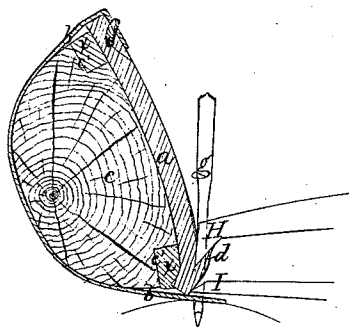


L. R. Blake,

Last.

No. 106,459.

Patented Aug. 16. 1870.



Lyman R. Blake

By his Attorney

Crashy, Halsted Ground

Wynne
J.B. Crosby
H. Gould

UNITED STATES PATENT OFFICE.

LYMAN R. BLAKE, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN LASTS FOR MACHINE-SEWED TURNED SHOES.

Specification forming part of Letters Patent No. **106,459**, dated August 16, 1870.

To all whom it may concern:

Be it known that I, LYMAN R. BLAKE, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Lasts for Use in the Machine-Sewed "Turns;" and I do hereby declare that the following, taken in connection with the drawing which accompanies and forms part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it.

Letters Patent of the United States No. 94,134 were issued, August 24, 1869, to Everett P. Richardson, relating to his invention of means for sewing turns by mechanism, in which invention he makes use of a device marked J in the drawings of said patent, said device being termed in the specification of the said patent, a "hooked bar," a "hook-gage," a "gage," a "hook," and a "gripping device," which is used in combination with a last having a rabbet all around its sole-edge, and a "bender" or "gripper," marked I in the drawings of said patent, the purpose of the rabbet around the last being to permit bending of the edge of the sole, the device J operating to determine the degree of the bend given to the sole-edge, the bending of which is effected by movements of the "bender or gripper I," as by reference to said patent will more fully appear. In practice under said patent I have found some trouble in making use of said hook-gage, which is inserted between the upper and the edge of the sole, and is apt to draw or strain the upper out of its proper place relative to the last and sole, and my invention has been made to obviate the need of the hook-gage in sewing turns, as set forth in the aforesaid patent, while I retain the other parts of the sewing-machine.

My invention consists in a last the edge of which is made elastic, which is conveniently done by filling the rabbet made around the edge of a last, as seen in Figures 4, 6, and 11 of the aforesaid patent, with vulcanized rubber, which I prefer as being the best spring, in form and material, for the purpose, known to me. The rubber, when so connected with the last as to form its edge, yields sufficiently to allow the bender or gripper to give the curve necessary at the sole-edge where the needle enters to allow a straight needle to enter and come out of the sole on the same side, or, if the bend made in

the sole is but slight, to enter at one side and come out at the adjacent edge. This peculiarity in the construction of the last enables me to dispense with the hook-gage, and renders it easy to sew turns, as described in Richardson's aforesaid patent, without meeting with the trouble produced by the employment of the hook-gage.

I am aware that a groove has been formed in a last near its edge for the purpose of receiving rubber or other material, the purpose of the rubber being to receive the points of awls and of nails or pegs driven after the preaction of the awls, so as to prevent injury of the last by said points, the piece of rubber or other material in the groove being capable of removal when worn by said points; but the rubber in the groove did not, as in my last, extend to and form the sole-edge of the last, this sole-edge being formed of the material of the last, or of a metal strip placed around the last, so that the said last had not, as mine has, a yielding or elastic edge, and consequently could not be used for the purpose for which I use my elastic-edged last.

The drawing shows my improved last in cross-section, said drawing also indicating the manner of using said last.

For convenience of reference I mark the parts as they are marked in the drawing of Richardson's aforesaid patent.

c is the last, and *c'* is the rabbet cut around the sole-edge of the last, said rabbet being filled with vulcanized rubber to complete the contour of the last.

a is the sole, placed on the sole-face of the last, and *b* is the upper to be sewed to the sole.

H is a piece which fits into the groove or channel cut in the sole at *d*, and resists the pull of the needle *g* when it is retracted.

I is the bender or gripper, which, by movement to and away from the sole, bends its edge, and compresses the rubber which takes the place of the hook-gage. Said rubber is indicated by *x*, and its place may be supplied, though probably not so well, by other elastic yielding material.

The rubber may be vulcanized in the place which it is to occupy, in which case dovetailed grooves or holes, largest at their inner ends, may be made, communicating with the rabbet, to aid in holding the rubber in its place; or the

rubber may be held by roughened projections extending into the rabbet.

Springs of metal may be used to form the yielding edge of the last for the purpose specified, though in my opinion they would not be so cheap, and would not operate as well as the yielding edge or corner formed by the rubber.

I claim—

A last having a rabbet cut around its sole-edge, said rabbet being filled with an elastic material, substantially as described.

LYMAN R. BLAKE.

Witnesses:

J. B. CROSBY,
FRANCIS GOULD.