

J. H. BROWN.
 MANUFACTURE OF TOE CASES OR TOE BOXES FOR BOOTS AND SHOES.
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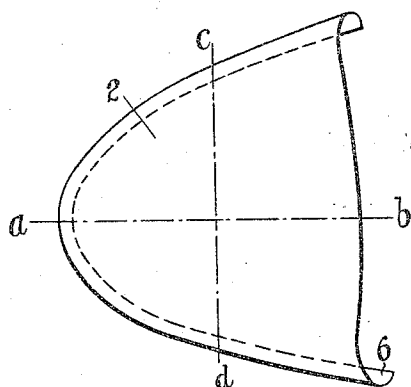


Fig 1.

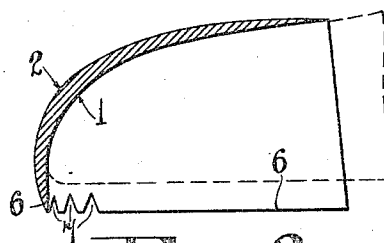


Fig 2.

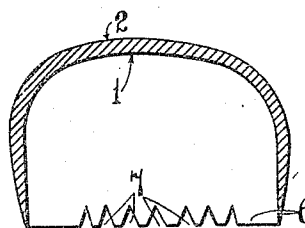


Fig 3.

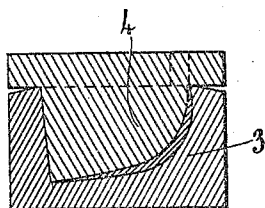


Fig 4.

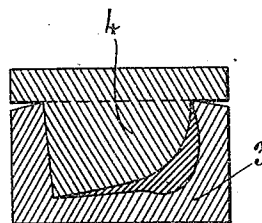


Fig 6.

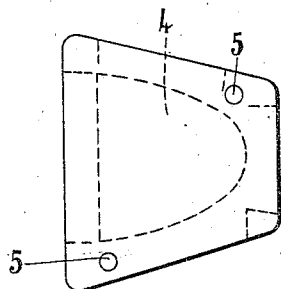


Fig 5.

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UNITED STATES PATENT OFFICE.

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MANUFACTURE OF TOE-CASES OR TOE-BOXES FOR BOOTS AND SHOES.

1,059,654

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To all whom it may concern:

Be it known that I, JOSEPH HENRY BROWN, a subject of the King of Great Britain, residing at 33 Connaught street, Northampton, England, have invented certain new and useful improvements in the Manufacture of Toe-Cases or Toe-Boxes for Boots and Shoes, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to toe cases or toe boxes for boots and shoes and consists of an improvement in the manufacture of a known type of resilient toe case or toe box which is composed of a known material viz. rubber composition, said article being molded to the required shape so as not to require any shaping to the last during the process of lasting the boot or shoe.

According to this invention it is proposed to manufacture articles of the kind above mentioned in such a manner that different shapes of toe cases may be produced which fit the same last. That is to say, the articles produced may vary as required as regards their exterior form or shape, while the interior shape remains the same.

By this improvement boots or shoes may be made on the same last with practically any shape or form of toe, thus as the fashion in toes changes, manufacturers may produce on their existing lasts boots and shoes having the desired style of toe, thus avoiding the expense of new lasts for each different shape or form of toe.

Toe cases or toe boxes of the kind with which this invention is concerned are made in a mold and in carrying the invention into effect that part of the mold which forms the interior of the article is made from the last itself while the other part of the mold is made according to the desired shape or form of the exterior of the article. By altering the last mentioned mold part toe cases of different shape exteriorly but of the same interior shape may be produced.

In order that the invention may be readily understood reference will be made in the following further description to the accompanying drawing, wherein:—

Figure 1 is a plan of a toe case or toe box of the kind with which this invention is concerned. Fig. 2 is a section of the same taken on the line *a—b* of Fig. 1. Fig.

3 is a section taken on the line *c—d* of Fig. 1. Fig. 4 is a vertical section through a mold for making the toe case. Fig. 5 is a plan of said mold. Fig. 6 is a vertical section of a mold for producing a differently shaped toe to that shown in Fig. 4.

Figs. 1 to 3 are drawn to a larger scale than Figs. 4 to 6 and like parts are designated by the same reference characters throughout the drawing.

The resilient toe case is molded on the inside 1 exactly to the shape of the toe end of the last while according to this invention, and as will be hereinafter described, the outside 2 is molded to the required shape of the toe of the boot or shoe.

The toe case being thus molded and vulcanized or set to shape will not only fit upon the last without requiring to be shaped or conformed thereto during the process of making the boot or shoe but will also maintain the original shape or form of the boot or shoe toe, that is to say, although the resilient toe case or toe box will permit the toe of the boot to be compressed or otherwise yield to pressure nevertheless it will always resume its original shape when the pressure is removed.

The toe case is formed in a mold of the kind comprising a hollow portion 3 and a core portion 4 (Figs. 4 and 6) the two parts fitting together such for example as by means of dowels 5 in the well known manner.

In constructing the mold the shaped core portion 4 is formed by making an iron or other metal casting from the toe end of the last on which the boot is to be made said last being previously fitted up *i. e.* made deeper on the face so as to produce a mold portion of sufficient depth to form the turning in allowance 6 on the edge of the toe case. In Fig. 2 the toe end of the last is indicated by dotted lines so that the additional material provided for turning in during the process of making the boot may be clearly seen. The hollow portion 3 of the mold is made in any suitable manner this being shaped to the required outside form of the toe.

As will be clearly seen by reference to Figs. 4 and 6, by varying the shape of the hollow portion 3 of the mold toe cases of different shapes may be produced without

however altering the interior shape and therefore the same last may be used for making boots having different shapes or fashions of toes. The molded toe cases or
5 toe boxes are secured in the boot during the formation of the latter in the usual way.

In the example of toe case illustrated in the drawing the turning in allowance 6, at the pointed end of the toe case, has small
10 sections of a V shape as shown at 7 taken out, the object of the openings thereby produced being to prevent any accumulation of surplus material and to facilitate the last-
ing of the extreme end of the toe. The
15 openings 7 are however sometimes omitted.

Instead of a mold such as shown in Fig. 5 adapted to produce only one toe case at a time, a mold capable of producing a number of toe cases may be used.

What I claim then is:—

The process of producing a plurality of
20 molded toe caps all having the same internal contour and differing external contours, consisting in successively molding
such a plurality of caps from a plastic
25 composition in a mold having a male die having a molding face of unvarying contour and a succession of female dies having
molding faces shaped to give the desired external contours to the caps, and then
30 setting the caps in their molded shapes.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH HENRY BROWN.

Witnesses:

JESSIE MCGAVIN,
LIZZIE FORREST.