

No. 665,797.

Patented Jan. 8, 1901.

J. NEWTON.
BOOT OR SHOE.

(Application filed Sept. 26, 1898.)

(No Model.)

Fig.1.

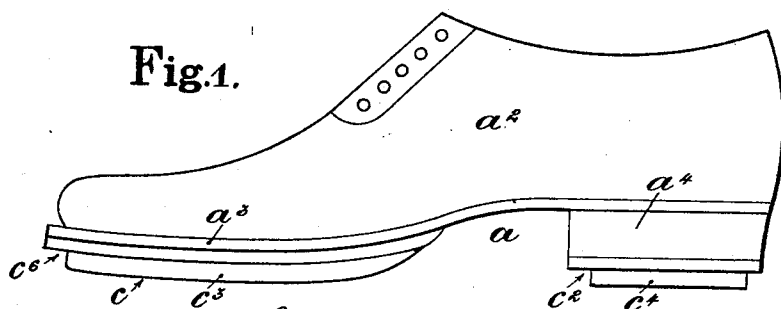


Fig.4.

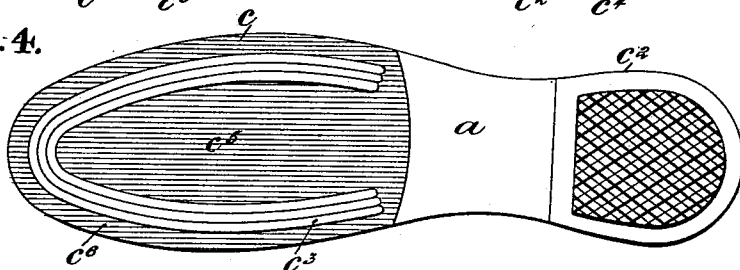


Fig.2.

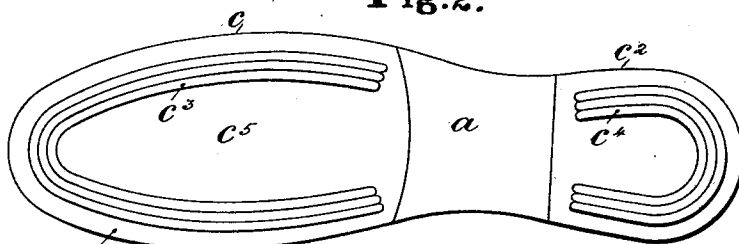


Fig.3.

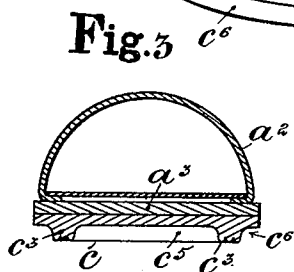


Fig.5.

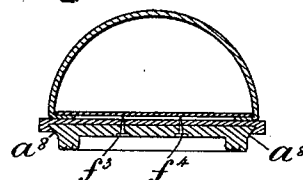
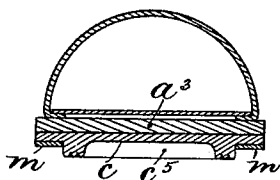


Fig.6.



Witnesses
Eugene H. Clifford.
John W. Hall.

Inventor
Joseph Newton

UNITED STATES PATENT OFFICE.

JOSEPH NEWTON, OF DRESDEN, ENGLAND.

BOOT OR SHOE.

SPECIFICATION forming part of Letters Patent No. 665,797, dated January 8, 1901.

Application filed September 26, 1898. Serial No. 691,946. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH NEWTON, earthenware manufacturer, a subject of the Queen of Great Britain, residing at 35 Belgrave road, Dresden, in the county of Stafford, England, have invented a certain new and useful Improved Boot or Shoe, of which the following is a specification.

This invention relates to boots, shoes, and similar articles of foot wearing-apparel, and has for its object to provide them with outer sole and heel portions of rubber, gutta-percha, or compositions thereof of a particular construction. These outer rubber sole and heel portions constitute the treads proper to the boot or shoe and are fixed or fastened to the ordinary leather sole and heel or to the leather under sole and heel, so that they form rigid parts therewith.

The purpose of this invention is to obtain a non-absorbent tread which has very little surface, so that a more even temperature and greater resistance to cold and heat to the feet of the wearer are obtained and a large increase of comfort in walking. Moreover, boots and shoes fitted with treads constructed according to this invention are non-slipping in frosty weather, non-conductors of electricity, and noiseless of tread, the latter being of great importance in hospitals and sick-rooms.

The invention will be described in connection with the annexed sheet of drawings, in which an elevation of a shoe with a tread constructed in accordance to this invention is shown in Figure 1, an under side plan of the same in Fig. 2, and a transverse vertical section in Fig. 3; taken on the dotted line F, Fig. 2. Figs. 4, 5, and 6 show various forms of construction and affixment.

The shoe a has fitted to its upper a^2 in the ordinary manner a leather sole and heel $a^3 a^4$. To the bottom of this leather sole and heel are attached correspondingly-sized rubber sole and heel portions $c c^2$ of a particular construction, the said portions to constitute treads. These rubber sole and heel portions are constructed or molded with outstanding boundary rib portions $c^3 c^4$ and with set-back or hollowed-out middles c^5 and edges c^6 , so that there is no part of the middles of the rubber treads in contact with the ground in walking, but a free and well-defined air pas-

sage or space. This construction of the rubber treads—viz., boundary ribs and hollowed-out middle parts—is of importance in a shoe constructed according to this invention, as also is the leather under sole and heel parts, as without this combination the advantages hereinbefore enumerated could not be obtained. For instance, practical tests show that leather is the healthiest material to be in contact with the foot, and without its intervention between the rubber treads and the foot the comfort desired in walking could not be obtained. Further, by hollowing out or setting back the middle parts of the rubber treads and having only a boundary contact with the ground and an intervening rubber webbing between the said boundary rib parts and the leather under sole the shock due to an uneven tread, as stepping upon a projecting stone, &c., is taken and cushioned evenly along the boot or shoe by means of this intervening webbing.

In Fig. 4 the rubber heel-tread is shown of a studded construction, the set-back portions in this case only being at the extreme edges. This construction of heel-tread may be used with advantage in some instances, as the heel part of the shoe is not so sensitive to the foot of the wearer as the sole part. These sole and heel rubber portions, with their outstanding rib parts, are, as regards each portion, molded in one piece in Figs. 1, 2, 3, and 4, and rigidly cemented to the outer surfaces of the leather under sole and heel of the shoe.

In Fig. 5 is shown a section of a shoe in which the leather of the undersole is cut away at its middle c^8 for the reception of the rubber sole portion or tread, the latter being dovetailed into the said cut-away part and held therein as a secondary affixing means by nails or screws $f^3 f^4$. In this case the outer rubber tread is easily renewable when worn, as the same can be easily detached from the dovetailed recess and another one substituted, and this without any skilled assistance.

In Fig. 6 another method of fixing the rubber tread c to the leather undersole is shown. Metal plates $m m$ are in this case fitted around the extreme boundary of the rubber tread, and form the means, through suitable screws, for securely clamping the rubber treads in position. In this case the rubber tread need not

be cemented to the leather undersole; but the said clamping-plate may form a secondary means to the cementing for the tread's affixment.

5 Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A boot or shoe having a leather sole entirely covered from the shank to the toe by an
10 elastic rubber sole *c*, formed integral with the unbroken, offstanding tread-rib *c*³ extending continuously at a distance from and parallel with its edge, to provide the continuous surrounding marginal portion *c*⁶ and interven-
15 ing web *c*⁵, substantially as shown and described.

2. A boot or shoe having a tread-surface comprising an elastic rubber strip formed integral with an unbroken offstanding tread-
20 rib extending continuously at a distance from and parallel with the edge of the strip to provide a continuous surrounding marginal portion and intervening web, substantially as shown and described.

25 3. A boot or shoe having tread-surfaces, the front or sole portion of which is entirely covered from the shank to the toe by an elastic rubber strip *c*, formed integral with the unbroken offstanding tread-rib *c*³, extending
30 continuously at a distance from and parallel with its edge, to provide the continuous surrounding marginal portion *c*⁶ and intervening web *c*⁵, and the rear or heel portion of said
35 boot or shoe being covered with a rubber strip having an offstanding tread arranged at

a distance from and parallel with the edge of the heel to provide a surrounding marginal portion, substantially as described.

4. A boot or shoe having a tread-surface comprising a rubber strip formed with an integral unbroken offstanding tread-rib extend- 40
ing continuously at a distance from and parallel with the edge of the strip to provide a continuous surrounding marginal portion and intervening web, and means engaging said 45
marginal portion throughout the boundary edge thereof and constituting the means for securely clamping said tread-surface in position, substantially as described.

5. A boot or shoe having a tread thereof 50
hollowed out and provided with undercut sides, and a tread-surface comprising a rubber strip formed with an integral unbroken offstanding tread-rib extending continuously at a distance from and parallel with the edge 55
of the strip to provide a continuous surrounding marginal portion and intervening web, said marginal portion having dovetailed sides which fit into the said undercut sides of the hollowed-out tread to retain the said rubber 60
tread-surface in position, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOSEPH NEWTON.

Witnesses:

ERNEST H. CLIFFORD,
JOHN WM. MALLETT.