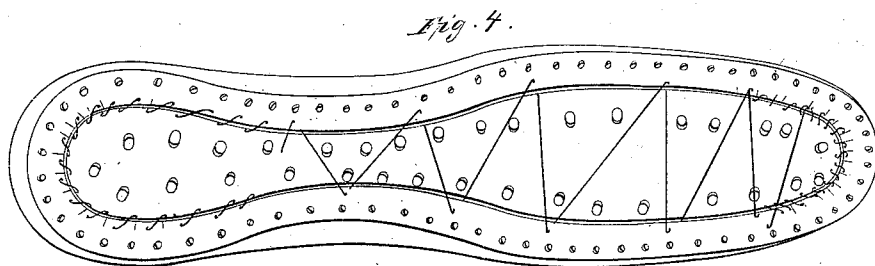
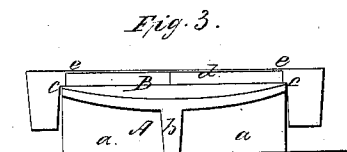
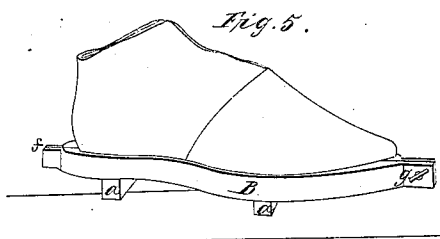
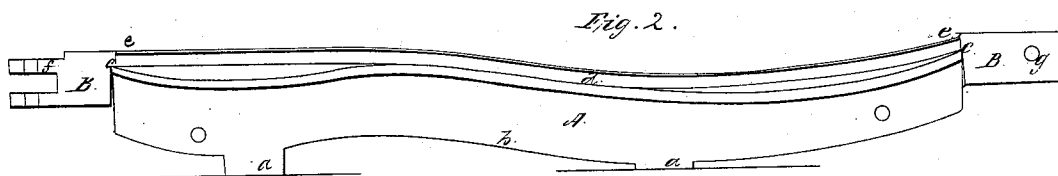
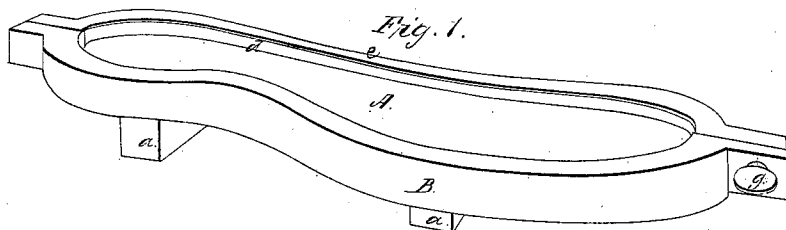


*J. M. Wimley,*

*Shoe Sole,*

*N<sup>o</sup> 13,073,*

*Patented June 12, 1855.*



*Witnesses:*  
*Benjamin*  
*W. K. K. K.*

*Inventor:*  
*John M. Wimley*

# UNITED STATES PATENT OFFICE.

JNO. M. WIMLEY, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO J. A. B. SHAW.

## ATTACHING GUTTA-PERCHA SOLES TO BOOTS AND SHOES.

Specification of Letters Patent No. 13,073, dated June 12, 1855.

*To all whom it may concern:*

Be it known that I, JOHN M. WIMLEY, of the city of Philadelphia and State of Pennsylvania, have invented a new and Improved Mode of Manufacturing Boots and Shoes; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The nature of my invention consists in making boots and shoes with the outer soles entirely of gutta percha, the same being simultaneously formed and secured to the leather "insole" and "upper" by means of heat and pressure in a mold—thus dispensing with the sewing, pegging or nailing required in applying leather outer soles as heretofore.

To enable others skilled in the art to make and use my invention, I will proceed to describe its nature or construction and operation.

Referring to the drawings, Figure 1, is a perspective view of the metallic mold in which the gutta percha sole is formed and united to the leather "insole" and "upper"; Fig. 2, a longitudinal vertical section, and Fig. 3, a transverse vertical section of the same; Fig. 4, a representation of the bottom of a shoe as prepared previously to forming and uniting the gutta percha sole thereto, and Fig. 5, a perspective view of the same as applied upon the moldlike letters indicating the same parts in the different figures.

The metallic mold consists of two pieces, the foundation or bottom (A) and the rim (B). The foundation has its upper side shaped in length and breadth like the sole of a boot or shoe, and its surface formed so as to be a counterpart of the bottom of the intended sole of the boot or shoe, whether with or without a heel. On the under side this piece is formed with projections (*a*, *a*, *b*,) adapted for giving strength and also stability. The rim (B) is formed so as to fit accurately around the bottom piece—fitting its curves and resting upon it by means of a narrow projection (*e*) formed by a rabbet which is made around on the inside thereof; so as to admit the bottom piece (A) from below, and so as to leave a sufficient space (*d*) above, for the proper thickness of the intended sole. Around on the inside of the upper surface of this rim, a

narrow thin projection (*e*) is also made, as shown in the drawings. The rim is also jointed at one end (*f*), and fitted with a clamping screw (*g*) at the other, so that it may be readily opened laterally, for the purpose of taking out the boot or shoe after the sole is fixed thereto. I usually make this mold of brass, but any other substance competent to stand heat and pressure will answer.

The boot or shoe to be soled is prepared by the upper being "lasted" over the "insole" in the usual manner and the two leathers secured together by means of a few stitches with waxed thread (*h*, *h*), or by means of a little melted gutta percha inserted (as a cement) between the turned down edge of the upper and the insole, merely to hold the upper in place. I now take a common hollow punch and with it make a series of small holes obliquely through the "upper" and the "insole," around near the edges of the same (following the last as a guide) and with the same punch also a series of holes, somewhat more obliquely through the intermediate part of the "insole," substantially as shown in the drawings. The shoe being now ready for the outer sole—I melt the gutta percha, in any suitable vessel over a moderate fire, bringing it to about the consistence of tar, and with a spoon or other instrument of a similar character, fill the same into the mold, so as to occupy the space above the bottom (A) of the same, even with the upper edge of the rim (B). I then place the shoe, prepared as described, accurately on the mold and with its bottom on the melted gutta percha (as shown in Fig. 5), and by means of a screw or other press, force the "lasted" shoe firmly down until the sides of the shoe come in contact all around with the projecting edge (*e*) of the mold. Melted gutta percha is thus forced into and through the holes that were previously made through the insole and edge of the upper, filling them—and the superfluous portion which has escaped out upon the surface of the rim (B) is now scraped off, while warm, with the back of a knife or other suitable tool. After remaining thus, ten or fifteen minutes under the press, it is released—the rim (B) opened and the boot or shoe taken up—having the outer sole smoothly and firmly secured, both to the "upper" and the "insole," and ready for varnishing.

When the leather of the "upper" is gummed or oily, I generally rasp the upper surface of the part which is turned down upon the "insole," thus removing the gum or grease and roughening the surface, in order to insure a more perfect union of the same with the gutta percha sole, and making the shoe water-tight—the gutta percha which is in the holes, being of itself entirely sufficient to keep the sole and "upper" from separating, unless exposed to heat sufficiently high to melt the gutta percha.

Boots and shoes made in this way will wear longer than if made entirely of leather, and for winter use, or for wearing in wet weather, they are far superior—and besides five or six pairs of boots or shoes can be soled on this plan, while one pair is being soled with leather as heretofore.

I am aware that india rubber, after being cut out or shaped like a sole, has been united

to the "insole" and "upper" by means of an intermediating cement, caused to penetrate holes made in the insole and upper; but I do not claim this as my invention; nor do I claim uniting gutta percha and leather for any other purpose than that of manufacturing boots and shoes as herein described—but

What I claim as my invention and desire to secure by Letters Patent is—

Manufacturing or making boots and shoes, with the outer soles made entirely of gutta percha, when the said outer soles are simultaneously formed and united to the upper and insole, by means of heat, and pressure in a mold, substantially as herein described and set forth.

JOHN M. WIMLEY.

Witnesses:

BEN. MORISON,  
JNO. B. KENNEY.