L. J. SODERLUND.

RUBBER HEEL.

APPLICATION FILED AUG. 17, 1912.

1,048,367. Patented Dec. 24, 1912.

Fig. 1.

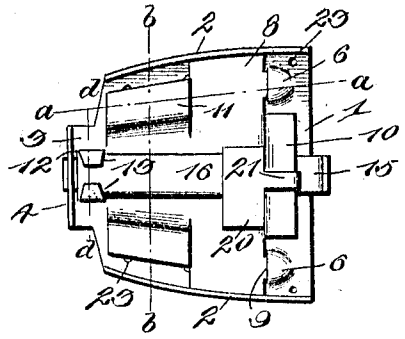


Fig. 2.

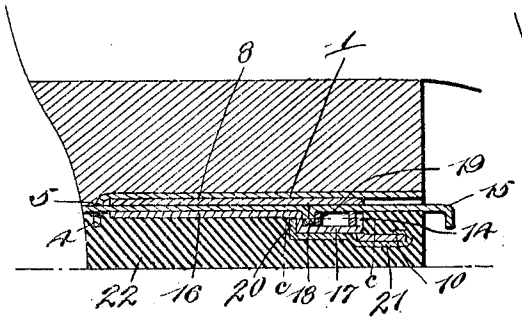


Fig. 3.

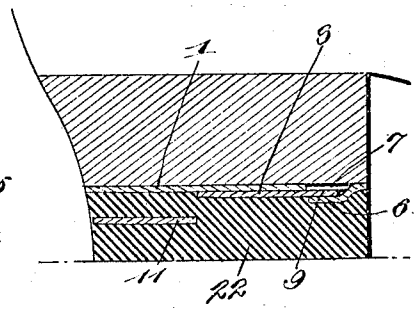


Fig. 4.

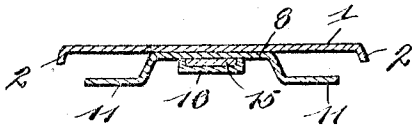


Fig. 5.

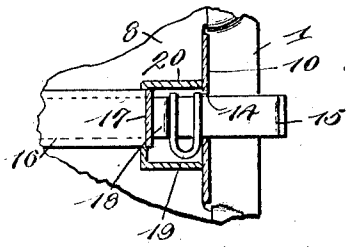
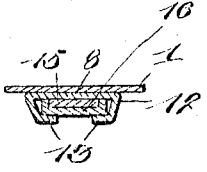


Fig. 6.



Witnesses

Chas. L. Griesbauer.

A. B. Norton.

Inventor

L. J. Soderlund,

By Watson E. Coleman.

Attorney

UNITED STATES PATENT OFFICE.

LOUIS JOHN SODERLUND, OF TWO HARBORS, MINNESOTA.

RUBBER HEEL.

1,048,367. Specification of Letters Patent. Patented Dec. 24, 1912.

Application filed August 17, 1912. Serial No. 715,644.

To all whom it may concern:

Be it known that I, LOUIS JOHN SODERLUND, a citizen of the United States, residing at Two Harbors, in the county of Lake and State of Minnesota, have invented certain new and useful Improvements in Rubber Heels, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in rubber heels for shoes and boots, and especially with reference to means for detachably securing a rubber or other like heel in place, so as to admit of the ready removal and renewal or repairing of the heel when the same becomes worn, the invention consisting in the construction, combination and arrangement of devices hereinafter described and claimed.

In the accompanying drawings: Figure 1 is an inverted plan of my improved heel attaching devices; Fig. 2 is a vertical longitudinal central sectional view of a rubber heel provided with my improved attaching devices; Fig. 3 is a similar view on the plane indicated by the line *a*—*a* of Fig. 1; Fig. 4 is a detail vertical sectional view on the plane indicated by the line *b*—*b* of Fig. 1; Fig. 5 is a detail horizontal sectional view on the plane indicated by the line *c*—*c* of Fig. 2; and Fig. 6 is a detail vertical transverse sectional view on the plane indicated by the line *d*—*d* of Fig. 1.

In the embodiment of my invention I provide a heel plate 1 which is made of suitable sheet or plate metal, conforms to the shape of the heel of a shoe or boot and is formed at its sides with depending flanges 2 and at its rear with an extension or arm 3 which has a depending flange 4, said flange being provided with a lock opening 5. Near the front corners of the heel plate are struck up offsets 6 which are substantially semi-circular in form with their curved sides presented to the front edge of the heel plate and openings 7 are formed at the straight rear sides of said offsets. These offsets form keepers, as will presently appear.

In connection with the heel plate 1 I also provide a core plate 8 which is of a size and shape adapting it to fit on the lower side of the attaching plate 1 and to bear between the flanges 2, 4 of said attaching plate. This core plate is provided near its front corners with forwardly extending tongues 9 which are adapted to enter the openings 7 and to engage the keepers or offsets 6 and is also formed at its front side with an offset, bent anchoring arm 10. At the rear corners of the said core plate are similar anchoring arms 11. An arm 12, which extends rearwardly, is formed between the anchoring arms 11, and the sides thereof are bent to form clamping fingers 13. The anchoring arm 10 has an opening 14 through which extends a locking bolt 15. The said locking bolt operates in a housing 16, the rear end of which is secured to the under side of the core plate by the arms 13. The front end of the housing is formed with an offset portion 17, the front end of which projects through the opening 14 in the anchoring arm 10. The bolt 15 is formed with a stop 18 which operates in the said offset portion 17 of the housing, the rear end of the said bolt being adapted to be engaged with the opening 5 of the flange 4, so as to lock the rear end of the core plate to the flange 4 after the tongues 9 have been engaged with the keepers or offsets 6. Hence, as will be understood, the core plate may be readily attached to or detached from the attaching plate. To secure the bolt in locking position I provide a substantially U-shaped spring 19 which is arranged between the anchoring arm 10 and the stop flange 18 of the bolt and lies between the bolt and the offset portion 17 of the housing 16. This spring and also the said offset portion of the housing 16 are covered by a housing 20 which bears on the core plate at a point just in rear of the anchoring arm 10 and has a forwardly extending attaching arm 21 which is bent around the front edge of said anchoring arm.

The body 22 of the heel, which is made of rubber or other suitable substance, is molded on the core plate so that the anchoring arms of the core plate are embedded in the substance of the said rubber heel, as shown, and hence the core plate is permanently connected to the heel and serves to secure the latter in place. The housing 20 prevents any of the material of which the rubber heel is formed from coming in contact with the spring 19 and interfering with the action thereof.

It will be understood that in order to detach the heel it is only necessary to first withdraw the bolt from the opening 5 of the flange 4 and to then disengage the tongues 9 from the keeper offsets 6. When-

ever the rubber heel becomes worn it can be melted from the core plate and a new one formed on the latter as will be understood. The attaching plate 1 is here shown as provided with openings 23 through which screws or other like devices may pass in order to secure the attaching plate to the heel of the boot or shoe on which the device is to be worn.

Having thus described my invention I claim:

1. In a heel, the combination of an attaching plate having keepers with a core plate having anchoring means to be embedded in the substance of a heel, the said core plate being further provided with tongues to engage certain of the keepers of the attaching plate, a movable bolt carried by the core plate and adapted to be engaged with the other keeper of the attaching plate, a spring to hold the bolt in normal locking position, and a housing to cover said spring and the contiguous portions of the bolt for the purpose set forth.

2. In a heel, the combination of an attaching plate having keepers with a core plate having anchoring arms to be embedded in the substance of a heel, the said core plate being further provided with tongues to engage certain of the keepers of the attaching plate, a longitudinally movable bolt carried by the core plate and adapted to be engaged with the other keeper of the attaching plate and means for holding the bolt in normal locking position.

3. In a heel the combination of an attaching plate having keepers with a core plate having anchoring arms to be embedded in the substance of a heel, said core plate being further provided with tongues to engage certain of the keepers of the attaching plate, a longitudinally movable bolt carried by the core plate and adapted to be engaged with the other keeper of the attaching plate, a housing for said longitudinal movable bolt, said housing being offset on one end, and a spring disposed in the offset portion of said housing to normally hold the bolt in locking position.

4. In a heel the combination of an attaching plate having keepers with a core plate having anchoring arms to be embedded in the substance of a heel, said core plate being further provided with tongues to engage certain of the keepers of the attaching plate, a longitudinally movable bolt carried by the core plate and adapted to be engaged with one of the keepers of the attaching plate, a housing for said longitudinally movable bolt, said housing being offset on one end, a spring disposed in the offset portion of said housing to normally hold the bolt in locking position, and a second housing adapted to cover the offset portion of the first mentioned housing, said second housing having a forwardly extending arm which is adapted to be bent around one of said anchoring arms, as and for the purpose set forth.

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

LOUIS JOHN SODERLUND.

Witnesses:
JAS. C. TENEURE,
FRANK KEMPFFER.