Nov. 5, 1935. H. COCHRAN 2,020,240

SHOE

Filed Nov. 5, 1934

Fig. 1.

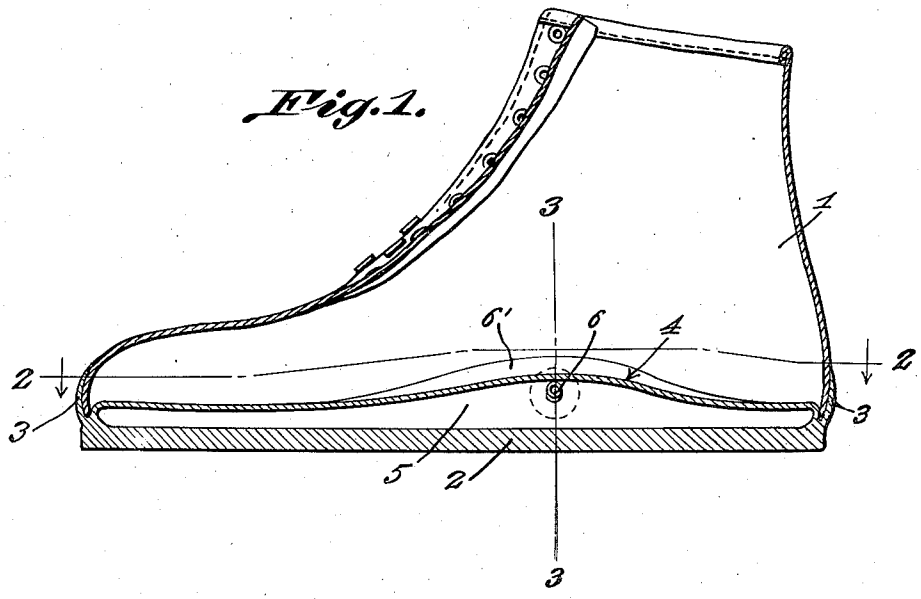


Fig. 2.

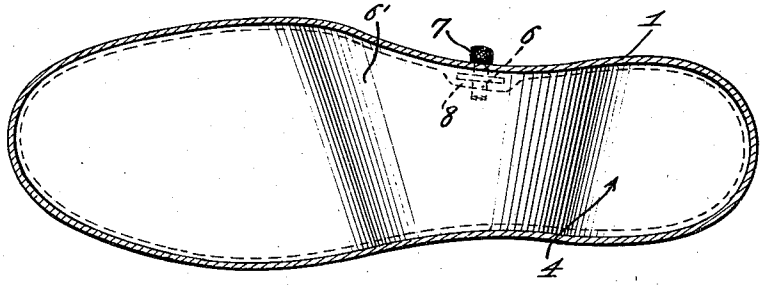


Fig. 4.

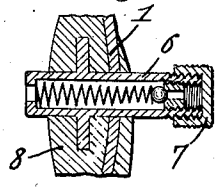
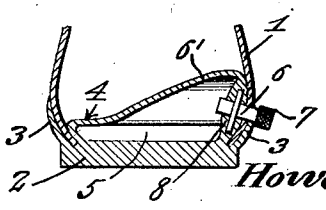


Fig. 3.



Howard Cochran, INVENTOR

BY Victor J. Evans & Co.

ATTORNEY

Patented Nov. 5, 1935 2,020,240

UNITED STATES PATENT OFFICE

2,020,240

SHOE

Howard Cochran, Lewisburg, Tenn.

Application November 5, 1934, Serial No. 751,658

1 Claim. (Cl. 36—29)

This invention relates to a shoe for athletic purposes and has for the primary object the provision of a pneumatic cushion and supporting means so that the arch of the foot of a person will be efficiently supported to prevent injury to the arch and will provide a cushion to the entire tread portions of the foot to prevent blisters, bruises and the like.

With these and other objects in view this invention consists in certain novel features of construction, combination and arrangement of parts to be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawing, in which

Figure 1 is a vertical sectional view illustrating a shoe constructed in accordance with my invention.

Figure 2 is a sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a sectional view taken on the line 3—3 of Figure 1.

Figure 4 is an enlarged detail sectional view illustrating the inflating valve for the pneumatic means.

Referring in detail to the drawing, the numeral 1 indicates a shoe upper constructed in any well known manner and suitably secured to a sole 2 forming the subject matter of the present invention. The sole is constructed from a single piece of material, preferably of rubber, and has formed integrally with the edges thereof upstanding flanges 3 which engage and embrace a portion of the shoe upper. The flanges may be cemented or otherwise secured to the shoe upper. Formed integrally with the sole 2 and arranged within the upper 1 is a wall 4 defining between itself and the inner face of the sole a pneumatic chamber 5 adapted to receive air through an inflating valve 6 having a removable cap 7 arranged exteriorly of the shoe upper. The pneumatic chamber 5 extends the full length and width of the sole so that the entire portion of a person's foot rests upon a pneumatic cushion. The wall 4 is provided with a convexed offset portion 6' to fit the arch of the foot and provides a support for the arch. The offset portion 6' of the wall 4 tapers towards the toe and heel portions of the upper and also towards one side of the upper so that it will conform to and snugly grip the arch of the foot. The foot resting upon the wall 4 will be supported throughout by an air cushion so as to absorb shocks and jars to the foot as well as supporting the arch to prevent injury thereto. The foot being cushioned by the pneumatic means will prevent shocks and jars from being received by the ankle and leg of the foot.

Shoes constructed in accordance with the foregoing and when worn by athletes will permit them to perform on hard surfaces without liability of injury to the feet and legs and will provide shoes that are extremely comfortable.

One wall of the chamber 5 is thickened, as shown at 8, and apertured to receive the inflating valve 6, the latter extending through the shoe upper and one of the flanges of the sole.

Having described the invention, I claim:

A shoe comprising a shoe upper, an elastic sole secured to said upper, an elastic wall secured to the sole and arranged in the upper and providing between itself and the sole a pneumatic chamber, an inflating valve communicating with the chamber, said wall having an offset portion to form an arch support, said offset portion having a convex surface and tapering towards the heel and toe portions and one side of the shoe upper, and flanges integral with the sole and embracing a portion of the shoe upper and secured to the latter.

HOWARD COCHRAN.