(No Model.)

F. RICHARDSON.

RUBBER OVERSHOE.

No. 305,964. Patented Sept. 30, 1884.

Fig. 1.

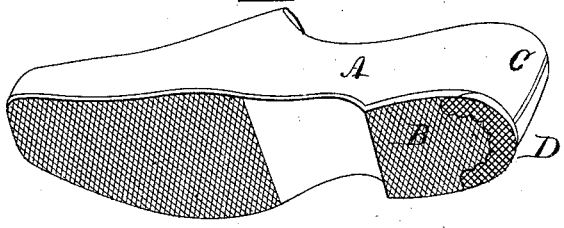


Fig. 4.

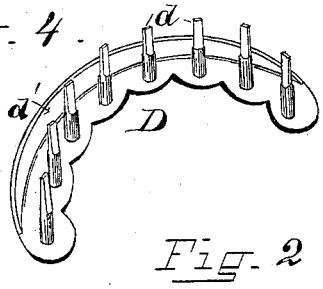


Fig. 2.

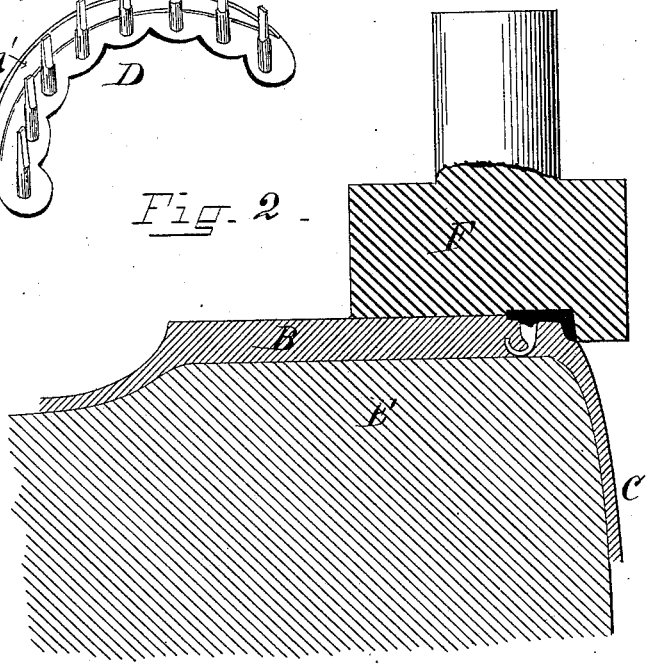
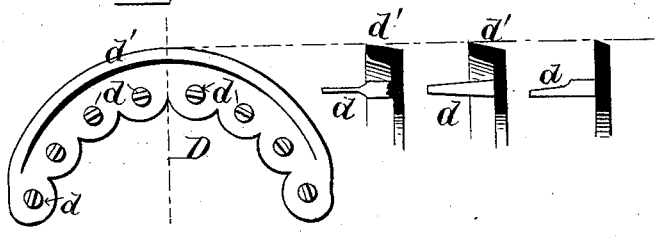


Fig. 3.



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UNITED STATES PATENT OFFICE.

FREDERICK RICHARDSON, OF PROVIDENCE, RHODE ISLAND.

RUBBER OVERSHOE.

SPECIFICATION forming part of Letters Patent No. 305,964, dated September 30, 1884.

Application filed November 13, 1882. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK RICHARDSON, of the city and county of Providence, and State of Rhode Island, have invented a new and useful Improvement in Rubber Overshoes; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to an improvement in the wearing-surface for protecting the rear portion of the heel of rubber overshoes; and it consists in a metal plate provided with clinching-studs, constructed to be forced by pressure through the rubber and clinched, as will be more fully set forth hereinafter. In rubber overshoes the heel is not, as in rubber boots or other boots and shoes, constructed so as to project considerably beyond the shoe proper. The inside of the rubber overshoe has a depression at the rear to receive the heel of the boot or shoe over which the overshoe is worn. The heel-cap at the intersection with the heel is but slightly thicker than other parts of the shoe, and as the cap must fit tightly on the heel, so as to hold the overshoe in place, the rear edge of the boot or shoe bears directly on the rear corner of the overshoe, so that in use this portion of the rubber overshoe is subjected to extraordinary wear, being interposed between the boot-heel and the ground. All boots or shoes wear more on the rear portion of the heel than at any other part, and rubber overshoes more that any other boots or shoes. Various means have been adopted to protect this rear portion of the heel in rubber overshoes, as the wearing away of this portion ruins the whole shoe. Wearing-surfaces and guards have been secured by cementation between two thicknesses of rubber, while others have been secured by nails. The objection to the first is that special tools and skilled labor are required to secure the metal wearing-surfaces in the exact position required to make a finished and durable shoe, while the objection to the nailing consists in that the nails do not hold the metal firmly, and that water is liable to follow the nails into the interior of the shoe, particularly after the same has been worn for some time.

The object of this invention is to so construct a metal heel-guard that the same can be readily and cheaply secured to an overshoe made in the ordinary manner, which will be firmly secured, and protect the rear of the heel against wear.

Figure 1 is a perspective view of a rubber overshoe, the rear of the heel of which is shown protected by the improved metallic wearing-plate. Fig. 2 is a sectional view showing the heel portion of a rubber overshoe secured on a last, a follower, by which the metal studs are forced through the heel portion of the shoe and clinched to secure the metal wearing-plate. Fig. 3 is a view of the inside of the metal plate, showing studs by which the same is secured. Sections of the plate and views of the studs are also shown. Fig. 4 is a perspective view of the improved heel-plate.

In the drawings, A is a rubber overshoe. B is the heel portion of the same. C is the heel-cap. D is a wearing-plate provided with a number of studs, *d d*, cast in one piece with the plate. The upper ends of these studs are flattened, so that this portion will bend over and clinch, as is shown in Fig. 2, when they are forced into the rubber.

d' is a rim extending upward on the edge of the heel, so as to give increased protection at this part of the shoe.

E is a metal or metal-lined last, and F a follower, by which the plate is forced under pressure against the heel, and the studs *d d* through the same, so that on coming in contact with the last the flattened ends will be bent over and clinched. By thus forcing all the studs with great pressure through the rubber heel, and clinching the same, a firm water-tight connection is made, which will firmly and securely hold the metal wearing surface or plate to the shoe, and prevent the wearing of the rubber at this the weakest point, thereby greatly increasing the durability of the rubber overshoe.

I do not wish to confine myself to the exact form of the wearing-plate shown, as different forms may be used, and the plate may be made to extend over a larger or the entire surface of the heel.

The studs *d d* are each formed with an en-

largement at its base, which secures great rigidity to that portion of the stud, and confines the bending to the flattened upper portion of the stud. When the stud is forced through the rubber, the enlargements at the bases of the studs form each a plug, which completely fills the hole made by the flattened upper portion of the stud, and thus prevents the entrance of water.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A plate constructed to form the wearing-surface of the heel of a rubber overshoe, provided with studs having flattened clinching-points formed with enlarged bases, as and for the purposes set forth.

2. The heel-plate D, consisting of a plate forming the wearing-surface of the rear portion of the heel and provided with the studs *d d*, having flattened clinching-points and enlarged bases, and the rim *d*, constructed to protect the rear edge of the heel, as described.

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Witnesses:

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