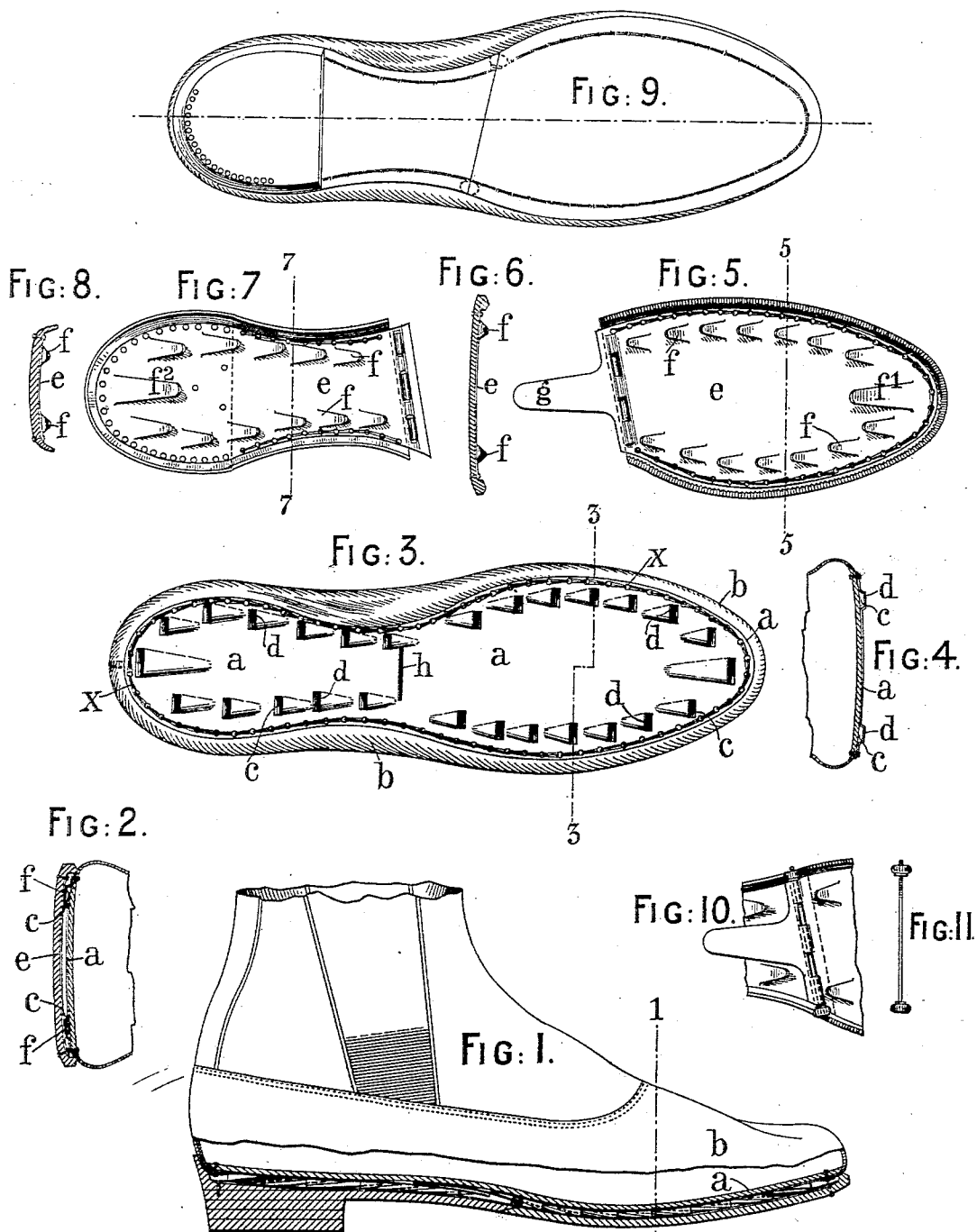


(No Model.)

A. A. BLANDY.
SOLE.

No. 504,660.

Patented Sept. 5, 1893.



WITNESSES.

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UNITED STATES PATENT OFFICE.

ALFRED ADDISON BLANDY, OF LONDON, ENGLAND.

SOLE.

SPECIFICATION forming part of Letters Patent No. 504,660, dated September 5, 1893.

Application filed June 6, 1893. Serial No. 476,709. (No model.) Patented in England June 10, 1890, No. 8,967.

To all whom it may concern:

Be it known that I, ALFRED ADDISON BLANDY, a citizen of the United States of America, residing at 56 Netherwood Road, West Kensington, London, England, have invented Improvements in the Manufacture of Boots and Shoes, (for which I have obtained the grant of Letters Patent in Great Britain, No. 8,967, dated June 10, 1890,) of which the following is a specification.

This invention relates to improvements in the manufacture of the soles and heels of boots or shoes.

The uppers are lasted as usual or in any suitable way upon the insole and in this case advantageously assisted in securing them waterproof by adding any waterproof material as for instance a fine fabric covered with a vulcanized substance (such as that for which I received the grant of Letters Patent in Great Britain, dated the 28th day of February, 1889, No. 3,591, and known as "Blandyte"). This thin proofing is placed between the insole and the upper. Then a thin metal plate is sewed or riveted or otherwise suitably secured upon the whole and extending over the entire sole. This plate is stamped out and may be perforated with holes near the edge for the nails or rivets or for the sewing; small slots are also punched (advantageously when stamping out the said plate) or formed at short distances apart and as near the holes or edges as desired or as strength will permit. A second plate is also stamped out or otherwise suitably formed advantageously in two parts and is securely attached to the aforesaid plate on the insole by means of tongues (corresponding to the said slots) stamped or formed therein to accurately fit in the said slots; these tongues may widen from the point to the base so that when pushed home in the said slots they will afford great strength. The said plates are thus firmly joined together and so fixed.

The tongued plate is formed in two parts so that one half of this second or tongued plate meets the other half at the front end of waist and is there fixed by any suitable fastening for instance screws or what perhaps is more advantageous a sort of hinge or knuckle joint locked by a pin extending through from side to side and is capable of an almost invisible finish. The front half carries the fore

sole and this "fore part" is drawn home from the toe end toward the waist while the heel and waist part that is the "back part" is pressed home from the heel and the two being secured by means of the said fastenings as they come together as before described. Thus these removable parts can be placed and removed without difficulty and very expeditiously and new parts can be readily substituted when it is desired.

To these movable plates can readily be secured any suitable substance or material for instance either ordinary leather (so as to give the same effect and appearance as shoes now in use) or these said plates may carry rubber, gutta percha or imitations of the latter or of leather. For instance my present invention will be found very advantageous for use with the compound invented and patented by me and known as "Blandyte" which latter would thus act as a substitute for leather or gutta percha resisting water, hard usage, heat and cold and is molded and pressed or otherwise formed into the desired shapes and is capable of retaining its union with the said movable plates. By these means the shapes and forms of every change in fashion can be readily obtained. The aforesaid compound "Blandyte" or other like material may be molded upon the aforesaid tongued plates and the material thereafter vulcanized on the said plate—thus obtaining an important feature of economy. The wearing surfaces may carry within the substance any suitable metal or protecting substance to resist wear and tear—if desired.

In order that my present invention may be easily understood and readily carried into practice I will proceed to further describe same with reference to the drawings hereunto annexed.

In the drawings, Figure 1 is a side elevation of a boot manufactured in accordance with my present invention—parts being broken away to show my improvements. Fig. 2 is a cross section on line 1—1 Fig. 1. Fig. 3 is an under side plan of the boot with the two movable parts (*i. e.* (1) the outer sole and (2) the heel and waist) removed. Fig. 4 is a cross section on line 3—3 Fig. 3. Fig. 5 is a plan of the inner surface or "inside" of the removable "fore part" or outer sole. Fig. 6 is a

cross section on line 5—5 Fig. 5. Fig. 7 is a plan of the inner surface or inside of the removable "back part" or heel and waist. Fig. 8 is a cross section on the line 7—7 Fig. 7. Fig. 9 is an under side plan of the complete boot—showing the joint where the outer sole meets the waist. Fig. 10 is a local view in plan of the underside surface or inside of the fore part and waist just where the latter meets the former and are joined—the method illustrated being a kind of hinge joint. Fig. 11 shows the pin used in this hinge joint.

Similar letters of reference indicate corresponding parts throughout.

- 15 *a* is a metal or other suitable plate secured to the insole and upper *b* by sewing *x* (or riveting or other suitable means) any suitable waterproofing or waterproof material being introduced under this plate *a* as desired.
- 20 *c c* are slots or openings cut or formed in the plate *a* one edge of each slot being raised somewhat as shown at *d* Figs. 3 and 4 so as to readily receive the tongues or projections *f* stamped up or formed on the plate *e* secured
- 25 (similarly to *a*) to the inside surface of the outer sole or fore part and similarly on the back part Fig. 7—the only difference being that the raised edges *d* and tongues *f* in the back part are arranged in the opposite direction to those of the fore part see Figs. 3, 5 and
- 30 7, the direction of these openings *c d* and of the tongues *f* all being approximately parallel with the length of the boot or shoe. The larger tongue *g* is a guiding tongue or projection which enters the slot *h* in the plate *a* when the fore part is drawn on from the toe—the enlarged tongues *f'* and *f''* at the toe and heel respectively also serving as guiding tongues. The back part Fig. 7 is drawn on from the
- 40 heel toward the fore part the tongues *f* on both parts (Figs. 5 and 7) entering the slots *c* respectively so that when the waist and fore part meet and are securely joined to one another as hereinafter described (see Fig. 10)
- 45 these tongues will thus securely bind and secure and thus fix these two said parts (Figs. 5 and 7) to the body of the boot or shoe while at the same time the same are readily detach-

able again when required. These two parts Figs. 5 and 7 may be joined by forming a sort of hinge joint as shown in Fig. 10 (the removable pin of which is shown in Fig. 11) so that such joint is practically invisible.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. As an article of manufacture, a shoe provided with a sole having a metal sole plate to which the upper is secured, said plate having elongated openings pointing toward the middle of the sole; an outer metallic sole plate composed of a heel and waist plate to which the heel proper and the waist sole are secured, and a "fore part" plate to which the fore sole is secured; the said outer metallic sole plates being provided with raised tongues pointing toward the middle of the sole and arranged to engage the elongated openings in the inner metallic plate, the two outer sole plates being secured together by a hinge joint, which in combination with the tongues and slots will hold the outer sole firmly to the inner sole, substantially as described.

2. As an article of manufacture, a shoe provided with a sole having a metal sole plate to which the upper is secured, a waterproof material being placed between the uppers and the said plate, said plate having elongated openings pointing toward the middle of the sole; an outer metallic sole plate composed of a heel and waist plate to which the heel proper and the waist sole are secured, and a "fore part" plate to which the fore sole is secured; the said outer metallic sole plates being provided with raised tongues pointing toward the middle of the sole and arranged to engage the elongated openings in the inner metallic plate, the two outer sole plates being secured together by a hinge joint, which in combination with the tongues and slots will hold the outer sole firmly to the inner sole, substantially as described.

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Witnesses:

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