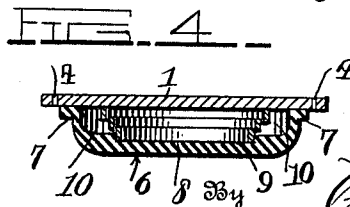
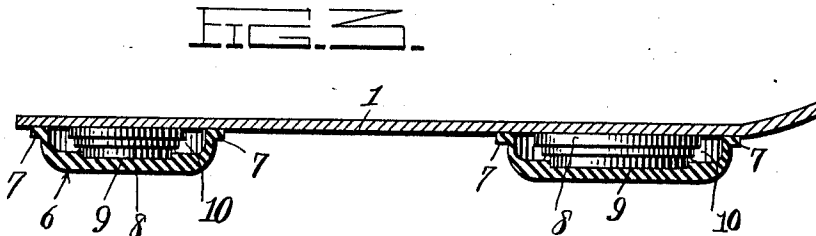
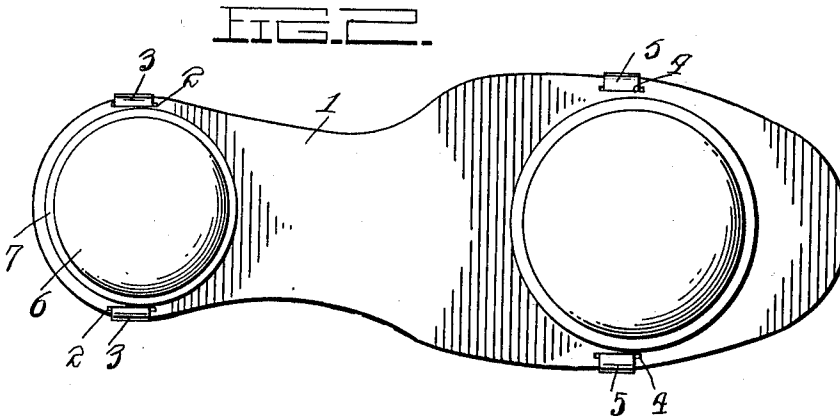
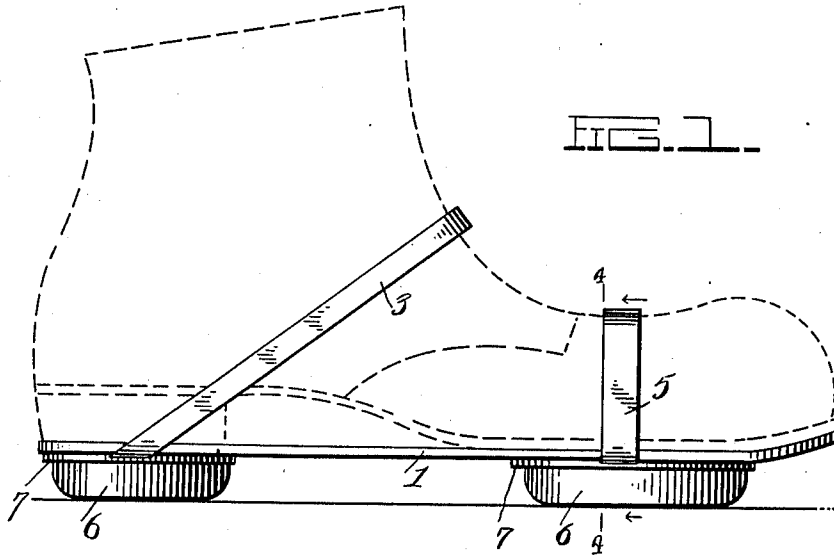


M. W. FREEMAN.
PNEUMATIC WALKING ATTACHMENT.
APPLICATION FILED APR. 25, 1911.

1,021,142.

Patented Mar. 26, 1912.



Witnesses
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UNITED STATES PATENT OFFICE.

MALCOLM W. FREEMAN, OF MILLINGTON, MASSACHUSETTS.

PNEUMATIC WALKING ATTACHMENT.

1,021,142.

Specification of Letters Patent.

Patented Mar. 26, 1912.

Application filed April 25, 1911. Serial No. 623,194.

To all whom it may concern:

Be it known that I, MALCOLM W. FREEMAN, a citizen of the United States, residing at Millington, in the county of Franklin, State of Massachusetts, have invented certain new and useful Improvements in Pneumatic Walking Attachments; and I do hereby declare the following to be 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.

This invention relates to pneumatic walking attachments for shoes, and has for its object to provide a device of this character which may be quickly and readily attached to the shoes of a pedestrian and which when attached will greatly facilitate walking.

A further object of the invention is to provide a device of this character which will be of great aid to athletes in vaulting, jumping or running and similar exercises.

In the drawing:—Figure 1 is a side view showing the device attached to a shoe. Fig. 2 is a bottom view. Fig. 3 is a longitudinal sectional view. Fig. 4 is a transverse sectional view on line 4—4 of Fig. 1.

Referring to the drawing, the numeral 1 designates a plate corresponding in contour to the usual sole and heel of a boot or shoe and is formed from metal preferably aluminum. The heel section of the plate 1 is provided with diametrically opposite slots 2, in which are fastened the ends of straps 3, said straps being adapted to be buckled around the instep of the wearer. Similar slots 4 are provided in the sole section of the plate 1 and to which straps 5 are attached to pass around the vamp of the wearer's shoes to firmly secure the device in position. To the under side of the heel and sole sections of the plate 1 are secured

rubber cups 6, each of which is provided with an annular flange 7, whereby the same are cemented to the plate 1. Inclosed in each cup is a convolute spring 8 which has its greater convolutions contacting with the lower side of the plate 1 and its smaller convolutions embedded and cemented in the inner face of the tread 9. The treads 9 are of greater thickness than the sides of the cups, to withstand wear.

By employing convolute springs 8 the cups 6 are prevented from lateral collapsing, this type of spring being especially adapted to prevent such action. It will be further noted that when the cups 6 are applied and securely cemented air chambers 10 are produced, and acting in conjunction with the springs 9 will form both a spring and pneumatic cushion, which when worn will greatly facilitate walking.

What is claimed, is:—

A pneumatic walking attachment comprising a plate having a sole section and a heel section, a rubber cup secured to each of the said sections, an annular flange formed upon each cup, each cup being provided with a thickened tread, said cups when secured forming air chambers, a convolute spring mounted in each air chamber, said springs having their greater convolutions resting upon the bottoms of the heel and sole sections and their lesser convolutions embedded in the inner faces of the treads, and means for securing the said plate to a boot or shoe.

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

MALCOLM W. FREEMAN.

Witnesses:

BESSIE F. BALLARD,
DANIEL BALLARD.