

No. 652,888.

Patented July 3, 1900.

G. F. BUTTERFIELD.
SOLE AND HEEL FOR BOOTS OR SHOES.

(Application filed July 1, 1897.)

(No Model.)

Fig. 1.

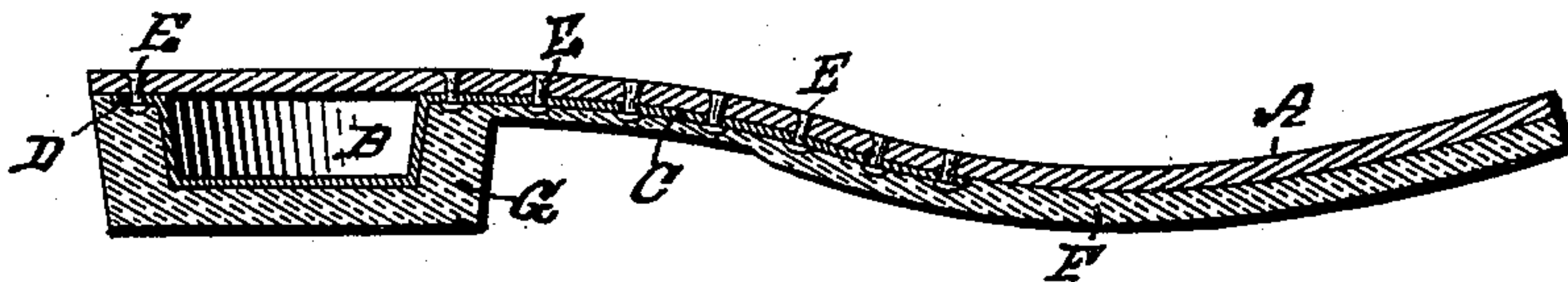
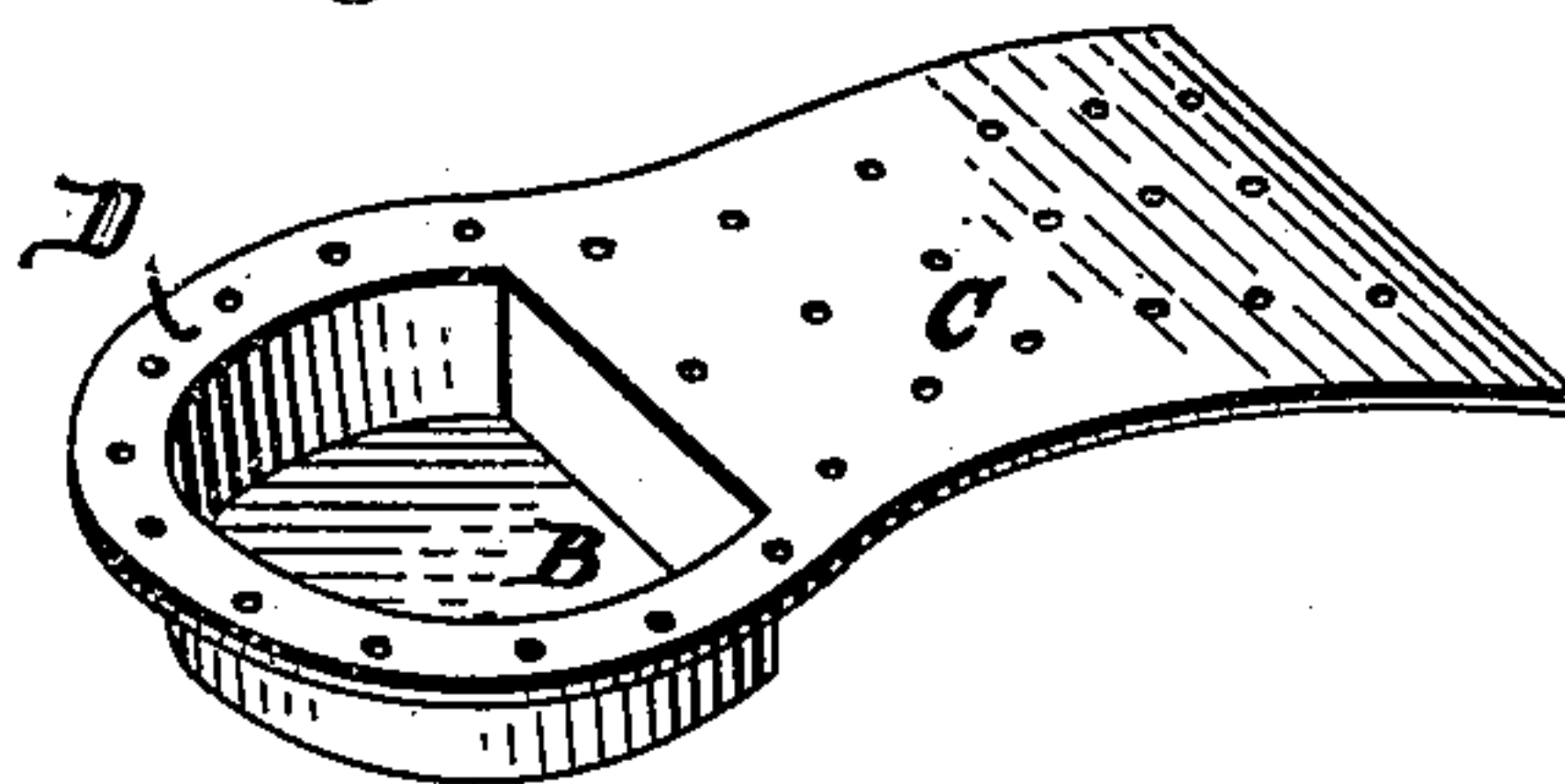


Fig. 2.



Witnesses:

Charles F. Logan.
Myra C. F. F. F.

Inventor:

George F. Butterfield
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UNITED STATES PATENT OFFICE.

GEORGE F. BUTTERFIELD, OF STONEHAM, MASSACHUSETTS.

SOLE AND HEEL FOR BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 652,888, dated July 3, 1900.

Application filed July 1, 1897. Serial No. 643,080. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. BUTTERFIELD, of Stoneham, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Soles and Heels for Boots or Shoes, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to rubber and leather composite soles and heels for boots and shoes, and especially to a hollow metallic heel-form and shank-plate interposed between the leather and rubber parts of such sole and heel and adapted to be secured firmly to the leather portion thereof and to present a surface to which the rubber will permanently adhere when vulcanized thereon, the rubber clinging also to exposed portions of the leather sole-bottom.

Instead of making the heel of a solid body of rubber, which would be wasteful and require a longer time to vulcanize properly than the sole and shank, I secure to the bottom of the sole at the heel end a heel-shaped metallic block or shell, and I mold around this the rubber heel in one with the shank and sole. This block or shell is riveted or otherwise firmly fastened to the leather sole. I prefer a hollow copper or other metallic heel-form having a thin integral tongue or shank-stiffening front projection riveted beneath and to the leather sole, to which tongue and shell the rubber shank and heel adheres, covering the metal parts, the adjacent leather margin, and all the fastenings. The advantage of copper for this shell and shank is that the rubber clings to it most tenaciously in vulcanizing and the slow cooling which follows tempers the metal tongue. This feature of my invention is applicable to all forms of rubber-heeled boots and shoes.

The metallic heel-form may have a narrow projecting flange secured by short rivets to the leather above or below it, or long rivets formed with a shoulder and having a reduced portion beyond said shoulder and riveted beneath the bottom of the metal heel-piece, extend thence upwardly through the leather sole, and are clenched above the inner sole against the iron or iron-plated last when the sole and heel are applied to the shoe.

In the drawings, Figure 2 is a perspective view of the metallic heel-form and shank-

plate peculiar to my invention, and Fig. 1 a longitudinal section of a shoe sole and heel embodying my invention.

A represents the leather or other firm shoe-sole, and B C the hollow metallic heel-form and shank-plate formed integral and firmly secured beneath the sole A by rivets E E or other suitable fastenings. The heel-shaped shell B is open at the top and provided with a projecting narrow marginal flange D, perforated to receive the rivets, nails, or other fastenings by which it is secured to the sole A. The shank-stiffening tongue C, extending forward from the front of the shell B, has also numerous perforations for the same purpose, the fastenings extending through such tongue and the sole A to unite them permanently.

F represents the rubber sole, and G the rubber heel applied to the bottom of the sole A, heel B, and tongue or shank-plate C and secured firmly to them by being vulcanized thereon in a suitable mold. The parts will be thoroughly cleaned, so that the rubber applied in the plastic state will adhere firmly to the leather and metal portions and to the fastenings which unite them.

I claim as my invention—

1. A hollow, metallic heel-form, closed at the bottom, open at the top, and having a narrow, perforated flange along its upper edge, and the shank-stiffening tongue extending forward from its front, the whole adapted to be embedded in the shoe heel and sole and firmly secured thereto, substantially as set forth.

2. The described composite shoe sole and heel, consisting of the leather body A, the hollow heel-form B, formed with a projecting tongue or shank-plate C and perforated flange D, secured firmly to said sole, and the rubber sole and heel F G firmly vulcanized to such sole, heel-form and shank-plate, and covering the fastenings thereof, substantially as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 28th day of June, A. D. 1897.

GEORGE F. BUTTERFIELD.

Witnesses:

A. H. SPENCER,
N. K. BAKER.