

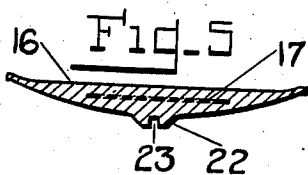
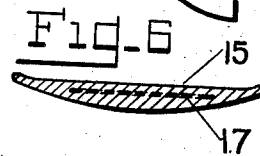
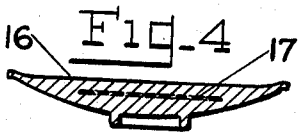
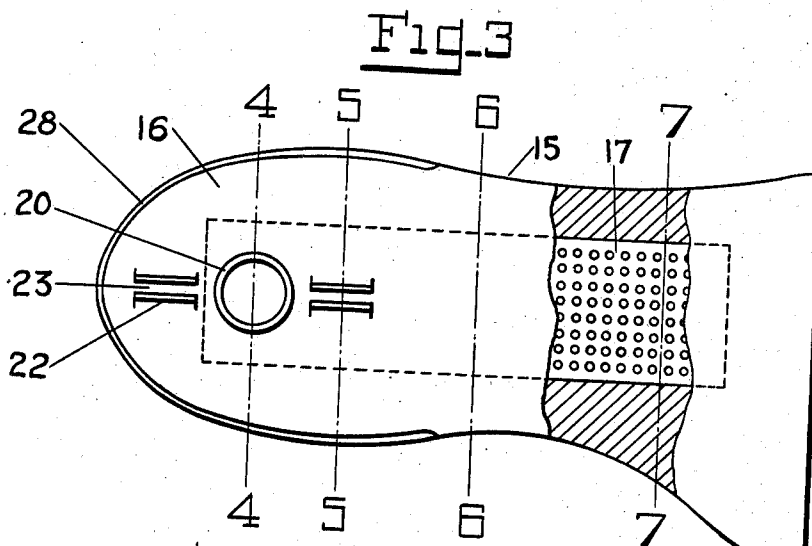
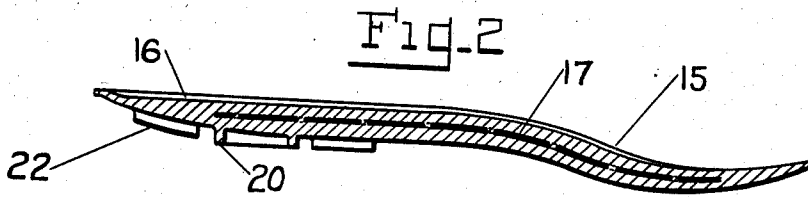
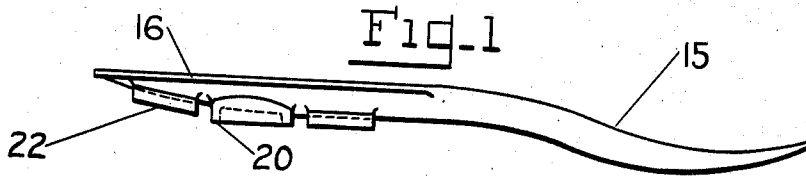
Nov. 18, 1941.

F. A. PARKHURST
SHOE BOTTOM

2,263,187

Filed Jan. 18, 1940

3 Sheets-Sheet 1



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Fig-8

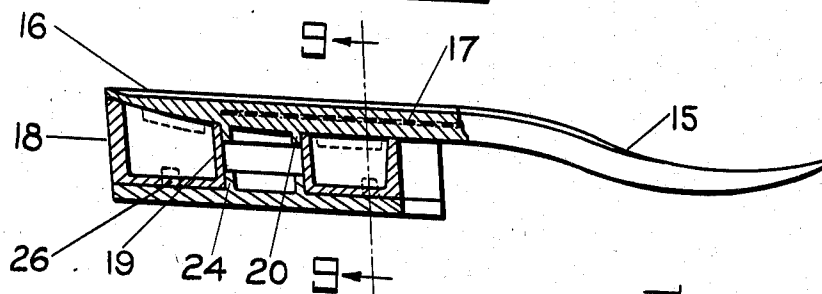


Fig-9

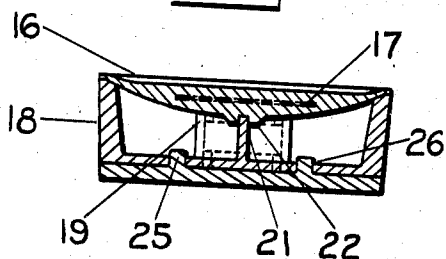


Fig-12

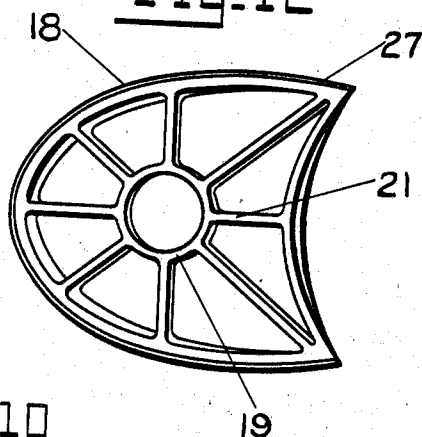


Fig-10

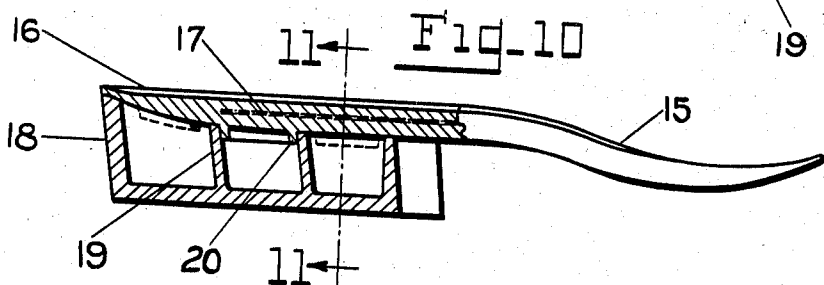
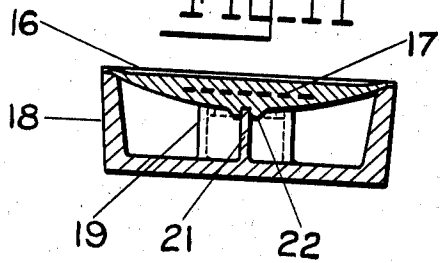


Fig-11



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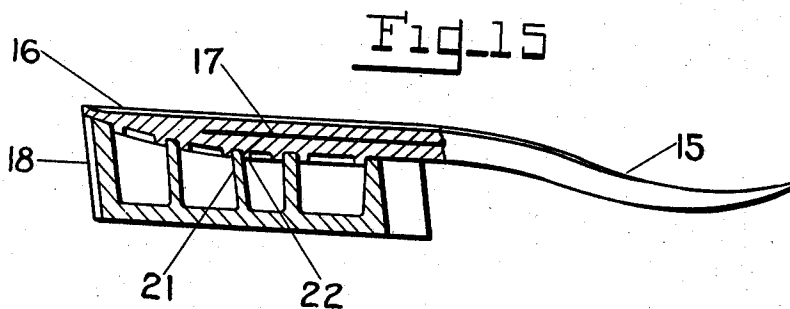
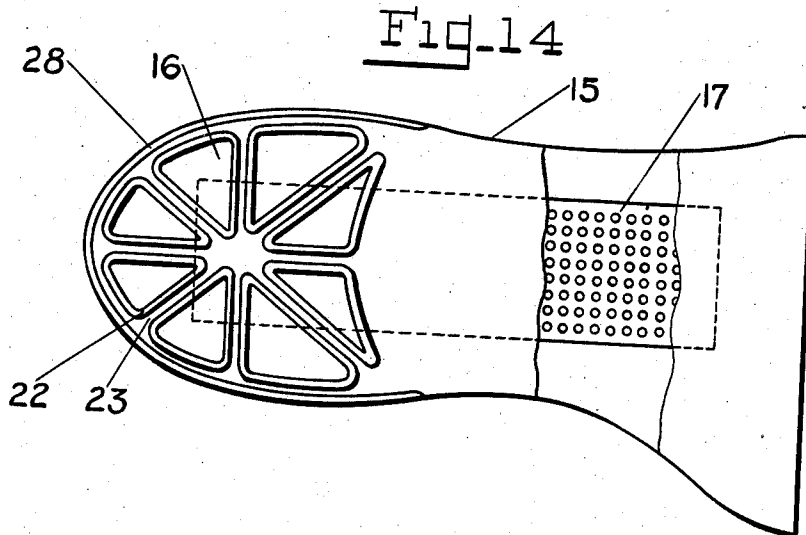
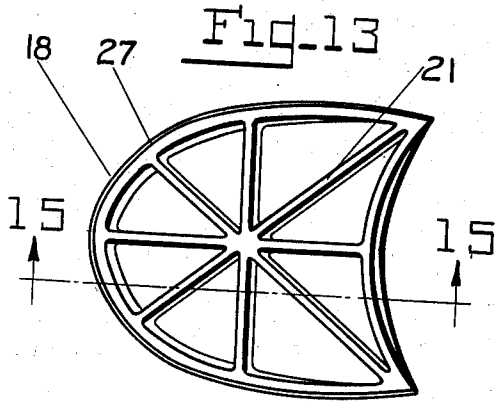
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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

2,263,187

SHOE BOTTOM

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corporation of Delaware

Application January 18, 1940, Serial No. 314,417

7 Claims. (Cl. 36-24.5)

This invention relates to the bottoms of boots and shoes and has for its object to provide a light and inexpensive shank and heel assembly, which parts can be readily molded by well-known means and methods from suitable plastic materials and thereafter combined into a unitary structure of attractive appearance and great durability.

More or less satisfactory molded plastic boot and shoe heels have heretofore been produced, but it has been found extremely difficult, if not impossible, to attach them to conventional shoes with the necessary security, since the nails or screws commonly employed for this purpose are unsuited for the attachment of heels of this character. Moreover, the structure thereof has generally been such as to make them unnecessarily heavy with an accompanied increased cost. The present invention has for one of its objects the provision of a shoe bottom structure including a molded plastic heel securely attached in such manner that it will be retained in proper position throughout the life of the shoe, and which will be light in weight and relatively inexpensive.

The foregoing and other objects of the invention together with means whereby the latter may be carried into effect, will best be understood from the following description of certain forms or embodiments thereof shown in the accompanying drawings, these, however, having been chosen for purposes of exemplification merely, it being obvious that the invention, as defined by the claims hereunto appended, may be otherwise embodied without departure from the spirit and scope thereof.

In said drawings:

Fig. 1 is a side elevation, Fig. 2 is a side elevation in section and Fig. 3 is a bottom plan view, partly broken away, of a shoe shank element constituting one feature of the present invention;

Figs. 4, 5, 6 and 7 are sections taken substantially on the lines 4-4, 5-5, 6-6, and 7-7, respectively, of Fig. 3;

Fig. 8 is a side elevation partly in section of a shank member similar to that shown in Figs. 1 and 2, having a heel with toplift attached thereto;

Fig. 9 is a section taken on the line 9-9 of Fig. 8;

Fig. 10 is a side elevation partly in section of a shank member similar to that shown in Figs. 1 and 2, having a heel without toplift attached thereto;

Fig. 11 is a section taken on the line 11-11 of Fig. 10.

Fig. 12 is a top plan view of my preferred heel

without toplift, and in particular showing webs 21, socket 19 and projecting surface 27 of shell 18.

Fig. 13 is a top plan view of another modification of my heel without toplift, and showing the position of webs 21.

Fig. 14 is a bottom plan view, partly broken away of a modification of my shoe shank element constituting one feature of the present invention;

Fig. 15 is a section taken substantially on the line 15-15 of Fig. 13 and having the shank 15 shown in Fig. 14 attached, the shank being partly in section.

Referring to Figs. 1 to 7, there is shown at 15 a shoe shank member die cast or molded in accordance with well-known methods from a suitable plastic material or composition, having the requisite strength, durability and hardness such for example, as cellulose acetate molding compositions, molding resins, the vinyl acetals and chlorides, polystyrene, etc. The said shank member 15 is formed with a heel seat portion 16, and has molded and embedded therein a stiffening member 17 preferably comprising a strip of perforated sheet steel. The heel seat portion 16 in the construction shown is adapted to cooperate with and have attached thereto a molded plastic heel of the general character more fully described in a co-pending application filed January 9, 1940 Serial No. 313,065. Said heel, as shown in Figs. 8, 9, 10, 11 and 12 comprises a shell 18, molded in a suitable shape from plastic material similar to that of which the shank 15 is composed, said shell being provided with a socket 19 of cylindrical or other form to retain and receive the projecting complementary member 20 of the heel seat 16. The shell 18 is formed with interior integral reinforcing or stiffening webs 21 extending from the exterior surface of said socket 19 to the interior surface of said heel shell 18 preferably substantially through its entire height. The heel seat portion 16 of the shank 15 as shown more clearly in Fig. 3 is formed with a projection or projections in the form of a pair or pairs of parallel ribs 22 forming between them a recess or groove 23 to receive the upper projecting edge of the web 21 as shown in Figs. 9 and 11, which is thereby embraced by the said ribs. The interengaging recesses and projections on the heel and the heel seat portion of the shank 15 interlock with one another to prevent relative lateral movement of the former on the latter, so that by securing the parts together into a unitary structure, as by the use of a suitable cement or by softening the engaging surfaces by a suitable sol-

vent, the heel will be securely fastened to the shank and become a substantially integral part thereof. The heel seat portion 16 is also provided with a shallow depression 28 into which the projecting surface 27 of the heel shell 18 is fitted.

In Figs. 8 and 9 there is shown a toplift likewise molded from plastic material similar to that of which the shank 15 and shell 18 are composed and attached to said heel shell by means of projections 24 and 25 received in the bottom open end of socket 19 and openings 26 of the heel respectively.

In Fig. 13 there is shown a modification of my heel, wherein the reinforcing webs 21 radially extend from a common center instead of radiating from a socket as shown in Fig. 12.

In Fig. 14 there is shown at 15 a shank member die cast or molded from a suitable plastic composition, having a heel seat portion 16, a stiffening member 17, and a depression 28 as described above. The heel seat portion 16 of the shank 15 is here provided with a plurality of ribs 22 and grooves 23 which cooperate and articulate with webs 21 of the heel to secure the heel in position.

In Fig. 15 there is shown in section a series of webs 21 of the heel fitted in to the grooves 23, and gripped by the ribs 22 of the heel seat 16.

The construction above described is such that the heel with its reinforcing elements and toplift receiving socket where a toplift is desired, the shank with its stiffener and heel seat portion shaped complementary to the contiguous portions of the heel, may be conveniently molded separately, and thereafter when assembled and cemented or otherwise secured together as above described to form a substantially integral heel and shank and, when in place, are securely bonded together against possible disintegration.

This application is a continuation-in-part of my prior application Ser. No. 263,620 filed March 23, 1939.

What is claimed is:

1. In a boot or shoe, a shank composed of molded plastic material and having a heel seat portion, and a heel composed of molded plastic material and secured to said heel seat portion, said heel having a plurality of interior reinforcing webs and said heel seat portion having a plurality of ribs and grooves complementary to and articulated with said reinforcing webs.

2. In a boot or shoe, a shank composed of molded plastic material and having a heel seat portion, and a heel composed of molded plastic material and secured to said heel seat portion, said heel having a plurality of interior reinforcing webs radially extending from the interior thereof outwardly to the sidewall of said heel and said heel seat portion having a plurality of ribs and

grooves complementary to and articulated with said reinforcing webs.

3. In a boot or shoe, a shank composed of molded plastic material and having a heel seat portion, and a heel composed of molded plastic material and secured to said heel seat portion, said heel having an interior reinforcing projection and a socket integral with said reinforcing projection and said heel seat portion having a projection complementary to said socket and a recess to receive said reinforcing projection.

4. In a boot or shoe, a shank composed of molded plastic material and having a heel seat portion, and a heel comprising a hollow shell of molded plastic material and having reinforcing webs radially extending from the exterior surface of a socket in said heel to the interior surface of said shell, said heel seat portion having a projection to be received by said socket and having recesses to receive the adjacent edges of said webs.

5. In a boot or shoe, a shank composed of molded plastic material and having a heel seat portion, and a heel comprising a hollow shell of molded plastic material and having reinforcing webs radially extending from the exterior surface of a socket to the interior surface of said shell, said heel seat portion having a projection to be received by said socket and having at least one pair of parallel ribs embracing between them the adjacent edge of said web.

6. In a boot or shoe, a shank composed of molded plastic material and having a heel seat portion and a heel comprising a hollow shell of molded plastic material and having at least two reinforcing webs radially extending from the exterior surface of a substantially vertical cylindrically shaped socket to the interior surface of said shell, said heel seat portion having a cylindrically shaped projection to be received by said socket and having two pairs of parallel ribs embracing between them the adjacent edges of said webs.

7. In a boot or shoe, a shank composed of molded plastic material and having a heel seat portion, and a heel comprising a hollow shell of molded plastic material and having at least two reinforcing webs radially extending from the exterior surface of a substantially vertical cylindrically shaped socket to the interior surface of said shell substantially through its entire height, said heel seat portion having a cylindrically shaped projection to be received by said socket and having one pair of parallel ribs in rear of said projection and another pair of parallel ribs in front of said projection, each of said pairs of parallel ribs embracing between them the adjacent edges of said reinforcing webs.

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