

F. RICHARDSON & F. HACKER.

Boot-Heels.

No. 126,489.

Patented May 7, 1872.

Fig. 1

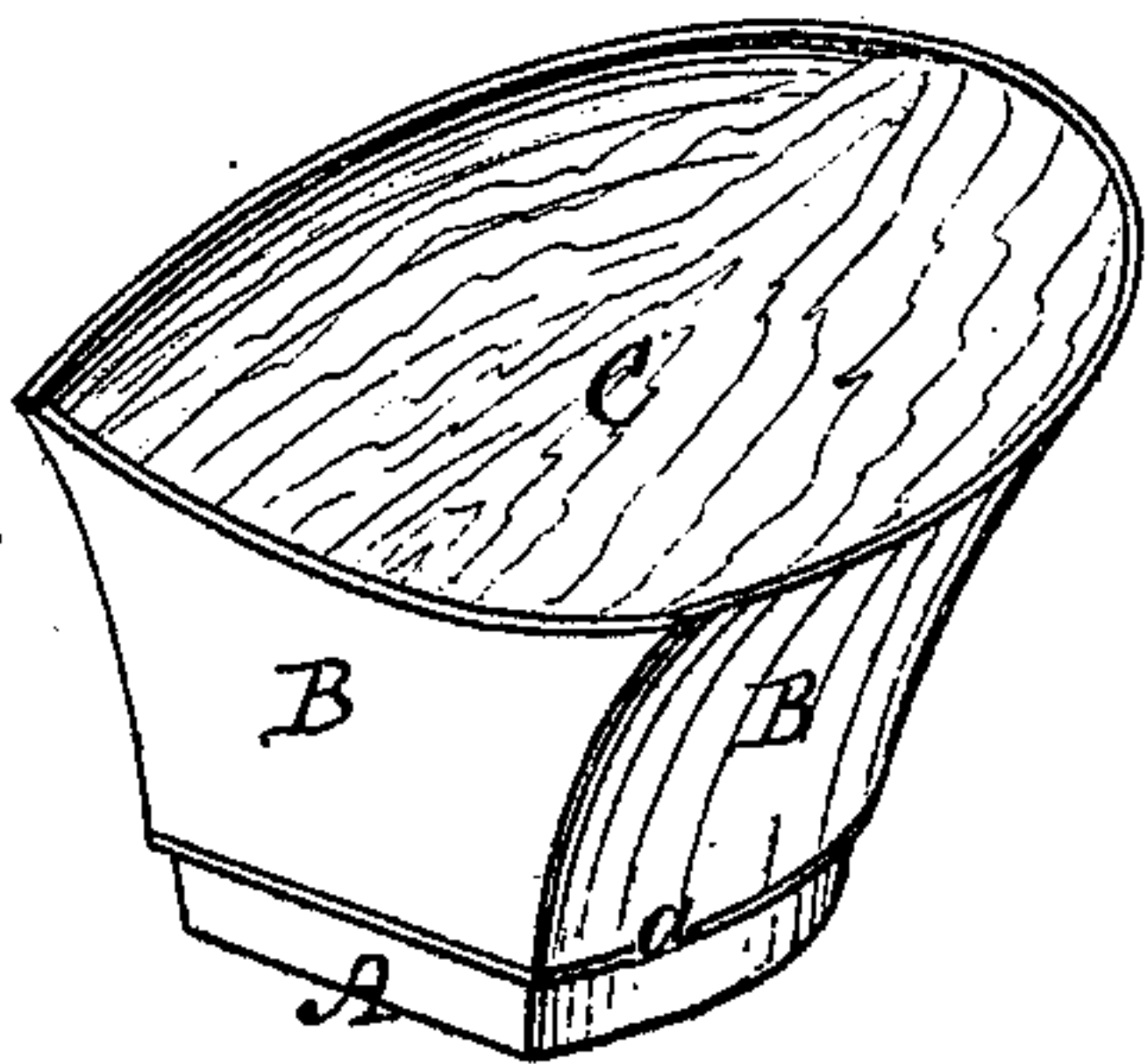


Fig. 2.

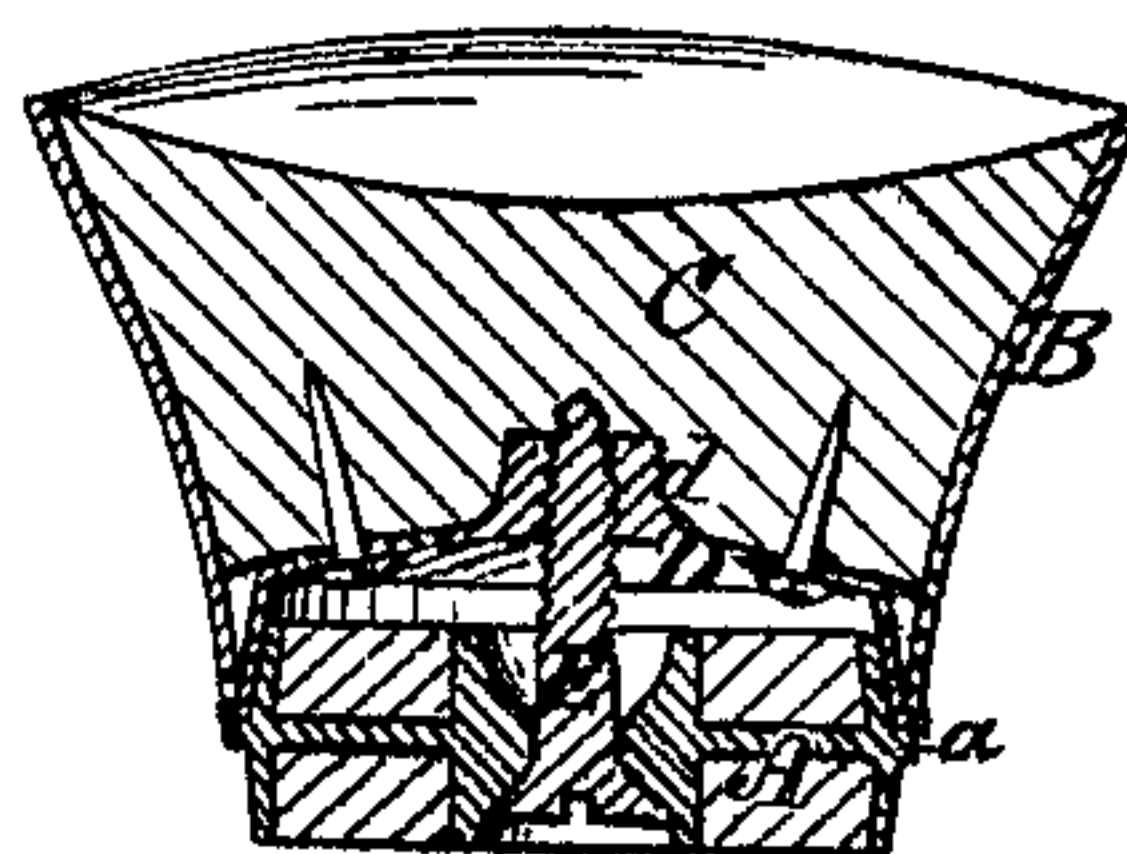


Fig. 3

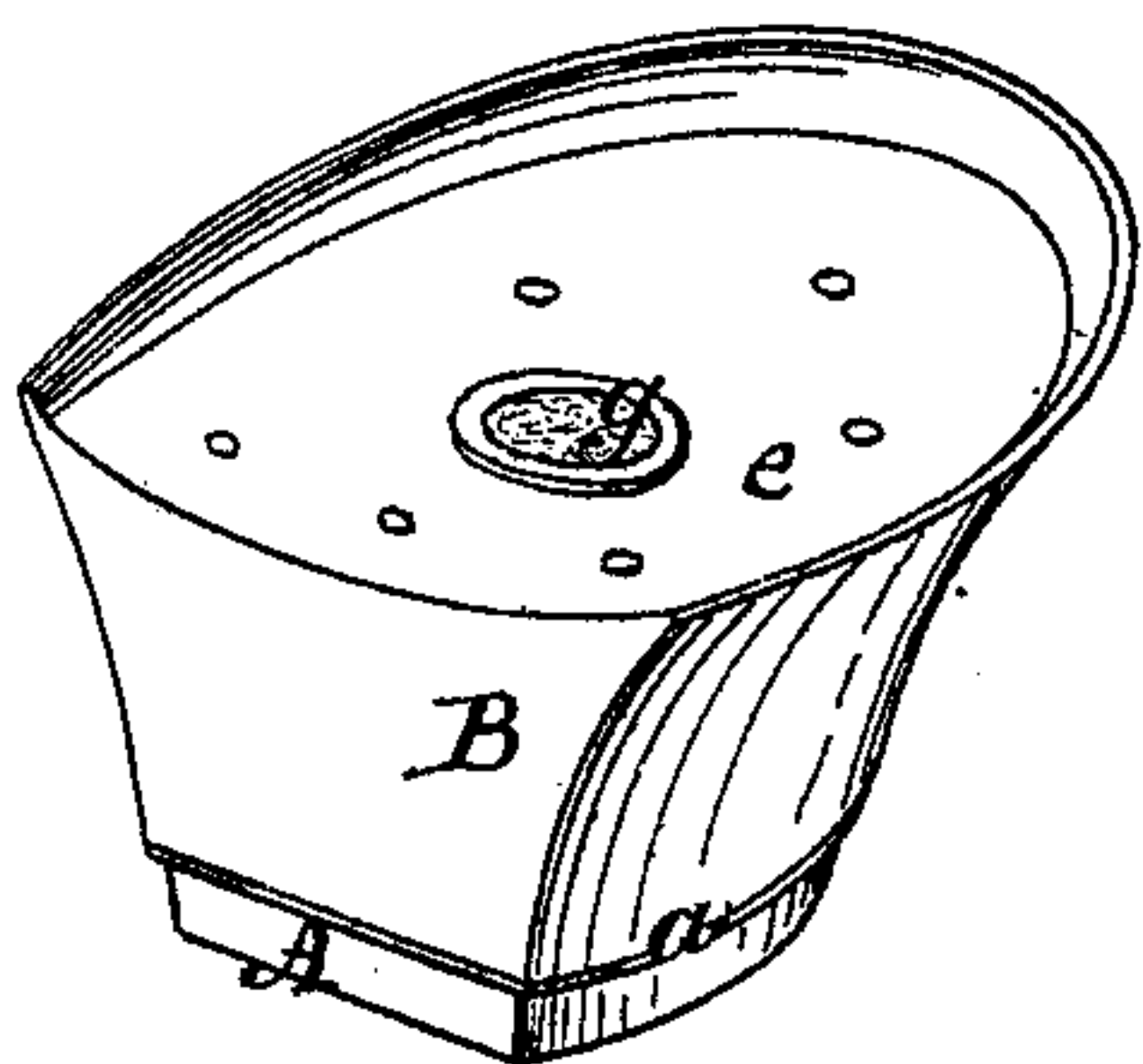


Fig. 4

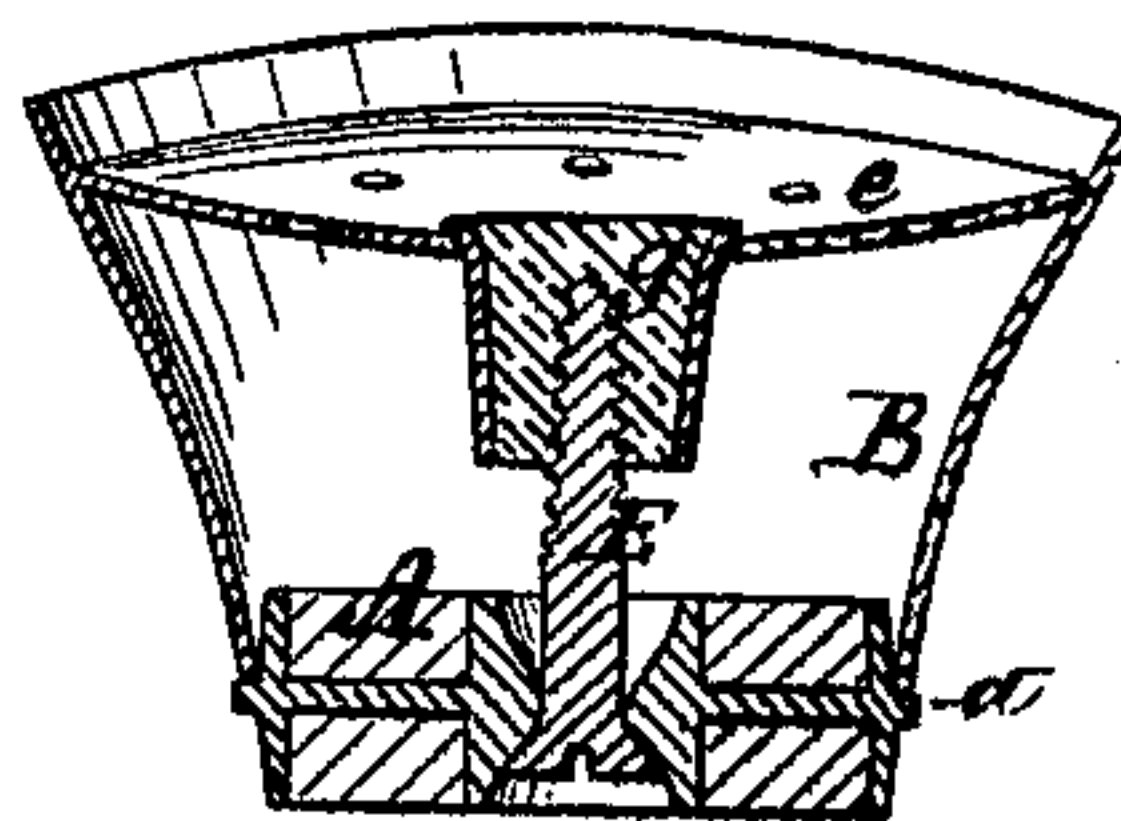


Fig. 7.

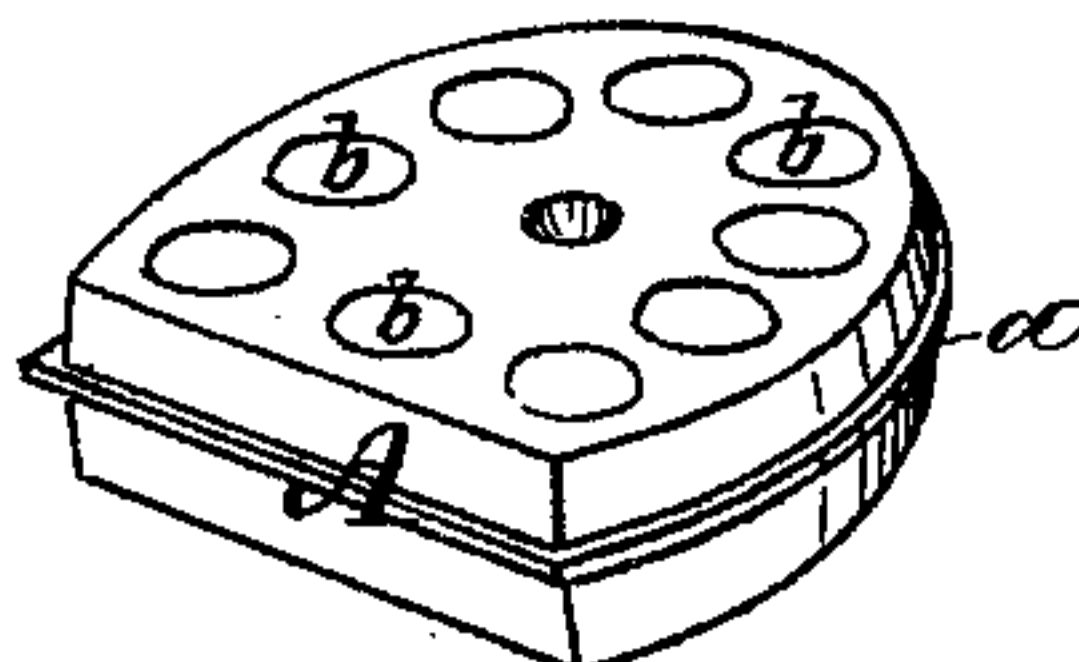


Fig. 5

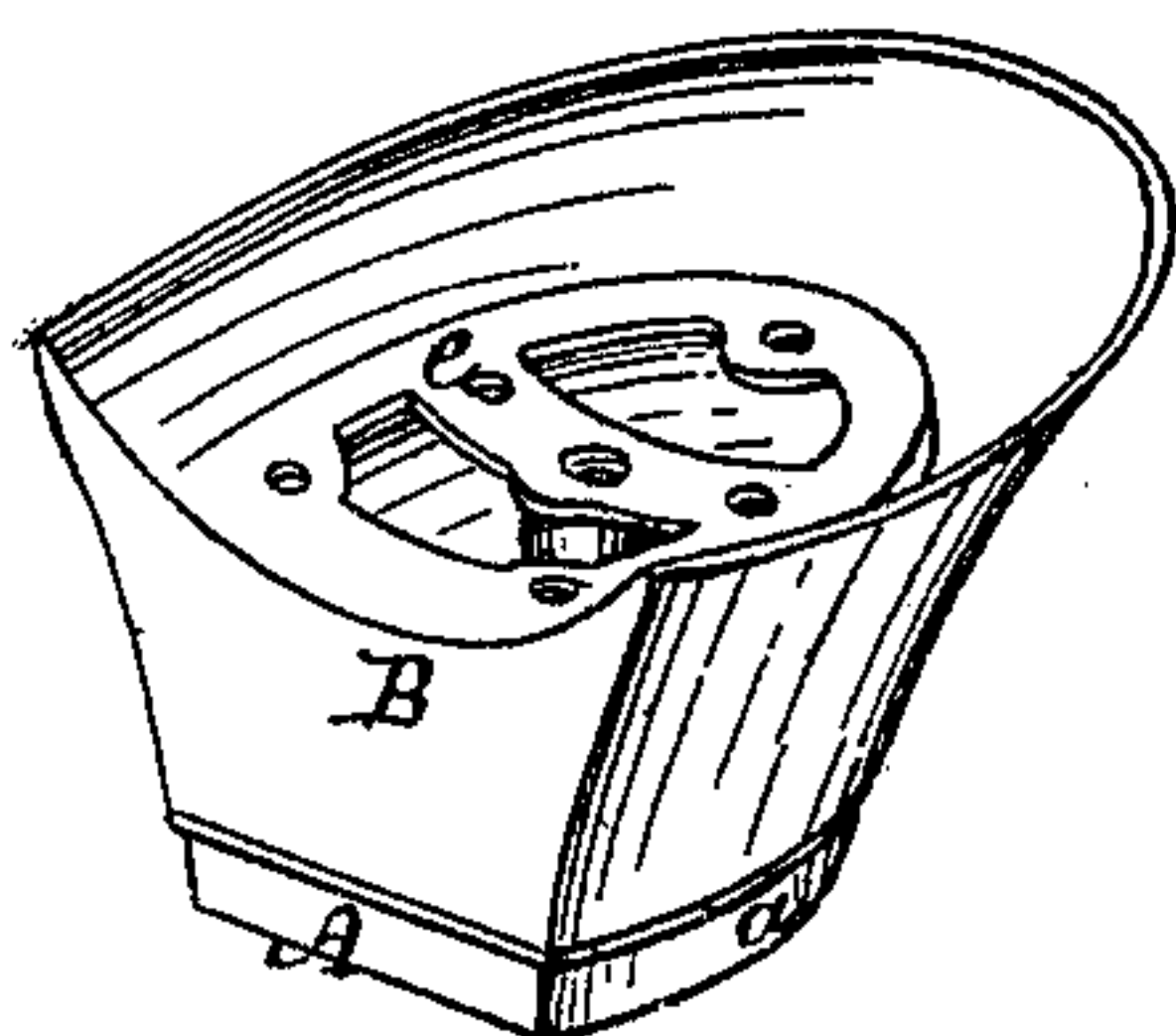


Fig. 6

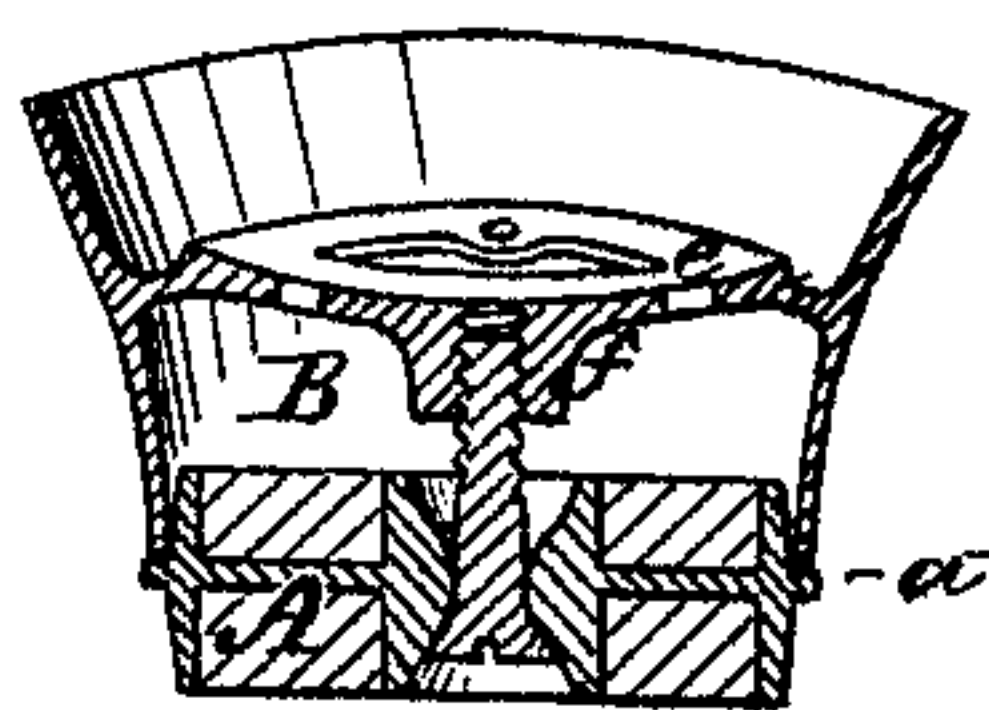


Fig. 8.



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UNITED STATES PATENT OFFICE.

FREDERICK RICHARDSON AND FRANCIS HACKER, OF PROVIDENCE, R. I.,
ASSIGNORS TO REVERSIBLE BOOT-HEEL COMPANY, OF SAME PLACE.

IMPROVEMENT IN BOOT-HEELS.

Specification forming part of Letters Patent No. 126,489, dated May 7, 1872.

To all whom it may concern:

Be it known that we, FREDERICK RICHARDSON and FRANCIS HACKER, both of the city and county of Providence, in the State of Rhode Island, have invented certain new and useful Improvements in Boot-Heels.

Our improvements relate generally to that class of metallic boot-heels known as changeable and reversible. Our invention consists partly in certain novelties in construction and arrangement, by which reversible boot-heels are adapted to new goods for application by the manufacturer in the process of construction; and, also, in a heel-tap, provided with a tread-piece, composed of wood and rubber, combined in a novel and peculiar manner; and we do hereby declare that the following specification, taken in connection with the drawing furnished and forming a part of the same, is a full and exact description of several boot-heels involving our invention.

Referring to the drawing, Figure 1 represents, in perspective, one of our improved heels ready for attachment to a boot. Fig. 2 represents the heel, Fig. 1, in central cross-vertical section. Fig. 3 represents another of our heels, in perspective, of a slightly different construction. Fig. 4 represents the heel, Fig. 3, in central cross-vertical section. Fig. 5 represents still another heel slightly varied in construction. Fig. 6 represents the heel, Fig. 5, in central cross-vertical section. Fig. 7 represents, in perspective, a heel-tap of novel and peculiar construction. Fig. 8 represents the same in longitudinal vertical section.

A in all the figures denotes a reversible and changeable heel-tap, the main features of which have already been patented by us. It consists, as shown, of a two-faced tap, having a central flange, *a*, which serves as a bearing-surface, and sustains the weight of the wearer when it is applied to a boot and in actual use. In Figs. 7 and 8 one of these taps of a peculiar and novel character is exhibited in perspective and in vertical section. B denotes in each figure a combined socket-plate and heel-shell. As heretofore constructed, the socket-plate has been fitted to receive or be attached to the end of the ordinary heel, which is composed of leather, built up and attached

to the boot in the usual manner. When so constructed, the reversible heel is especially adapted for application by any wearer of ordinary skill; or for application by parties in the retail trade. As now made, the shell is in the form of a perfect heel, with its lower end of such a size and form as will enable it to properly receive the changeable and reversible tap. We have presented three practicable and desirable methods of construction. In Figs. 1 and 2 the heel-shell B is represented as filled with a heel-like structure, C, composed of solid wood, for instance, which can be attached to the boot by nails entering downward through the sole into or through the structure and secured by clinching. We are aware that metallic heel-shells are not new, and that they have been made in many different styles. D in Fig. 2 denotes an interior cup-like device or socket-shell, which has a slight laterally-projecting flange extending around its lower edge. At an interior central point it is provided with a tapped block, *d*. The socket-shell D, heel-shell B, and heel-like interior structure C are permanently united by nails or screws passing through the socket-shell into or through the wooden structure C. If passed through the wooden structure, the nails should be secured by clinching. The changeable and reversible tap A is secured in position by the central screw E, which engages with the tapped block *d*.

In Figs. 3, 4, 5, and 6 heel-shells are shown in which no interior heel-like structure is requisite. Heels of this kind are provided with a top plate, *e*, which is cast solid with the shell, and provided with suitable perforations, through which the shell may be permanently attached to the boot or shoe by means of screws, clinch-nails, wire-stitching, or even twine-stitching. The changeable and reversible heel-tap A is secured in both cases to the heel by the central screw E, which engages either with a solid-tapped block, *f*, as in Fig. 6, or a tubular nut, *g*, as shown in Figs. 3 and 4. When the latter is employed an oval tapering tube of metal, fitted with leather or wood, will serve an admirable purpose. As applied to shoes intended for ladies' and children's wear, these heels are beautifully enameled, and are truly ornamental, while the

changeable and reversible heel-tap serves not only to economize in general wear, but its tendency is, at all times, to secure a proper foothold for the wearer, and thereby to prevent sprains of the lower joints, and to induce an easy and graceful carriage.

Our improved heel-tap is composed partly of a central plate, to which wooden studs *b* are attached or secured, in such a manner that they will have a firm bearing connection therewith. In this instance, as shown in the drawing, the studs are made in two pieces and united after manner of a mortise and tenon, by bringing them together through holes in the central plate. The spaces between the studs are then filled with vulcanizable rubber compound, and subsequently hardened in a well-known manner. The studs may as well be made elliptical in form with an annular groove (at a point midway between the two ends) as wide as the thickness of the central plate. In the central plate oval openings should also be provided, corresponding in form with the studs, but sufficiently large to readily receive them. After the studs have been inserted into the openings in the plate, and then turned half around, the annular groove will receive the central plate, and connect the two firmly so long as the studs remain turned. After the rubber or other compound has been applied, no rotary movement of the studs can occur, and, therefore the unity between them and the plate cannot be disturbed.

A heel-tap of this description possesses great durability. It is free from the sound of the metallic heel; and also free from the excessive yielding action of the rubber heel, and is one with which it would be practically impossible for its wearer to slip, either on ice or smooth flag-stone.

We are aware that it is not new to make heels which are capable of being entirely detached and changed from one boot to the other; and also that it is not new to provide such heels with taps, which can also be changed from one heel to the other; but such change cannot be effected without the heel itself be removed, or practically detached from the boot. Boot-heels have also heretofore been made consisting of a shell provided with a horizontal interior annular projection, combined with a tap composed of rubber or leather, provided with a circumferential recess corresponding to and for receiving the interior annular projection of the shell, when the tap is forced or "sprung" therein.

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

1. The improved boot and shoe heel, composed of a metallic heel-shell, having the exterior form and outline of a perfect heel, and provided with means for permanent attachment to the boot or shoe, and a heel-tap which is practically changeable and reversible, and is provided with separate means by which it may be conveniently attached to the heel-shell, and which will admit of its being readily detached therefrom, substantially as and for the purposes specified.

2. The improved heel-tap described, composed of a plate and wooden studs surrounded and combined with vulcanized rubber or similar compound, substantially as and for the purposes specified.

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