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1,995,058

TOP LIFT ATTACHMENT

Filed Aug. 26, 1932

Fig. 1

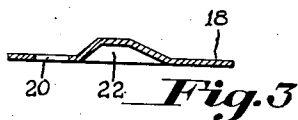
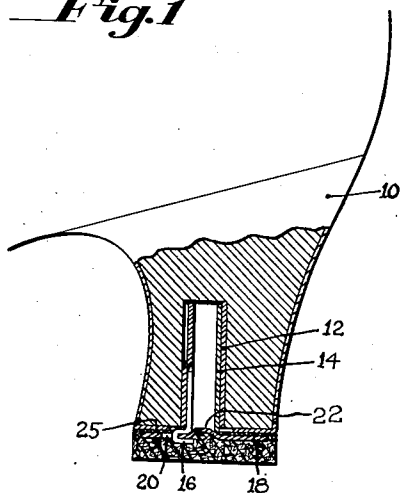


Fig. 3

Fig. 2

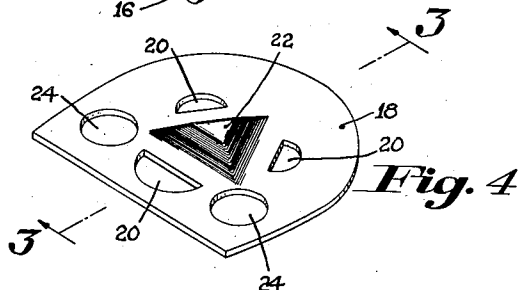
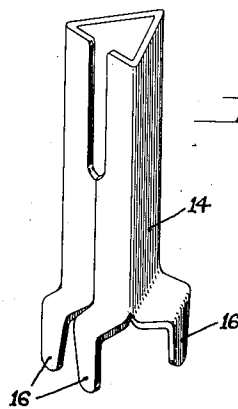


Fig. 4

Fig. 5

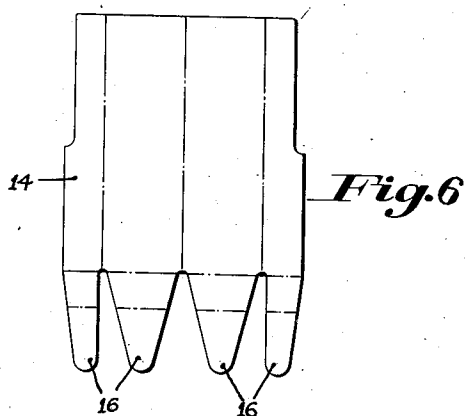
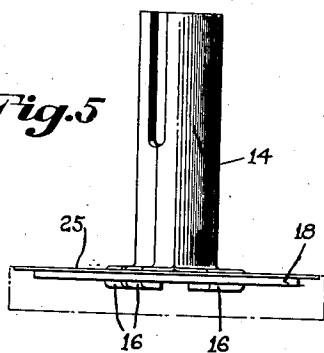


Fig. 6

Witness

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TOP LIFT ATTACHMENT

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7 Claims. (Cl. 36—36)

The present invention relates to attachments for demountably securing heel lifts to a boot or shoe, and is more particularly concerned with such an attachment adapted for employment in connection with a molded rubber heel lift, together with the method of producing the lifts and combined attachment.

The purpose and object of the present invention is to effectively and adequately attach a supporting post or the like to a molded heel lift of rubber or similar composition in such a manner that the proper formation of the rubber in the mold shall not be handicapped, and upon completion the rubber lift will be permanently and immovably bonded to the supporting post.

With these and other objects in view, one feature of the invention contemplates the provision of a supporting post having attaching prongs adapted to be bent into locking or clinching position, which cooperate with a plate adapted to be embedded in the heel lift during formation in such a manner that the post is rigidly locked to the plate, which in turn serves for locking the post to the lift. The post is preferably of tubular formation, open at both ends, and the plate is provided with a depressed portion engaging with the open end of the tubular post adjacent thereto, to effectually seal the interior of the post from flow of rubber thereinto during the molding of the heel about the plate.

The improved method employed in the production of this demountable heel contemplates the individual formation of the post and plate, the assembly and securing of the two members in fixed relation by clinching of the lugs on the post about the plate, the assembly of the post and plate within a heel mold, and the molding of rubber thereabout while sealing the open end of the post through the plate against entrance of rubber into the post, with consequent loss of volume and pressure in the mold.

Referring to the accompanying drawing, Fig. 1 represents an elevation partly in section of a shoe heel having the improved attachment; Fig. 2 is a perspective of the post before attachment to the plate; Fig. 3 is a section of the plate; Fig. 4 is a perspective of the plate shown in Fig. 3; Fig. 5 is an elevation partly in section of the post and plate embedded and bonded to a rubber heel lift; and Fig. 6 is a plan showing the blank from which the post is made.

The illustrated embodiment of the invention is particularly adapted for application to a wood heel base 10 of the type in familiar use on women's shoes. This heel base is provided with a metallic

socket 12, preferably of non-circular formation, extending lengthwise thereof to receive a demountable post attached to a heel lift. Cooperating therewith is a tubular post 14 of similar triangular cross-section, adapted for insertion within and frictional engagement with the walls of the socket. At its outer end the post is provided with offset lugs 16, which are normally clinched within the material of the heel lift such as leather or the like.

In applying this construction to a molded rubber lift, it is desirable that means be provided for rigidly securing the post to the lift in such a manner as to prevent loosening under normal conditions of wear, and to also provide a method of production which shall not cause interference with the molding of the rubber lift. To this end a heel-shaped plate 18 is provided with a series of openings 20 for the reception of the lugs 16, the lugs being passed through the openings and clinched upon the opposite side of the plate to permanently secure the post and plate in assembled relation in the manner shown in Figs. 1 and 5. The plate is furthermore provided with a depressed area 22 of similar conformation to the interior dimensions of the post at the open end, this depressed area adapted to enter and seal the open end of the post from the flow of rubber thereinto between the lugs. The plate is in addition provided with one or more openings 24 to allow the flow of rubber to the opposite side of the plate during molding, and insure complete embedding of the plate within the molded lift in approximately the fashion shown in Figs. 1 and 5.

In the actual production of this type of lift, the plate and attached post, after thorough cleaning by sand-blasting or otherwise, are assembled in the bottom cavity of a mold with the plate sustained slightly above the bottom of the mold cavity, and the attached post extending downwardly into a corresponding shaped recess in the mold. Interposed between the plate and the bottom of the mold is an inextensible sheet of fibre or the like indicated at 25, which in the finished top lift forms virtually the face in contact with the heel base. The material of the rubber top lift flows about the metal plate and forms a relatively thin film at the opposite side of the plate between the plate and fibre, thoroughly bonding the fibre sheet into the top lift at the attaching surface in such a manner that the sheet substantially provides an inextensible surface in contact with the heel base. Not only is the post effectually bonded to the heel lift by this method of construction, but in addi-

tion the resulting demountable top lift is rendered incapable of spreading or lateral distortion in use which would otherwise tend to loosen and eventually destroy the covering of the wood heel base by engagement with the inturned portion. For this purpose the fibre sheet at the attaching face is substantially co-extensive in size with the top lift itself. The combining of the fibre sheet, rubber top lift and post in this manner insures an effectual bonding and union of the several members in such a manner that they cannot be dislodged in use.

What is claimed is:

1. A heel lift attachment comprising a hollow post having securing prongs at one end, a plate secured to the post through the prongs and having a depression which engages and seals the open end of the post, and a molded rubber lift completely enveloping the plate and bonded thereto with the post projecting from the attaching surface.

2. A heel lift attachment comprising a hollow supporting post, a plate mechanically secured in rigid relationship to the post and so designed as to seal the open end of the post when in assembled relation, and a rubber lift completely enveloping the plate with an imperforate tread face and with the post projecting from the attaching face.

3. A heel lift attachment comprising a non-circular post of tubular formation, offset securing prongs projecting from one end of the post, a plate having openings therein for the reception of the prongs to locate the post in predetermined relationship to the plate, and having a depression which engages and seals the open end

of the post, and a rubber lift molded about and completely enveloping the plate.

4. A heel lift attachment comprising a molded body portion of rubber or the like, a securing plate embedded within the body portion and vulcanized thereto, a post projecting from the plate through the attaching face of the body portion, and a thin inextensible sheet of fibre lying at the attaching face of the body portion and bonded thereto in a manner to avoid lateral distortion of the attaching face in the region in contact with the adjoining heel base.

5. A heel lift attachment comprising a perforated plate, a supporting post projecting from one side of the plate, a fibre sheet laid over the surface of the plate at the side of the plate from which the post projects, and a rubber lift at the bottom side of the plate molded about the plate through the perforations thereof and vulcanized to the fibre sheet.

6. A molding insert for rubber heel lifts comprising a perforated plate, and a hollow supporting post formed at one end with lugs offset from the sides of the post to engage one side of the plate adjacent perforations in the plate and to grasp the plate when clinched over.

7. A molding insert for rubber heel lifts comprising a perforated plate, and a hollow supporting post formed at one end with lugs offset from the sides of the post to engage one side of the plate adjacent perforations in the plate and to grasp the plate when clinched over, the perforations in the plate being sufficiently large to permit free passage of molding rubber there-through and so spaced as to securely hold a molded lift in place.

JAMES F. FITZSIMMONS.