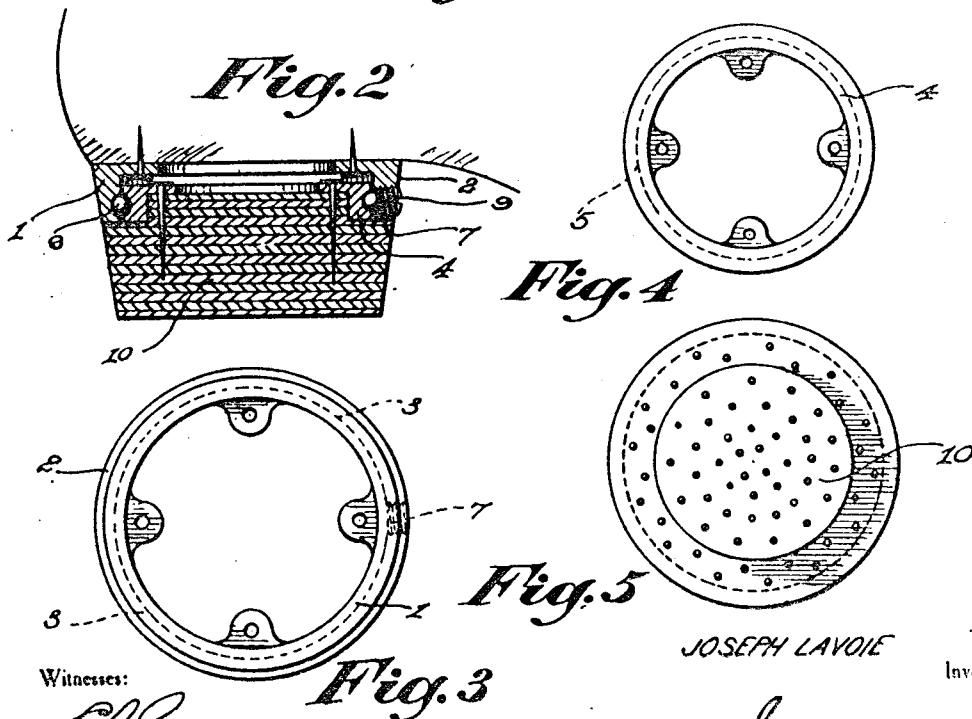
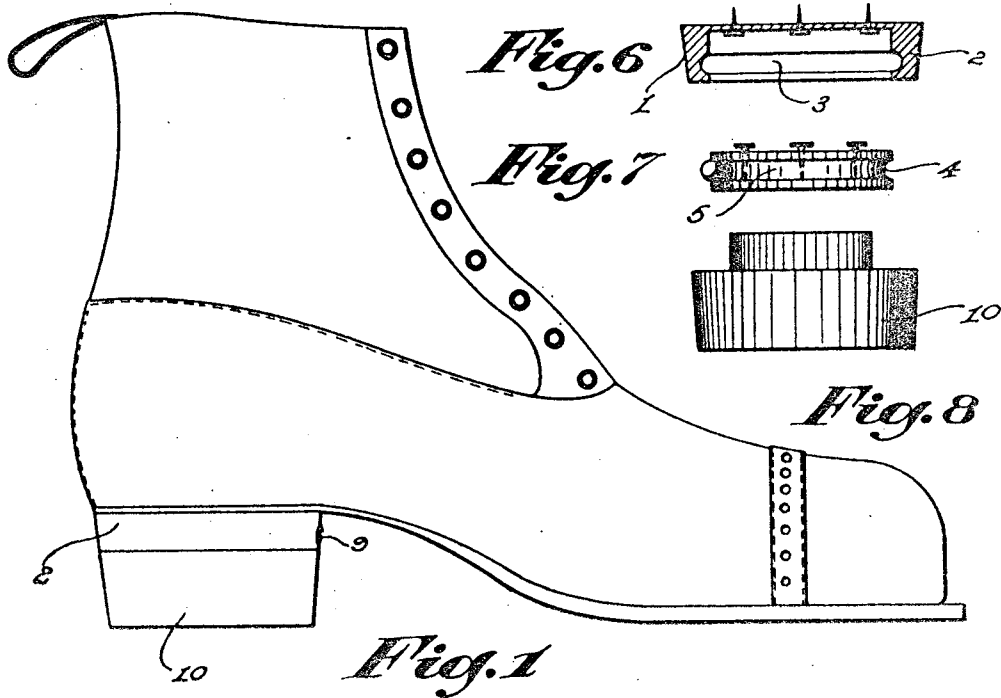


J. LAVOIE.
DETACHABLE SHOE HEEL.
APPLICATION FILED JULY 8, 1912.

1,046,815.

Patented Dec. 10, 1912.



Witnesses:
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UNITED STATES PATENT OFFICE.

JOSEPH LAVOIE, OF MONTREAL, QUEBEC, CANADA.

DETACHABLE SHOE-HEEL.

1,046,815.

Specification of Letters Patent.

Patented Dec. 10, 1912.

Application filed July 8, 1912. Serial No. 708,324.

To all whom it may concern:

Be it known that I, JOSEPH LAVOIE, a subject of the King of Great Britain, residing at Montreal, Province of Quebec, Canada, have invented certain new and useful Improvements in Detachable Shoe-Heels; and I do hereby declare that the following is 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.

The invention to be hereinafter described relates to detachable shoe heels.

In order to more clearly disclose the construction, operation, and use of the invention, reference should be had to the accompanying drawings forming part of the present application.

Throughout the several figures of the drawings like reference characters designate the same parts.

In the drawings: Figure 1 is a side elevation of the invention, applied; Fig. 2 is a vertical cross section through the heel; Fig. 3 is a top plan view of the top heel plate, removed; Fig. 4 is a similar view of the bottom heel plate; Fig. 5 is a top plan view of the heel body; Fig. 6 is a vertical cross section through a slightly modified top heel plate; Fig. 7 is a side view of a cooperating bottom heel plate; and Fig. 8 is a side elevation of the heel body.

Referring to the drawings in detail, 1 indicates a top plate of circular, annular, or other desired shape and adapted to be suitably secured to the heel part of a shoe upper. This plate is provided with a vertical wall 2 having an annular ball race 3 in its inner face. A bottom plate 4, similar in construction, is adapted to be removably inclosed within the plate 3 and is provided with a ball race 5. The two races 3 and 5,

when alined, receive ball bearings 6. These bearings are inserted through a ball passage 7 adapted to be closed by a screw threaded closure plug 9. When the balls are in place it will be obvious that they act both as an antifriction bearing between the members 3 and 4, and also as a means of connecting these members to each other, thereby preventing dropping of the member 4 from within the member 3. The heel body 10 is connected to the bottom plate 4 by nails, screws, or any other suitable means.

It is thought that the construction, operation, and use of the invention will be clear from the preceding detailed description.

Changes may be made in the construction, arrangement, and disposition of the several parts of the invention without in any way departing from the field and scope of the same, and it is meant to include all such within this application wherein only a preferred form has been disclosed.

Having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:

In a shoe heel, a top plate adapted to be secured to a shoe and provided with a vertical wall having a ball race in its inner face, a bottom plate adapted to fit within the wall of the top plate and having a similar vertical wall provided with a ball race in its outer face and adapted to be alined with the first named ball race, and ball bearings seated within said races and adapted to couple said plates together.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

JOSEPH LAVOIE.

Witnesses:

L. A. GAUVIN,
E. J. GAUVIN.