

(No Model.)

G. W. DAY.
MANUFACTURE OF SHOES.

No. 440,994.

Patented Nov. 18, 1890.

Fig. 1.

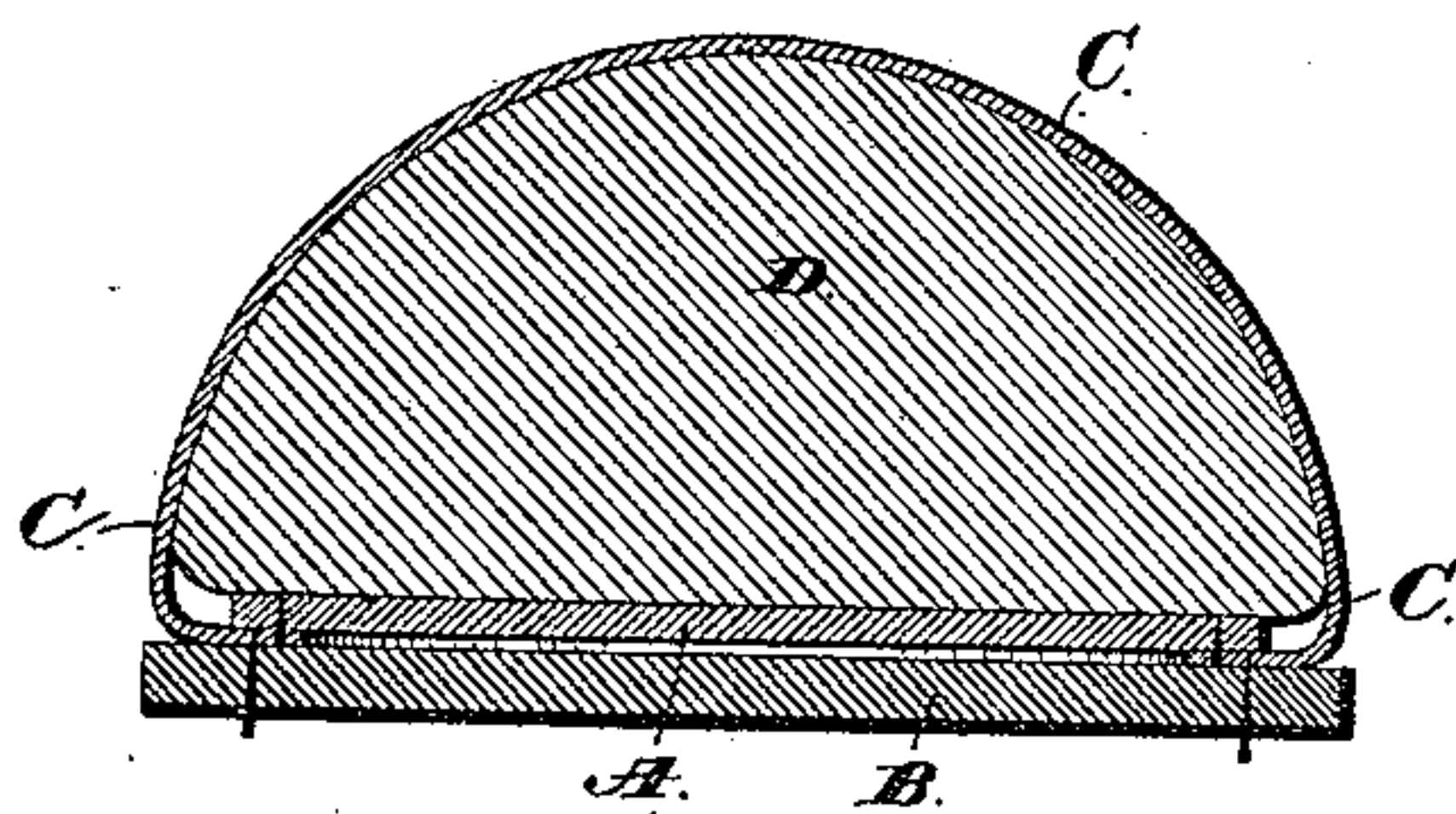


Fig. 2.

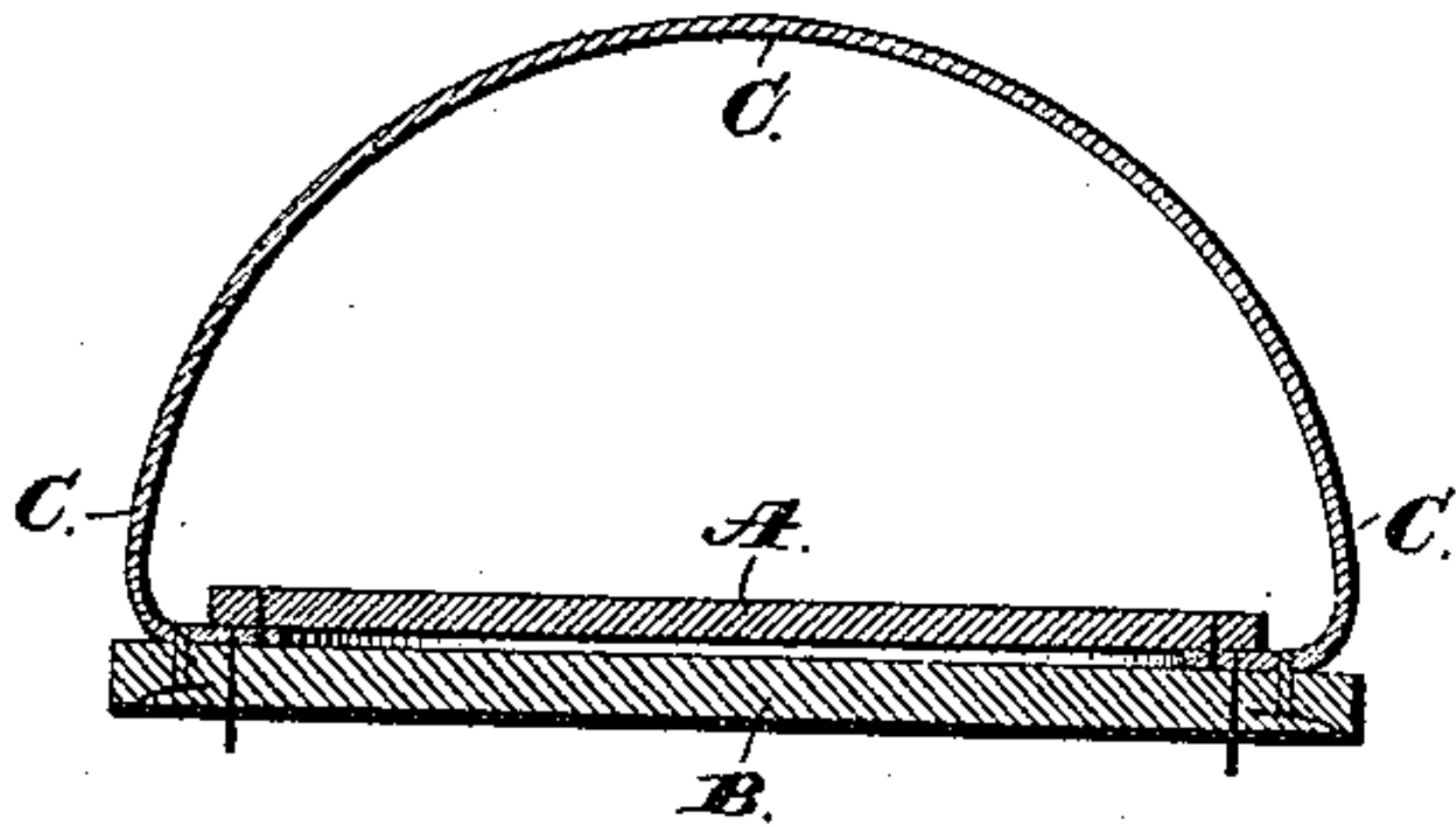
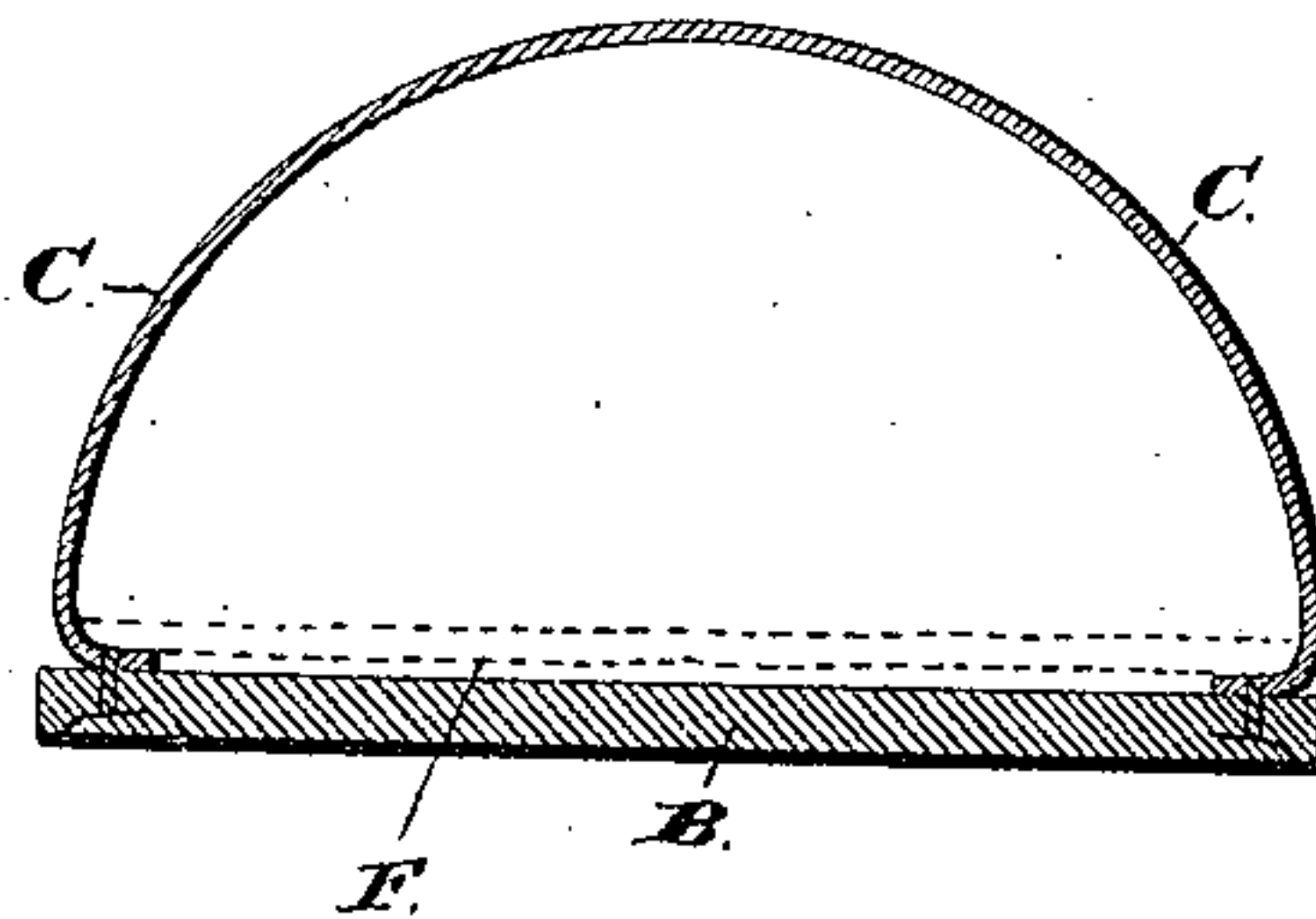


Fig. 3.



Witnesses:

Jack Hutchinson
Chas. J. Williamson

Inventor.

George W. Day, by
Kimble & Russell, his attys

UNITED STATES PATENT OFFICE

GEORGE W. DAY, OF HAVERHILL, ASSIGNOR TO WALTER SHAW, WARREN D. HOBBS, AND HENRY D. HYDE, TRUSTEES, ALL OF BOSTON, MASSACHUSETTS.

MANUFACTURE OF SHOES.

SPECIFICATION forming part of Letters Patent No. 440,994, dated November 18, 1890.

Application filed August 27, 1888. Serial No. 283,916. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. DAY, of Haverhill, in the county of Essex, and in the State of Massachusetts, have invented certain
5 new and useful Improvements in the Manufacture of Shoes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—

10 Figure 1 shows a transverse sectional view of a last with the shoe thereon in the first stages of manufacture in accordance with my invention; Fig. 2, a transverse sectional view of the shoe with the last removed and the
15 upper stitched to the sole; Fig. 3, a similar view of the same with the temporary lasting-blank cut out.

Letters of like name and kind refer to like parts in each of the figures.

20 The object of my invention is to provide an improved process of manufacturing shoes, whereby a single-sole sewed shoe or slipper can be produced without the necessity of turning; and to this end my invention consists in the process and the parts thereof, as
25 hereinafter specified.

Where, as has been heretofore done, light shoes and slippers are lasted and sewed inside out and then turned, there is great danger of straining, ripping, and breaking the
30 upper during the turning or inverting process. Where finely-finished leather is used for the upper, the folds and wrinkles which have to be made while the shoe is being
35 turned right side out, are sure to mar and injure the appearance of the leather surface. It is with the special intention of avoiding this great objection to the manufacturing of shoes by the "turn" process that I have in-
40 vented the improved method or process which I will set forth and claim in this specification.

In carrying out my process I provide a temporary lasting-blank A, of substantially
45 the same shape as but smaller than the sole B to be used. As the edge of this blank may be used as a guide for the machine sewing the sole and upper joining-seam, I make the outline of the blank edge correspond with the

lines of the desired seam. When such seam, 50 as usual, follows the contour of the sole at a certain distance from its edge, the lasting-blank will be, as indicated above, of substantially the same shape as the sole. With the lasting-blank provided, the upper C is drawn 55 upon and over a last D, and its edges are fastened to the blank by tacks, as usual. After the upper has thus been attached to the temporary blank the sole B is temporarily secured to the upper by tacks or cement, so as to hold 60 it in place during the sewing operation to follow. The last is then withdrawn and the sole and upper are stitched together; preferably by a McKay machine. The seam should be set by the machine at such distance from the edge 65 of the lasting-blank that if the upper should be separated from such blank by a cut close to the blank edge enough of the upper edge will be left to insure proper strength and hold for the stitches of the seam. After the sewing 70 of the sole to the upper, as set forth, the upper is cut around between the seam and the edge of the lasting-blank and close to such edge, and the blank is drawn out with the lasting-tacks in it and with the narrow strip 75 of cut-off edge of the upper fastened to it. The cutting can be done by machine or by hand. In either case the edge of the lasting-blank affords a guide for the knife or cutter.

Where a cutting-machine is used, the horn 80 thereof, carrying the knife, is to be provided with a guard to prevent the cutting of the upper at any point except along the desired line, and to keep the knife from cutting any of the stitches of the seam. With suitable guards, 85 and with a guide adapted to engage and move along the edge of the lasting-blank the cutting free of the blank, with its attached strip of upper and the lasting-tacks, can be easily and quickly done without danger of injuring 90 the upper or the seam. After the withdrawal of the lasting-blank, as set forth, the shoe is relasted, beaten out, and finished, and, if desired, a lining-sole F, covering the edges of the upper and the seam, can be inserted and held 95 in place by cement.

By cutting the vamp or upper edges between the seam and the lasting-blank, as described,

I leave the blank free to be taken out without any pulling and tearing, and insure the removal of all the lasting-tacks with the blank. The upper edges are also left smooth and clean
5 cut without any torn or rough portions, such as remain where a temporary inner sole, to which the upper is fastened in the lasting, is torn out. This tearing out of such temporary
10 inner sole not only leaves the vamp or upper edges rough and torn, but is apt to leave some of the lasting-tacks in the shoe to make trouble if not afterward removed in some way. Both of these great objections to the tearing-out process as heretofore used are, as indicated
15 hereinbefore, entirely avoided where my process is employed.

The lasting-blank used by me can be cut out of pasteboard, or of any cheap and tough material suitable for the purpose. After the
20 blank is withdrawn from the shoe the lasting-tacks can readily be taken out of it and the strip of vamp or upper edge detached, so as to put the blank in condition for subsequent use, if desired.

25 In lasting the upper, instead of attaching it to the lasting-blank by tacks, as described, it may be held thereon, until stitched to the outsole, by cement, or it may be drawn and held over the edge of the lasting-blank by
30 strings or threads; but however the upper may be lasted to or over the lasting-blank, both the blank and the tacks, cement or strings used in lasting will be cut out and removed, where my process is carried out.

I have shown in the drawings the sole as 35 provided with a channel on its under side to receive the seam, and a channel-flap to cover the same; but as the form of the seam can be varied at will without affecting my invention I do not limit myself to a channeled sole such 40 as shown.

My process, as shown and described, enables me to produce a single-sole sewed shoe with its upper stitched to the sole on its inner face by a seam parallel to the edge of the sole 45 and with the edges of the upper inside of the line of such seam.

Having thus described my invention, what I claim is—

As an improvement in the manufacture of 50 shoes, the process which consists in attaching the edges of the upper while on the last to a lasting-blank, sewing the sole to the upper with the seam outside of the edge of the blank, and then cutting the upper around between 55 the seam and the blank edge, outside of the latter, and removing the blank from the shoe, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 24th day of 60 August, 1888.

GEORGE W. DAY.

Witnesses:

ELMER P. HOWE,
WILLIAM A. SARGENT.