(No Model.)

G. W. DAY.

PROCESS OF MAKING BOOTS OR SHOES.

No. 491,258. Patented Feb. 7, 1893.

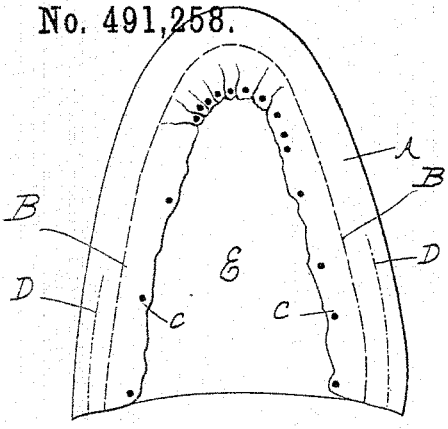


Fig 2

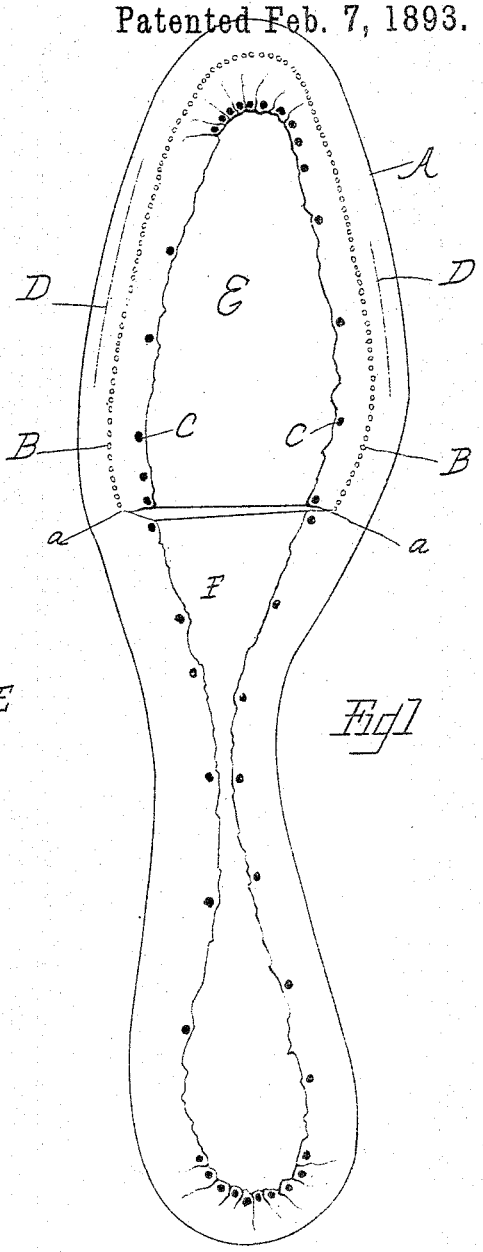
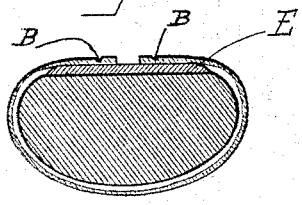


Fig 1

Fig 3



WITNESSES

Chas. L. Mahon

John Taylor

Geo. W. Day INVENTOR

BY Chas. E. Barbour

ATTORNEY

UNITED STATES PATENT OFFICE.

GEORGE W. DAY, OF HAVERHILL, MASSACHUSETTS, ASSIGNOR TO THE BOSTON FOOTWEAR MACHINE COMPANY, OF MAINE.

PROCESS OF MAKING BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 491,258, dated February 7, 1893.

Application filed June 29, 1891. Serial No. 397,861. (No specimens.)

To all whom it may concern:

Be it known that I, GEORGE W. DAY, a citizen of the United States, residing at Haverhill, in the county of Essex, in the State of Massachusetts, have invented a certain new and useful Improvement in the Process of the Manufacture of Boots and Shoes, of which the following is so full, clear, and exact a description as will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawings, in which—

Figure 1, is a bottom plan view of an unfinished shoe, illustrating my invention. Fig. 2, shows a row of cuts in the shoe upper. Fig. 3, shows a groove, or indentation near the edge of the upper.

The object of the invention is to provide a sewed boot or shoe which shall combine all the strength, firmness and correct symmetry of welted or double sole shoes, at the heel and shank portion, and at the same time possess all the quality and virtues and excellence of single sole turns, at the ball and toe portion, but free from the wrinkles of linings and bunches of surplus folded upper, at the toe.

The invention consists in the production of a shoe by taking the upper, previous to lasting it, and making a line of close indentations or perforations in any suitable manner, near the bottom or lasting edge, in practice about one-fourth of an inch from the edge, commencing in the shank portion of the upper and passing along the ball and toe to the shank.

In the accompanying drawings, A, designates the upper, which is provided with the openings or indentations, B. B., and which is secured to the last by the lasting tacks, C. C.

The position of the stitching is indicated at each side by the letters D D.

A narrow insole, E, is inserted between the folded edges of the upper, as is shown in Fig. 1. This narrow insole extends from the toe portion back into the shank, while a full width insole, F F, is secured to the bottom through the shank and over the heel portion only.

The upper is provided with two transverse slots, or cuts, *a a*, which extend from the inner edge of the folded portion of the upper out a distance equal to the distance between the edge of the upper and the holes and indentations in the upper.

The narrow inner sole which occupies the space beneath and between the inner folded edges of the upper, is narrower than the bottom of the last; it is placed on the last and an inner sole the full width of the last and extending from the rear end of the heel through the shank only is then placed on the last. The upper is then drawn over and upon the last and lasted in the usual manner by tacks or cement to the two inner soles, after which the upper on both sides of the shoe at the end of the full-width shank inner-sole is cut transversely from its inner edge to the perforations, as shown at *a*. The usual outer sole which has been previously channeled at its edge, or slip sole, is then laid on the lasted upper and inner soles and held in the usual manner by tacks or cement, the last is then removed and the outer sole or slip sole and inner sole and upper sewed together at the heel and shank portions of the shoe and at the ball and toe; the upper and outer sole or slip soles only, are stitched together. After the stitching has been completed, the end of the perforated edge of the upper at the ball-end of the short full width inner sole, is grasped by a suitable tool adapted to the purpose, and the entire lasted edge of the upper at the ball and toe portion is ripped out and detached from the sewed edge along the line of the perforations, and taken out together with the narrow inner sole to which the edge of the upper had been lasted, leaving the heel and shank portions of the shoe firmly supported and practically, rigid, by leaving the outer and inner sole and upper stitched together, while the ball and toe portions are like a turned shoe—free from an inner sole and all folded surplus edges of the upper and bunches usual in the toes of shoes having inner soles.

It is obvious that instead of perforations, various equivalents may be used, such as rows of slits cut in the leather, close together, such as are shown in Fig. 2, or the leather

may be partially cut through, or stamped or grooved, in any suitable manner, as shown in Fig. 3, or any other suitable equivalent means may be resorted to, which would have the effect of appreciably weakening the upper to such an extent as to facilitate its rupture on a predetermined line, such as is described by the present perforations and indentations shown.

What I believe to be new and desire to secure by Letters Patent, and what I therefore claim, is:—

The process of the manufacture of boots and shoes which consists in weakening, or impairing the strength of, the upper on a line inside the line of the fastenings of the outer sole, before the latter is applied, and in lasting, securing the upper inside of the weakening line, then removing the last, then securing the outer sole outside of the said weakening line, and, finally, removing the surplus upper inside of said weakening line substantially as described.

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

GEORGE W. DAY.

Witnesses:
T. E. MAJOR,
G. T. EMERY.