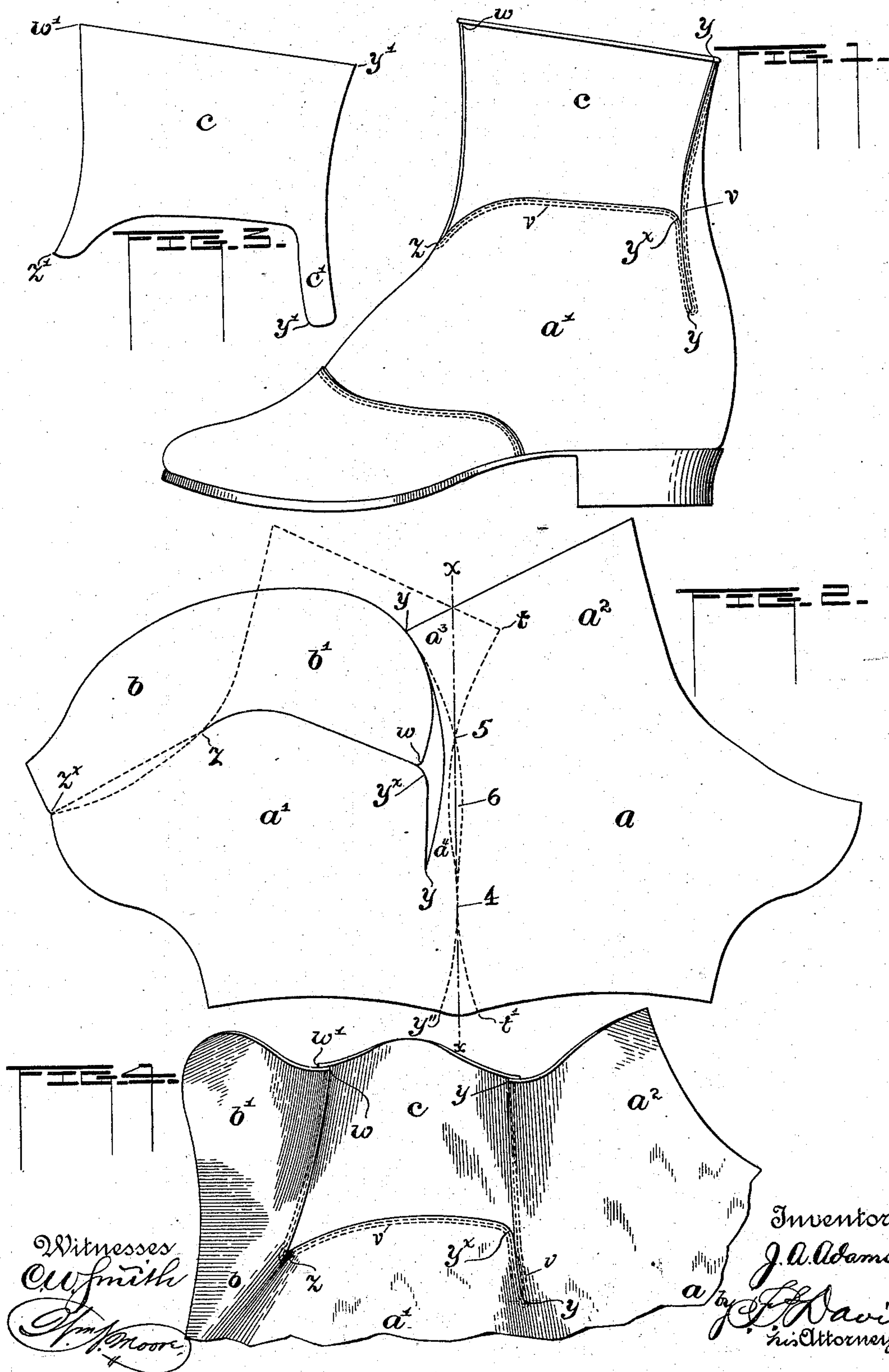


(No Model.)

J. A. ADAMS.  
SHOE UPPER.

No. 562,347.

Patented June 16, 1896.



Witnesses  
C. W. Smith  
J. M. Moore

Inventor,  
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his Attorney.



# UNITED STATES PATENT OFFICE.

JOHN A. ADAMS, OF NORTH ADAMS, MASSACHUSETTS, ASSIGNOR OF TWO-THIRDS TO GEORGE A. SIMARD AND ARTHUR MIGNAULT, OF SAME PLACE.

## SHOE-UPPER.

SPECIFICATION forming part of Letters Patent No. 562,347, dated June 16, 1896.

Application filed March 21, 1896. Serial No. 584,333. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN A. ADAMS, a citizen of the United States, residing at North Adams, in the county of Berkshire and State of Massachusetts, have invented certain new and useful Improvements in Shoe-Uppers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to the manufacture of boots and shoes and more particularly cheap shoes such as worn by the lower classes. The object therefore is to reduce expense as much as possible in the manufacture without detracting from the durability of the article. It is evident that the less seams there are in the upper of the shoe the more durable it will be, besides the saving in material and labor.

My invention provides for the making of a complete shoe-upper out of two pieces of leather without any seam at the instep or in the back and with the requisite crimp in the back both at the top and just above the heel, which results from the peculiar manner of cutting or shaping the two pieces of material, so that the mere stitching together of the said pieces in a prescribed manner produces the desired effect.

The drawings which accompany and form part of this specification illustrate an embodiment of the invention.

Figure 1 shows a side elevation of a shoe made in accordance with the invention. Fig. 2 shows one of the pieces of leather composing the upper as said piece appears in the flat when cut. Fig. 3 shows a similar view of the other piece of leather. Fig. 4 shows the two pieces as they appear when stitched together and not folded.

Referring first to Fig. 2, the letters  $a$  and  $a'$  designate, respectively, the lower parts of the two sides or quarters both being in the same piece of leather which when folded on a transverse central line, as that indicated by the dotted line  $xx$ , brings said two portions to lie upon each other with their edges coinciding. On one side of said line of fold the upper portion  $a^2$  of the quarter is in one continuous piece with the portion  $a$ . On the other side of said

line of fold the upper portion of the leather is cut on a line  $y y$ , extending angularly with respect to the said line of fold, said line of cut first extending from the top edge of the leather some distance from the point where the line  $xx$  intersects said top edge, obliquely toward the line of fold but not to the same, and thence continuing obliquely away from said line of fold, the complete line of cut forming substantially an arc of a circle with its central portion nearest the line of fold, and tapering portions of leather  $a^3$  and  $a^4$  being left as continuations of the portion  $a'$ , intervening between the line of fold and the line of cut  $y y$  throughout the extent of the latter. From the lower end of the cut  $y y$  another cut is made upwardly at an acute angle to it for the purpose of removing a small triangular piece of leather, and this cut  $y y^x$  is made as an angular continuation of a lateral cut terminating at the point  $z$  in the body of the leather, from which point the leather is designed to be folded on a line  $z z^x$ , being one boundary of the portion  $a'$  and the central outline of the shoe-upper where it lies over the instep in the completed shoe. The leather  $b$  on the outer side of the line  $z z^x$  and the leather strip  $b'$ , separated from the body of the leather by the cut  $y^x z$ , together constitute a complete buttonhole-fly, the upper end of which is preferably shaped by cutting on the line  $w y$ , which merges into the line  $y y$ , so that the leather cut off is removed in one piece with the triangular portion before referred to as removed by the cuts  $y y$  and  $y y^x$ .

The shoe-upper is completed by an insertion or filling piece  $c$ , of generally rectangular shape and shown in Fig. 3, said insertion-piece having projecting at one corner a narrow elongated strip or tongue  $c'$ . It will be observed that while the edge  $y' z'$  of the insertion-piece and  $y z$  of the main piece are cut on substantially the same lines or curves, so that the parts can be laid flat upon each other with the said edges overlapping uniformly, yet the edges  $y' y'$  and  $z' w'$  of the insertion-piece are cut concavely, so that when the pieces of leather lie upon each other in the flat with the edges  $y z$  and  $y' z'$  uniformly lapping, the said edges  $y' y'$  and  $z' w'$  extend divergently with respect to the edges  $y y$  and  $z w$ . However, in connecting together the two pieces of



leather all the edges are lapped uniformly, this being accomplished with the divergent edges by bending the leather as the stitching progresses. It will be observed that the effect of this is to produce crimps, as well illustrated in Fig. 4, and when the upper is folded on the lines  $x x$  and  $z z^x$  the crimps will fall properly in the back and front, so as to secure the proper shape or outline in the finished shoe.

It will be seen by comparison of Fig. 2 with Figs. 4 and 1 that in the formation of the upper, part of the leather portion marked  $a^3$ , which in Fig. 2 shows all on one side of the central line of fold, shifts around onto the other side. In the finished shoe-upper the line  $y y$  runs angularly toward the upper end of the crimped line of fold. The seam, it will be noticed, remains in the side of the shoe. Now, if the lateral cut  $z y^x$  simply extended straight on to the vertical cut  $y y$ , with the latter terminating at the meeting-point, an objectionable fullness would be found to exist just above the heel, which is due to the fact that the cut  $y y$  cannot be carried over far enough (and yet have the buttonhole-fly the full length) to bring the meeting-point of the back outlines of the two quarters above the heel, this being illustrated in Fig. 2, where lines  $y y''$  and  $t t'$  indicate the back outlines of the quarters, these lines meeting at point 4 in the middle of the heel and then intersecting above at the point 5. Now the leather 6, inclosed by the lines between these two points 4 and 5, is what occasions the fullness above mentioned. It is to obviate this that the cut  $y y$  is continued down and the cut  $y y^x$  made, removing a portion of leather corresponding in extent with the portion 6. In making up the shoe the edges  $y y^x$  and  $y y$  are drawn together, so that they abut and the stitching is extended down along the same, fastening the leather at each edge to the tongue  $c'$ , and causing the fullness to disappear above the heel. It follows that the completed shoe will have just the proper crimp in the back, not only toward the top, but also immediately above the heel.

The two pieces of leather are connected by a simple lapped seam effected in a single passage through an ordinary sewing-machine, the stitching being designated in the drawings by the letter  $v$ .

By the construction of shoe-upper above described a number of advantages result

which combine to accomplish the desideratum of insuring the greatest economy in the manufacture and yet securing such durability and correctness of shape in the completed article as to make it thoroughly salable; but two pieces of leather are necessary to be cut out and but one operation of stitching to unite them and that by a simple lapped seam. A very considerable saving in labor and in materials is here effected and not only is there less thread required but not so high a quality of thread as where a turned seam is used. It is obvious that greater strain comes on a seam extending directly up the back than one in the side and a back seam has to be specially treated, as by rubbing and staying or reinforcing, all of which my invention obviates.

What I claim as my invention is as follows:

A shoe-upper comprising two pieces of material one constituting one complete side or quarter and the lower part of the other side or quarter and also a complete buttonhole-fly, said piece being cut in its upper portion on a line extending from the top edge of the material at a point some distance from a central transverse line obliquely toward such line to within a short distance thereof and thence downwardly into the lower portion of the quarter, and said piece of material being further cut on a line extending upwardly from the lower end of and at an angle to the first cut, and thence laterally to separate the upper portion of the buttonhole-fly from the cut quarter the lower portion of the buttonhole-fly being left integral with that quarter and designed to be folded over on a line in continuation of the line of lateral cut; and the other piece of material composing the upper being shaped to fill the space opened by the folding over of the buttonhole-fly, said filling-piece having an elongated strip or tongue at one corner to extend along the downward extension of the first-named cut and the cut extending upward from the lower end thereof, the two pieces of material being connected by a lapped seam with the opposed edges produced by these last-named cuts brought together over the tongue, substantially as and for the purpose described.

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

JOHN A. ADAMS.

Witnesses:

GEORGE F. MILLER,  
WILLIAM H. LEWIS.