

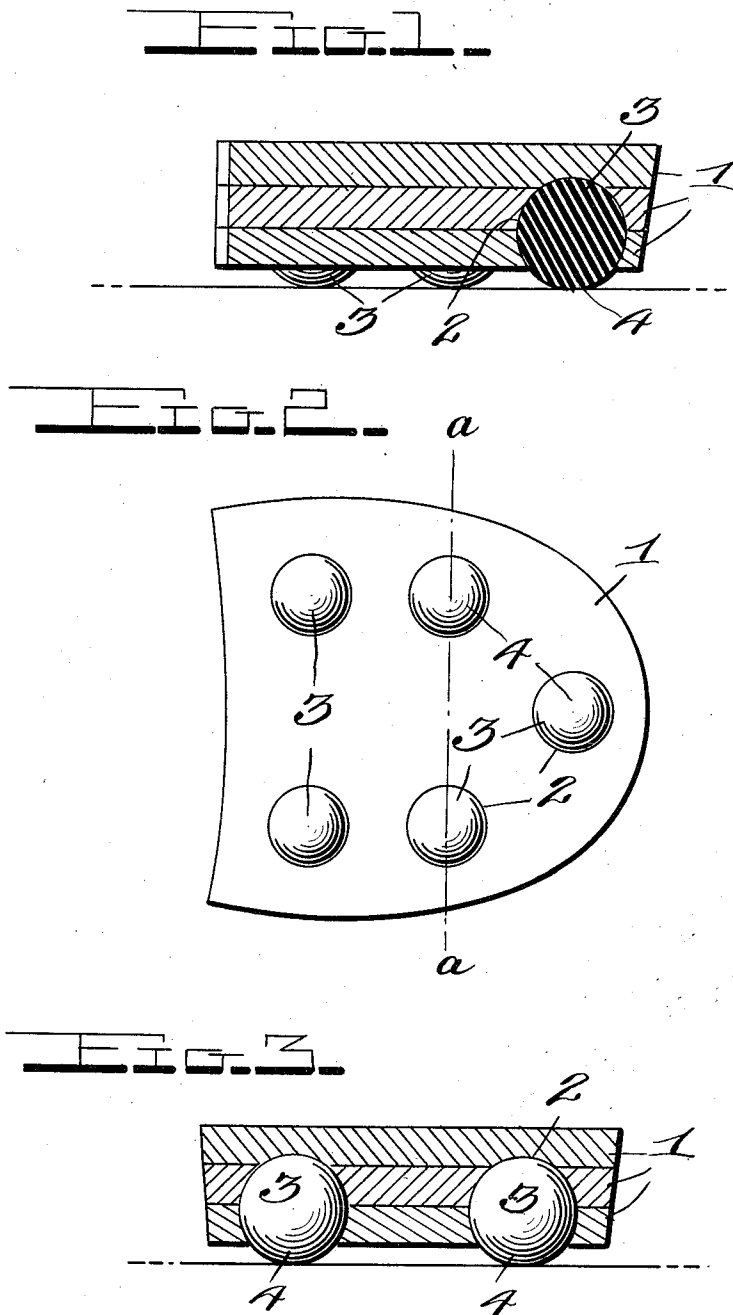
J. L. CHURCH.

HEEL.

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1,012,597.

Patented Dec. 26, 1911.



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HEEL.

1,012,597.

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To all whom it may concern:

Be it known that I, JOHN L. CHURCH, a citizen of the United States, residing at Silver Beach Station, Bellingham, in the county of Whatcom and State of Washington, have invented certain new and useful Improvements in Heels, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in heels for boots and shoes, the object of my invention being to provide a heel of improved construction which embodies elastic cushioning balls which are mounted in sockets with which the heel is provided and which serve to give elasticity to the heel so as to relieve and prevent fatigue of walking and standing, another object of the invention being to provide improved devices of this character which are extremely cheap and simple and are very strong and durable.

In the accompanying drawings Figure 1 is a vertical longitudinal sectional view of a heel constructed in accordance with my invention; Fig. 2 is an inverted plan of the same; and Fig. 3 is a transverse sectional view of the same on the plane indicated by the line *a-a* of Fig. 2.

My improved heel is made of a suitable number of layers 1 in which are formed sockets 2 which correspond in size and shape with cushioning balls 3 and serve to receive the said cushioning balls and nearly cover them, the lower side 1 of the cushioning balls being exposed and caused to project slightly below the bottom of the heel as indicated at 4. These cushioning balls are elastic and are, in practice, made of rubber. Any suitable number of the balls may be provided according to the size of the heel and the balls may be of any suitable size. Five of the said balls are shown in the heel for the purposes of this specification. The cushioning balls may be turned slightly in their sockets from time to time as may be required to present new surfaces below the heel, as the cushioning balls wear, but the

cushioning balls do not turn casually in their sockets in walking as when the heel is placed on the ground the cushioning balls are compressed vertically to some extent by the weight and force and hence tend to correspondingly expand horizontally and grip the surface of the sockets in which they are mounted, such gripping action effectually preventing the turning of the cushioning balls and hence there is no tendency, whatever, in my improved heel to slip. On the contrary, the cushioning balls not only relieve the concussion of the heel and correspondingly reduce the fatigue of walking and standing but also, by frictional contact with the ground, or other surface, prevent slipping.

It will be observed upon reference to the drawings that the sockets are partially made in the layers of the heel and it will be understood that the cushioning balls may be removed from their sockets by first detaching the layers of the heel from one another. The layers of the heel are secured together in the ordinary way by nails or other suitable means.

Having thus described my invention I claim:

1. A heel having spherical sockets open on their lower sides at the bottom of the heel and cushioning balls fitted in the said sockets and having their lower sides exposed and projecting from the bottom of the heel.

2. A heel having spherical sockets open on their lower sides at the bottom of the heel and cushioning balls fitted in the said sockets and having their lower sides exposed and projecting from the bottom of the heel, said cushioning balls being made of elastic material.

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

JOHN L. CHURCH.

Witnesses:

HENRY NEWHOUSE,
ANDERS ANDERSON.