(No Model.)

A. HANVEY.

SOLE FOR BOOTS OR SHOES.

No. 386,778. Patented July 24, 1888.

Fig. 1.

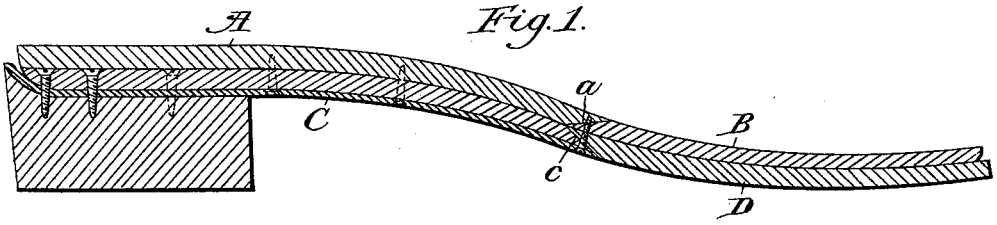


Fig. 2.

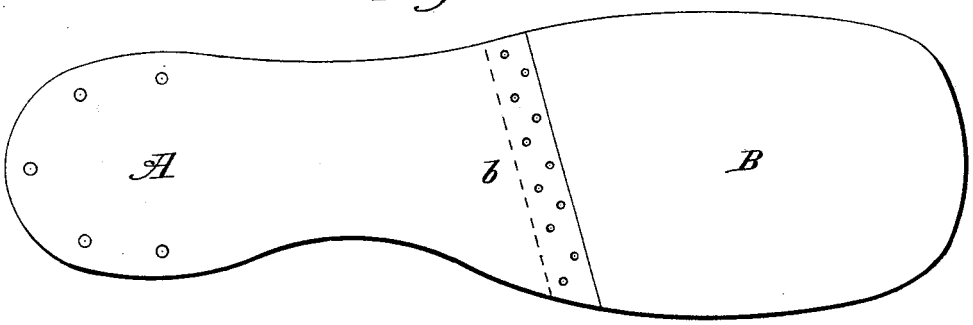


Fig. 3.

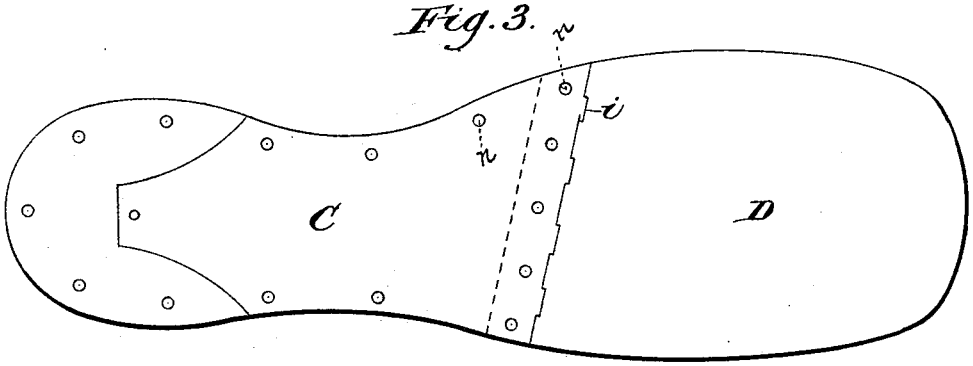
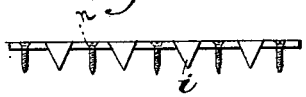


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

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SOLE FOR BOOTS OR SHOES.

SPECIFICATION forming part of Letters Patent No. 386,778, dated July 24, 1888.

Application filed October 25, 1887. Serial No. 253,371. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER HANVEY, a citizen of the United States, residing at Steubenville, in the county of Jefferson and State of Ohio, have invented a new and useful Improvement in Soles for Boots and Shoes, of which the following is a specification.

My invention relates to soles for boots and shoes, which are constructed of leather, wood, and iron, or metal of any suitable kind, in combination, each forming a distinct part, and together forming a "bottom" for a boot or shoe that is cheap and durable.

Referring to the drawings forming part of this specification, Figure 1 is a longitudinal vertical section taken through the inner and outer soles, showing the parts A and B united by lap-joint and the parts D and C in the same manner, and showing the manner of uniting the parts A and C together, the parts B and D being united, in the usual way of making boots and shoes, by either sewing or pegging. Fig. 2 shows the under side of the inner sole, the part A being of wood and the part B of leather, and the tacks or rivets with which the parts are additionally secured after having been cemented together. Fig. 3 shows the under side of the outer sole, the part C being of metal and the part D of leather. Fig. 4 is a cross-section of part C, showing points turned down on the front edge, which are driven into the hind end of the part D for the purpose of attaching the parts; showing also screws through the end for the purpose of holding the end firmly down on the part D.

Similar letters refer to similar parts throughout the several views.

The forward part, B, of the inner sole, Fig. 2, is of leather, suitable for the purpose, and is formed in the usual way of making shoes by either sewing or pegging. The hind end is beveled off for the purpose of forming a lap-joint, as shown in Fig. 1. The hind part, A, Figs. 1 and 2, is of wood, either compressed or otherwise, of suitable thickness to hold the screws, nails, or rivets passing through the parts C for the purpose of holding the said part C firmly in position while the shoe is being worn, and is of uniform thickness, with the edges beveled off, as in the usual way of preparing inner soles for pegged shoes, and is shaped to conform to that part of the foot intended to rest upon it. The forward end of the part A is beveled off for the purpose of forming a lap-joint with the part B, as shown at *a*, Fig. 1, which joint is made by cementing the two beveled edges together; and to give additional security against separation while being worn they are firmly nailed or riveted together, as shown at *b*, Fig. 2.

Part D, Figs. 1 and 3, is of leather suitable for outer sole, and is formed in the usual way of making either sewed or pegged shoes, and is beveled off at the hind end, as shown at *c*, Fig. 1, for the purpose of forming a lap-joint with the part C, as shown in Fig. 1. Part C, Figs. 1 and 2, is of metal, (any metal suitable for the purpose,) and is formed into shape by pressing a plate into dies prepared for the purpose, or by casting into molds, and is shaped to conform to the under side of the part A after the "upper" has been drawn over or "lasted." The forward end of this part C is made to conform to the hind end of the part D for the purpose of lapping over the said part D, as shown at *c*, Fig. 1, and is provided with points, which are turned down, as shown at *i*, Figs. 3 and 4, which are driven into the part D for the purpose of firmly uniting the parts together and holding them in this relation while the shoe is being worn. Around the edge and across the front end are holes *n*, through which screws pass, as shown in Fig. 4, entering into the wooden inner sole, A, as shown in Fig. 1, thus firmly and securely attaching the said metallic plate or outer shank-piece, *c*, to the upper and to the inner sole or wooden shank-piece A and to the outer or half sole D, as shown in Fig. 1.

The heel is of wood compressed or otherwise, leather, or any suitable material for the purpose, or may be cast of a piece with the part C, and is secured in position with screws, as shown in Fig. 1.

In constructing boots and shoes by this method the inner sole is formed by uniting the parts A and B together, as described, and when fastened to the "last" in the usual way the upper is drawn over or lasted in the usual way. The lasting being done and the "welt" sewed on, if it be the intention to make a sewed fore part with welt, the half-sole or outer fore part, D, is then placed in position and secured by either sewing or pegging in the usual way of making either sewed or pegged shoes. The

hind part, C, of the outer sole is then placed in position and secured as above described. The last is then withdrawn, the heel placed in position, and secured with screws inserted from the inside of the shoe, as shown in Fig. 1. The edge of the fore part D is then burnished and the "bottoming" process is complete.

It will be seen by the above that a very considerable part of the labor of bottoming boots and shoes by my invention is saved, and a firm substantial bottom is produced that is not liable to get out of shape while being worn by the "breaking down" of the shank, as so frequently occurs in bottoms made entirely of leather. It will be seen, also, that the difference between this and other methods of constructing boots and shoes with rigid shank and flexible fore part in the use of a wooden shank for inner sole that will receive and firmly hold the screws or nails with which the metallic plate forming the outer shank is attached, instead of an entire leather inner sole, is very material, as leather suitable for inner soles is not adapted to hold screws or nails with the tenacity necessary while the shoe is being worn.

Wooden and metallic shanks for outer soles have heretofore been used, as may be seen in the patents issued to Joseph Woodley, October 20, 1874, and to Philander Shaw, June 2, 1863. I do not therefore claim the metallic shank, broadly; but

What I do claim, and desire to secure by Letters Patent, is—

1. The combination of a metallic shank forming part of an outer sole, and a wooden shank forming part of an inner sole, with leather fore parts for both, together forming soles for boots and shoes, in the manner substantially as described.

2. The combination of a metallic shank provided with penetrating points, forming part of an outer sole, and a wooden shank forming part of an inner sole, with leather fore parts for both, together forming soles for boots and shoes, in the manner substantially as described.

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