W. Lee,

Shoe Upper Machine.

No. 100,535. Patented Mar. 8. 1870.

FIG. 1.

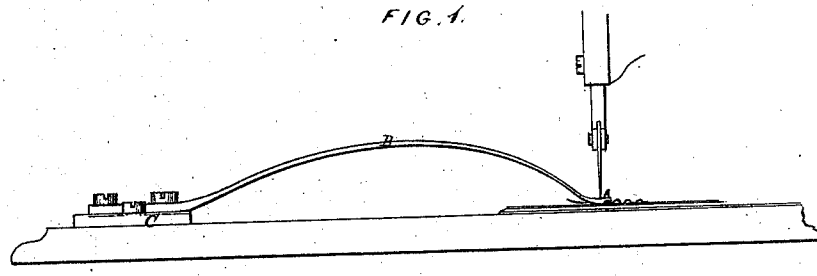

FIG 2

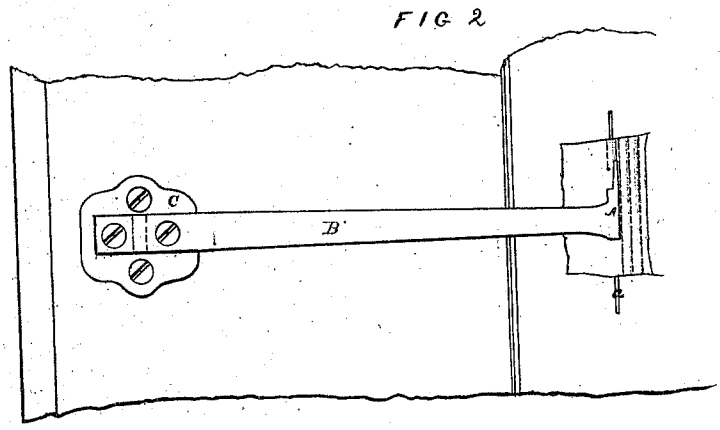

FIG. 3.

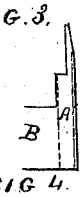

FIG 4.

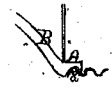

FIG. 5.

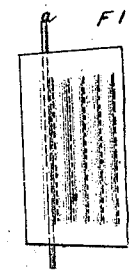

FIG. 6.

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WILLIAM LEE, OF NEW HAVEN, CONNECTICUT.

Letters Patent No. 100,535, *dated March* 8, 1870; *antedated February* 26, 1870.

IMPROVEMENT IN THE CORRUGATIONS OF BOOT AND SHOE UPPERS.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, WILLIAM LEE, of New Haven, State of Connecticut, and county of New Haven, have invented a new and improved Boot or Shoe Upper; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon; said drawings constitute part of this specification, and represent in—

Figure 1, side view of the device by which I perform the corrugations.

Figure 2 is a top plan view of the same.

Figures 3 and 4 are two views of the wrinkler enlarged, showing its position upon the leather with relation to the needle.

Figures 5 and 6 are two views of the upper with a number of corrugations placed therein, showing the relative position of the lining and upper leather, and also showing the position of the wire in one of the said corrugations.

My invention consists of a wrinkled boot or shoe upper, in which the wrinkle is held in place without filling by means of a smooth lining, as will be fully described hereinafter. The process by which the wrinkling is performed will also be fully described.

This wrinkling has been done in a sewing-machine, by stitching two rows across the upper, and afterward filling the intervening space with cotton, sand, or other plastic material, and thus form the wrinkle. Frequently attempts have also been made to perform this wrinkling by means of the common cording device, and for stitching a cord into cloth or other fabric. All these ways, however, necessitate the use of some kind of filling, and not only make a wrinkle in the upper leather, but also in the lining, which is hard for the foot, and does not keep its original form, being soon pressed or flattened out. In my improvement all this is avoided, as the wrinkles, when complete, have no filling, and are held in place by the lining, which is perfectly smooth, and consequently easy for the foot.

To enable others skilled in the art to make my improved upper, I will proceed to describe the construction and manner of making the same.

A is a former or wrinkler, made as shown in figs. 3 and 4, the lower surface of which is provided with a groove made of the proper size required for the corrugations in the leather.

A spring, B, is attached to the said wrinkler A for the purpose of holding it down upon the leather, and by its elasticity allow any slight unevenness in the said leather to pass under without injury.

The spring B is attached to the plate C by means of a small projection either upon the under side of the spring, or upon the upper side of the plate C, placed midway between the two set screws. I am enabled to vary the pressure upon the wrinkler by tightening the set-screw either forward or back of the projection, as a greater or less pressure is required.

This completes the construction of the device by which the wrinkle is formed. The operation is as follows:

The lining and upper leather are first stitched together where the corrugations or wrinkles are to commence. The wrinkler here acts as a guide, so that a straight seam may be easily stitched. After this seam has been stitched, the leather is taken out of the machine and a wire is inserted between the upper leather and the lining. The size of the said wire is governed by the size of the wrinkle to be made in the leather.

After the wire has been thus inserted and forced back against the row of stitches already made, the leather is again placed under the needle and wrinkler in such a manner as to bring the wire inserted between the lining and upper leather, as before described, longitudinally in the groove in the wrinkler A by the pressure of the spring B upon the said wrinkler. The leather is forced down around the wire, taking the form shown in fig. 6, while the lining lies perfectly flat and smooth upon the table. In this position it is advanced by the feeding device of the sewing-machine, and the lining and upper leather are again stitched together and the wrinkle or corrugation permanently fixed. When this seam has been finished the work is taken from the machine and the wire withdrawn from the corrugation, which retains its position as well without the wire as with it. The wire is then placed (in the manner before described) against the row of stitches last made, and the work is again placed in the machine and another corrugation formed in the leather in the same manner as the previous one, and so on until a sufficient number of wrinkles have been made.

I am aware that a groove has been made in the presser-foot of a sewing-machine for the purpose of cording garments, but in these devices the filling is left in the aperture.

I do not broadly claim wrinkling the boot or shoe, as such is not new; but

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

A wrinkled boot or shoe upper formed in the manner described, in which the wrinkle is held in place without filling by means of a smooth lining, substanstantially as described.

WILLIAM LEE.

Witnesses:

RUFUS H. SANFORD,
FRANK PRESCOTT.