Jan. 14, 1936. C. E. JOHNSON 2,027,482

DETACHABLE HEEL

Original Filed April 30, 1932

Fig. 1.

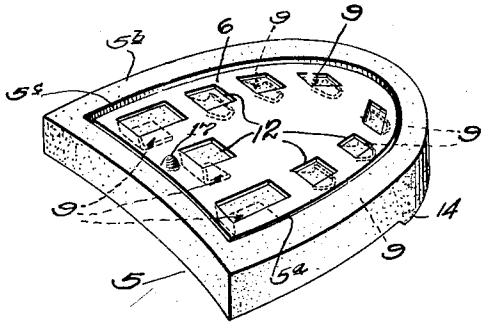


Fig. 2.

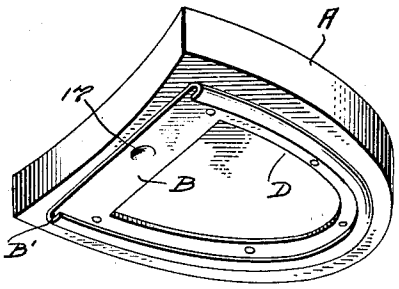


Fig. 3.

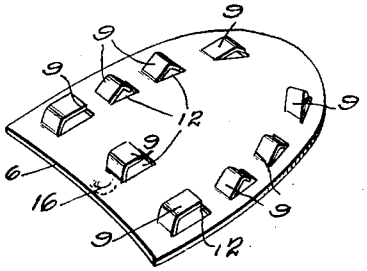


Fig. 4.

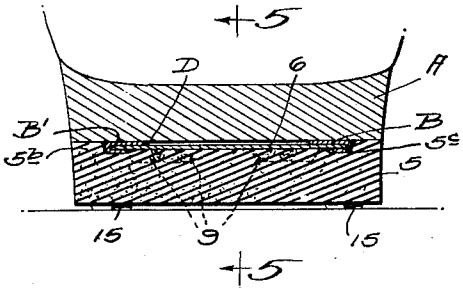


Fig. 5.

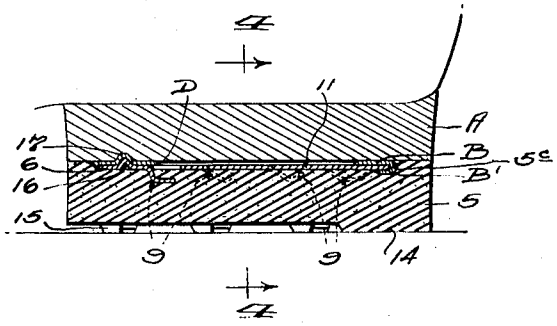
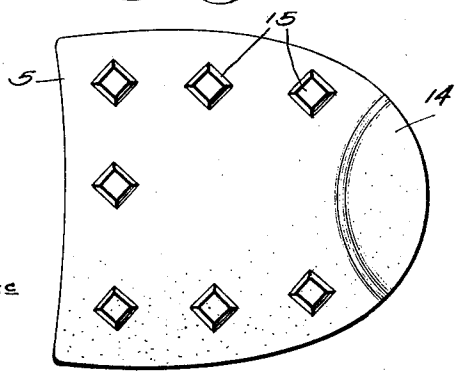


Fig. 6.



Inventor

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Patented Jan. 14, 1936

2,027,482

UNITED STATES PATENT OFFICE

2,027,482

DETACHABLE HEEL

Charles E. Johnson, De Graff, Ohio

Application April 30, 1932, Serial No. 608,524
Renewed August 21, 1935

3 Claims. (Cl. 36—36)

My invention relates to improvements in shoe heels and particularly to those which may be attached to the shoe without employing nails or the like.

The invention has for its primary object to provide a novel and improved means which enables the shoe heel to be quickly applied to the shoe and to be readily removed when worn, the nature of the invention being such that no tools are necessary to apply the heel or to remove it.

The invention aims particularly to provide a device of this character which embodies a minimum number of parts of simple inexpensive construction, there being no small elements to work loose when the heel has been applied and the attaching elements being wholly concealed and protected from the weather when the heel is in place,—the appearance of the shoe being in all respects the same as though the ordinary nailed rubber heel were used.

Another object of the invention resides in the provision of novel means for attaching a carrier plate to the rubber heel so that when the heel wears down to expose the attaching elements they will not present any surface or portion to catch in rugs and the like,—the nature of such attaching portions being such that they will, when exposed, tend to sink or approach the insole with the rest of the traction surface of the heel as the same wears further.

The invention also contemplates a novel latching means for holding the heel in place and which is formed in part by each of the shoe and heel-carried members.

The invention also resides in a certain manner of construction, combination and arrangement of the various parts and in modes of operation, all of which will be readily apparent from an inspection of the drawing in connection with a detailed description to follow.

It is to be understood that the drawing illustrates what appears to be a preferred example of the invention, although obviously the same may be modified considerably within the spirit and scope of the subject matter claimed hereinafter.

In the drawing, wherein the same reference characters have been used to designate the same parts in all views,

Figure 1 is a perspective view of the rubber heel showing the novel attaching plate incorporated therein;

Figure 2 is a perspective view of the bottom of the leather heel or base to which the rubber heel is to be applied;

Figure 3 is a perspective view of the rubber heel-carried attaching plate;

Figure 4 is a longitudinal sectional view through the assembled leather and rubber heel portions;

Figure 5 is a cross sectional view taken on the line 5—5 of Figure 4; and

Figure 6 is a bottom plan view of the rubber heel.

Referring to the drawing by reference characters numeral 5 designates the rubber heel which may be of any standard make but which preferably has wear-increasing protuberances as illustrated in Figure 6. In carrying out the invention the rubber heel 5 is formed with a heel shaped recess 5^a in its upper surface as shown in Figure 1 and which leaves the marginal rim 5^b,—the recess 5^a being of a depth so that when the heel-carried attaching plate 6 is located therein the rim 5^b will extend slightly above the plate to make contact with the bottom surface of the leather heel A and in this way conceal and protect from the weather the interengaging attaching plates 6, B, of the rubber and leather heels respectively.

As illustrated, the rubber heel-carried plate 6 is provided with the outwardly struck and rearwardly bent attaching tongues 9. The plate 6 is placed in the heel mould according to the preferred method of construction and the heel is moulded so that the tongues 9, will be embedded therein and the recess 5^a and marginal rim 5^b formed in the single moulding operation. It should be observed, however, that there is a slight space as indicated at 5^c between the margin of the plate 6 and the adjacent rim 5^a, the purpose of this space 5^c being to accommodate the margin of the leather heel-carried guide plate B, which as shown in Figure 5 has its edges bent inwardly to provide the groove B' for receiving the marginal portion of plate 6.

Particular attention is directed to the fact that the tongues 9 are disposed adjacent the sides of the plate 6, and are arranged in series extending rearwardly inwardly of the margin of the plate from adjacent the forward edge thereof. The tongues are struck from the plate in a single stamping operation. It is to be noted that such operation also forms the latch element 16, and the tongue 9 intermediate the sides and adjacent the front edge of the plate. It is noted that the ends of the tongues 9 are bent rearwardly, and curved upwardly slightly at their ends, so that when the heel 5 wears down to expose the tongues, there will be no edges to catch in rugs

and the like. Since the stock of the plate 6 is comparatively thin metal, the tongues 9 (having been exposed) will simply bend rearwardly and inwardly as the heel continues to wear so that even if the heel is kept in service for a considerable length of time after the tongues are exposed, no substantial injury will come to floors and no projections will be in evidence to catch in rugs, etc., as aforesaid.

The plates 6, B, are preferably of skeleton form for the sake of lightness,—the plate 6 having the openings 12 formed by the outward striking of tongues 9, and the leather heel-carried plate B preferably having the heel-shaped cut-out D which leaves such plate B in a frame-like condition. Plate B is nailed or otherwise permanently secured to the leather heel.

The rubber heel 5 has the thickened traction portion 14 at the rear, which will be arranged opposite the subjacent tongues 9, and as shown, there are marginal protuberances 15 at the sides and front of the traction surface.

Particular attention is invited to the fact that the intermediate front portions of the plates 6, B, are provided with integral locking means 16, 17, which in the drawing take the form of an integral protuberance and a recess, respectively. The mode of application of the rubber heel 5 to the leather heel B will be obvious at a glance. The rubber heel is simply pressed against the leather heel so as to rock the rear portion of the rim 5^b outwardly slightly so as to expose the rear end of plate 6, and enable said plate to be lodged in the groove B^1 of the leather heel carried plate B as the rubber heel is moved rearwardly. The protuberance 16 having seated itself in the recess 17 of plate B it will be obvious that the rubber heel 5 will be locked in place.

The marginal space 5^c about the edges of the plate 6 receives the marginal portion of the guide flanges B^1 of plate B while as stated the rim 5^b of the rubber heel makes contact with the surface of the leather heel so as to both conceal and protect the plates 6, B.

The forward tongues 9 need not have their free ends turned in as, of course, the rear surface of the heel wears a great deal more than the forward part; also the forward tongues 9 may project deeper into the heel 5 than the remaining ones.

What I claim is:

1. In a shoe heel construction including a base and a removable rubber heel, a keeper plate permanently secured to said base and having inturned edges providing a keeper groove, a carrier plate secured to the upper surface of the rubber heel, the rubber heel having a countersunk portion receiving said carrier plate and providing a marginal rim extending above and spaced laterally from the edges of said carrier plate whereby to provide a receiving groove, the edges of said carrier plate being designed to be inserted into the marginal keeper groove of said base-carried keeper plate and the margin of the latter being received in said receiving groove of the rubber heel, said marginal rim of the rubber heel being adapted to abut the surface of said base about said keeper plate whereby to conceal both plates and protect them from the weather, and outwardly struck tongues extending from said carrier plate and embedded in the rubber heel, the ends of said tongues being bent rearwardly toward the rounded portion of the rubber heel and the tongues adjacent the rounded rear end of the heel having their ends bent inwardly toward the carrier plate so as not to present catching edges when the rear end of the rubber heel wears down to expose the same.

2. In a shoe heel construction including a base and a nailessly secured removable rubber heel, a keeper plate permanently secured to said base, a carrier plate engageable with said keeper plate, and outwardly struck and rearwardly bent tongues extending from said carrier plate and embedded in the rubber heel, and the tongues adjacent the rounded rear end of the heel having their ends bent inwardly toward the carrier plate.

3. In a shoe heel construction including a base and a nailessly secured removable rubber heel, a keeper plate permanently secured to said base, a carrier plate engageable with said keeper plate, said carrier plate having resilient outwardly struck and rearwardly extending substantially V-shaped tongues embedded in the rubber heel, the free ends of said tongues angling in toward said plates, substantially as and for the purpose specified.

CHARLES E. JOHNSON.