(No Model.)

W. C. CROSS.

PREPARING THE UPPERS OF BOOTS OR SHOES FOR LASTING.

No. 313,301. Patented Mar. 3, 1885.

Fig. 1.

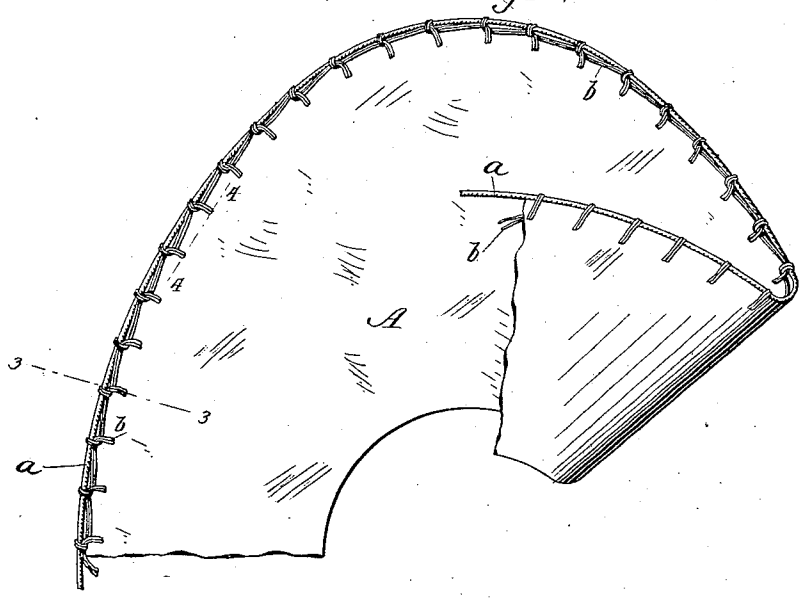


Fig. 2.

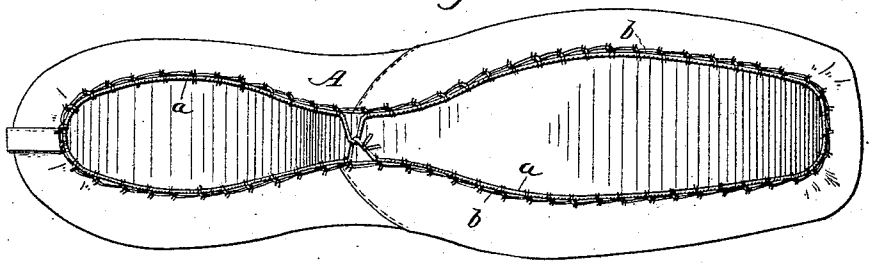


Fig. 3.

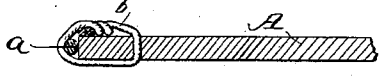
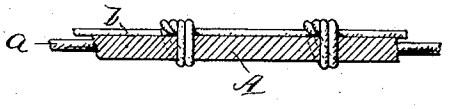


Fig. 4.



Witnesses:
H. N. Low
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Inventor:
Wm. C. Cross
by his attorney
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UNITED STATES PATENT OFFICE.

WILLIAM C. CROSS, OF BOSTON, MASSACHUSETTS.

PREPARING THE UPPERS OF BOOTS OR SHOES FOR LASTING.

SPECIFICATION forming part of Letters Patent No. 313,301, dated March 3, 1885.

Application filed December 2, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. CROSS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a certain new and useful Improvement in Preparing the Uppers of Boots and Shoes for Lasting, of which the following is a specification.

In my Letters Patent No. 306,589, dated October 14, 1884, I have described a way of preparing boot and shoe uppers for lasting by combining with the upper a draw-cord laid along the edge and upon one of the sides of the upper, and a loop-cord laid along the edge and upon the other side of the upper and bent at intervals into loops whose bights pass through to the opposite side of the upper and receive the draw-cord. This arrangement, although sufficient for some kinds of work, cannot always be effectively employed, because in it the draw-cord forms in effect a part of the stitch, and thus cannot be as thick and heavy as required for some kinds of work. With a view to removing this objection I devised a way of applying the draw-cord, which is described in my application for Letters Patent, Serial No. 146,437, filed October 25, 1884, and it consists in applying to one side of the upper a loop-thread and a draw-cord which passes through the loops of the loop-thread alternately from opposite sides thereof, so that the loops shall extend across or over the draw-cord diagonally and alternately in opposite directions. Under this arrangement the draw-cord, as in my Patent No. 306,589, is laid along the edge and upon one side of the upper; but unlike the said patented arrangement the draw-cord is independent of and forms no part of the stitch.

My present improvement embodies the feature last specified, but is designed to provide a way by which the draw-cord may be applied and firmly held to the actual edge of the upper by a series of loops which straddle the said edge. I am aware that this has in a general way been done already; but in the arrangements heretofore devised for the purpose the loop-thread has been applied by a running stitch or by sewing it "over and over" the edge. The vital objection to this arrangement is that the loops are free to draw one upon the other, the result being that when the draw-cord is pulled on some of the loops will elongate at the expense of others, and consequently the upper will not be pulled evenly over upon the last, and will be subjected to unequal draft upon various portions of its edge. Under my arrangement, however, this objection is entirely avoided, the loops straddle the edge so that I get a pull upon both sides of the upper; but I lock each loop so that it cannot possibly lengthen or shorten or be affected by the pull upon the other loops, and I thus maintain the draw-cord at all points around the edge in the desired and predetermined relation to the upper.

The nature of my improvement and the manner in which it is or may be carried into effect will be readily understood by reference to the accompanying drawings, in which—

Figure 1 is a view of a portion of an upper prepared in accordance with my invention. Fig. 2 is a plan of the upper lasted. Figs. 3 and 4 are sectional views representing more in detail the locked loops.

In the several figures, A is the upper, *a* is the draw-cord, and *b* is the loop-thread. It will be noted that the loops of the loop-thread straddle the edge of the upper, and that each loop is locked, so that while the loop-thread is continuous each loop is unaffected by the others and remains permanently just as it was laid in the first instance. The loops virtually cover the edge of the upper and are formed readily by sewing around the edge with the loop-thread a row of stitches each locked as in a "button-hole stitch." In thus stitching around the edge of the upper with a button-hole lock-stitch the draw-cord is applied by being fed along with the upper, the stitches of the loop-thread cover it and keep it close to the edge of the upper, as indicated.

What I claim as new, and desire to secure by Letters Patent, is—

The combination, with the upper, of the loop-thread *b*, applied to the edge of the upper in the form of a connected series of loops, each of which straddles the edge of the upper and is locked in place therein so as to be unaffected by others, and the draw-cord *a*, passing through and held in said loops along and around the edge of the upper, as hereinbefore shown and described.

In testimony whereof I have hereunto set my hand this 24th day of November, 1884.

WILLIAM C. CROSS.

Witnesses:
FRANK T. BENNER,
GEORGE S. LITTLEFIELD.