No. 826,740.

PATENTED JULY 24, 1906.

L. PEROTTI.

RUBBER.

APPLICATION FILED MAR. 8, 1904.

Fig. 1

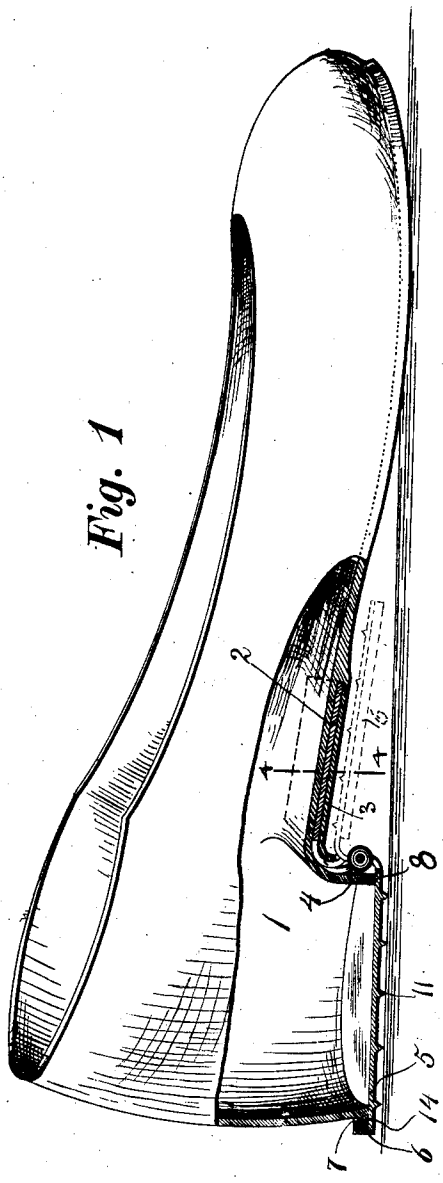


Fig. 4

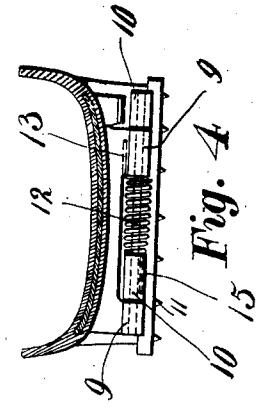


Fig. 3

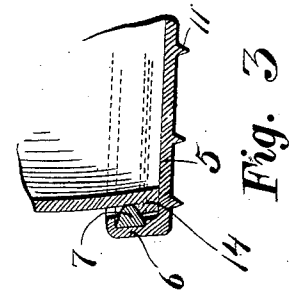
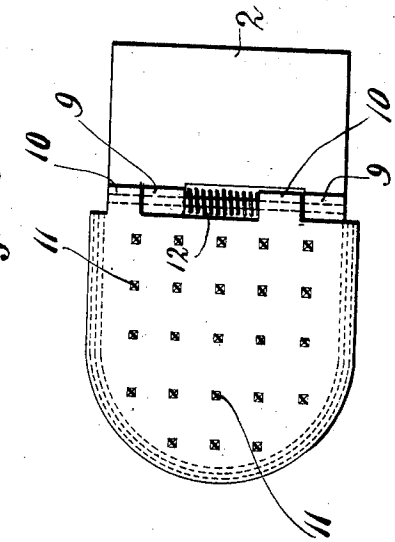


Fig. 2



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No. 826,740. Specification of Letters Patent. Patented July 24, 1906.

Application filed March 8, 1904. Serial No. 197,201.

To all whom it may concern:

Be it known that I, LOUIS PEROTTI, a subject of the King of Italy, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Rubbers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to numerals of reference marked thereon, which form a part of this specification.

The rubbers as at present used have the drawback that they not only do not prevent a person from slipping on slippery ground, but often even cause the slipping, and on this account many people prefer to go without rubbers. In order to do away with this drawback and to allow the person to keep on the rubbers when entering rooms without the risk of damaging the floors, I form the rubbers without bottoms in the heels and use instead of the latter removable plates or caps bearing on their outer surface pins or spikes, said plates or caps being adapted to tightly close up the bottom of the heels.

In order to make my invention more clear, the same is illustrated in the accompanying drawings, in which similar numerals denote corresponding parts, and in which—

Figure 1 shows the improved rubber, partly in section, the dotted lines showing the antislipping-plate attached to the heel raised. Fig. 2 shows a top plan view of the antislipping-plate, and Figs. 3 and 4 show some details of construction.

In the drawings, 1 indicates a rubber of ordinary form, the heel of said rubber having no bottom. A metal plate 2 is embedded in the sole of the rubber and extends through the front wall of the heel downward. The embedding of this plate 2 in the sole of the rubber can be done simultaneously with the casting of the molten mass of the rubber material into the form. The lower part of the plate 2 is uncovered, and extending outward from within the rubber material it is bent forward and formed into an eye 9, the outer part 3 of the inner wall of the heel being at its bottom end cut away, while the inner part 4 thereof is of the same length as the other walls. A plate 5, having on its three outer sides an upwardly-projecting wall 6 and forming thus a cap, is provided with pins or spikes 11 on its bottom surface and is adapted to replace the bottom of the heel and at the same time to serve as a means for preventing the slipping of the wearer on slippery ground.

The plate 5 has at its inner edge eyes 10, corresponding with the eye 9 of the plate 2, a pin or bolt being passed through the said eyes 9 and 10, forming with the latter a hinge-joint.

In order to have the plate 5 tightly close up the bottom of the heel, a groove is arranged in the upwardly-projecting wall 6 of the plate 5, and a strip 7 of elastic material is fitted in said groove. The bottom edge of the heel is somewhat thickened, forming at the outside a shoulder 14, which when the plate 5 is applied engages the elastic strip and secures the plate 5 in its working position. When the plate 5 is disengaged, it takes up a position underneath the sole of the rubber, in which it is out of the way. For this purpose a spiral spring 12 is suitably arranged between the members 9 and 10 of the hinge-joint, connecting the embedded metal plate 2 and the spike-plate 5 and having the tension to hold the spike-plate out of working position.

I do not, however, restrict myself to the above-described arrangement, as any alterations could be made without departing from the subject of my invention.

What I claim is—

1. The combination with an ordinary rubber having no bottom at its heel, of a metal plate embedded in the sole of the rubber, a second plate hinged thereto and bearing spikes on its outer surface and means for holding the said spike-bearing plate in working position, substantially and for the purpose as specified.

2. The combinaton with an ordinary rubber having no bottom at its heel, of a metal plate embedded in the sole of the rubber and having its rear end projecting outward from the sole, a second metal plate hinged to the said end, this plate bearing on its outer surface spikes and having an upwardly-projecting wall on three outer sides thereof, thus forming a cap adapted to fit upon the bottom of the heel and to tightly close up the same, means for holding the spike-bearing plate in its working position, substantially and for the purpose as specified.

3. The combination with an ordinary rubber having no bottom at its heel, of a metal plate embedded in the sole of the rubber and

having its rear end projecting outward from the sole, a second plate hinged to the said end and having spikes on its outer surface and on the three outer sides an upwardly-projecting wall, said wall being adapted to engage the heel and to form a tight joint therewith, the bottom end of the heel having on the outside a shoulder or a rib and the wall of the plate having a groove on its inner surface and a strip of elastic material fitted in said groove, the said shoulder being adapted to engage the elastic strip and to form a tight joint around the heel and to securely hold the spike-plate in its working position, substantially and for the purpose as specified.

4. The combination with an ordinary rubber having no bottom at its heel, of a metal plate embedded in the sole of the rubber and extending downward through the front wall of the heel, a second plate hinged to the bottom and outwardly-projecting end of the first plate and bearing on its outer surface spikes, this plate being adapted to fit upon the bottom of the heel and to tightly close up the same when in working position and means for holding this spike-plate out of engagement with the heel, substantially and for the purpose as specified.

5. The combination with an ordinry rubber having no bottom at its heel, of a metal plate embedded in the sole of the rubber and extending downward through the front wall of the heel, a second plate hinged to the bottom and outwardly-projecting end of the first plate and bearing on its outer surface spikes, the said spike-plate being adapted to fit upon the bottom of the heel and to tightly close the same when in working position, a spring arranged between the members of the hinge connecting the embedded metal plate and the spike-plate and having the tension to hold the spike-plate out of working position, substantially and for the purpose as specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

LOUIS PEROTTI.

Witnesses:

PHILIP DAVID LEFKOWITZ.

MAUDE IRENE SCHULER.