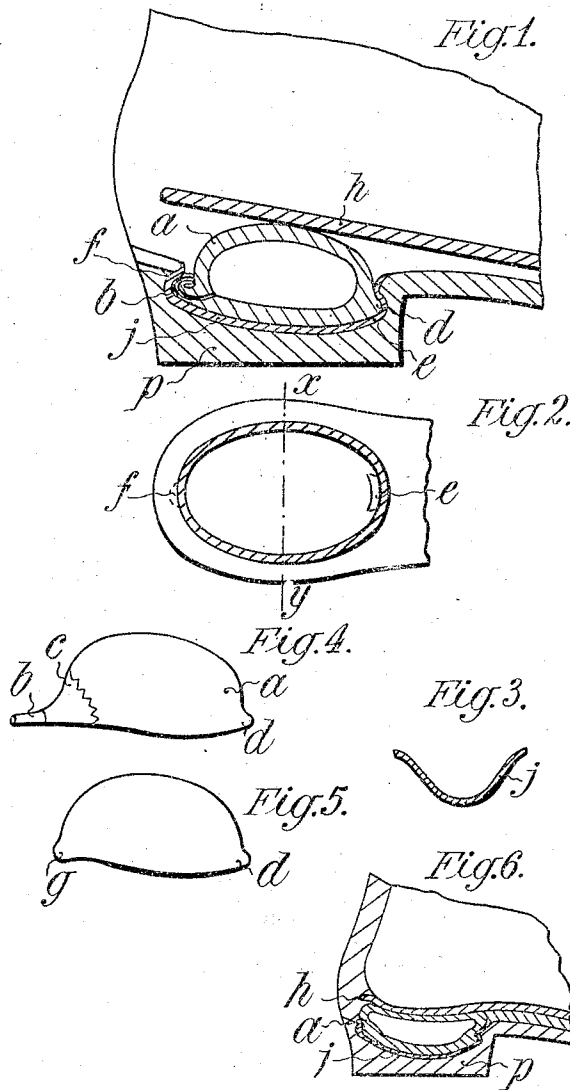


G. T. T. FREEMAN.
PNEUMATIC HEEL FOR BOOTS AND SHOES.
APPLICATION FILED APR. 13, 1914.

1,114,685.

Patented Oct. 20, 1914.



Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE TERRY TRIST FREEMAN, OF SOUTHSEA, ENGLAND.

PNEUMATIC HEEL FOR BOOTS AND SHOES.

1,114,685.

Specification of Letters Patent.

Patented Oct. 20, 1914.

Application filed April 13, 1914. Serial No. 831,455.

To all whom it may concern:

Be it known that I, GEORGE TERRY TRIST FREEMAN, a subject of His Majesty the King of England, residing at 60 Duncan road, Southsea, in the county of Hants, Kingdom of England, have invented a certain new and useful Pneumatic Heel for Boots and Shoes, of which the following is a specification.

10 This invention relates to a pneumatic heel for boots or shoes.

In order that the same may be clearly understood reference is made to the accompanying drawings in which:—

15 Figure 1 is a sectional elevation of a boot heel fitted according to the present invention; Fig. 2 is a sectional plan view thereof; Fig. 3 is a section on the line $x-y$ of Fig. 2; Figs. 4 and 5 are elevational views of the pneumatic cushion; and Fig. 6 is a sectional elevation showing the heel and cushion as when in use.

In the construction of the pneumatic heel of the boot or shoe an indiarubber cushion 25 a is fitted internally in the heel. It may if necessary be covered with any textile fabric to protect it from moisture. It is ovoid or round in shape and provided with an air-tube b of varying length of the same material and is strengthened with a collar 30 c and can be pumped up in the same manner as a football, or it can be sealed. A projection of solid indiarubber d is constructed at one end of the cushion a which 35 fits into the pocket or recess e in a case j which is made of metal or other suitable substance and fitted in a cavity in the heel, whereby the cushion a is held in position. At the other end of the cushion a , the tube 40 b by means of which the cushion a is filled with air, is doubled over, and when placed in position fits into another recess f on the opposite side to the other projection d of the cushion a whereby the tube b is protected and helps to keep the cushion a in 45 its right position. When the cushion is sealed, thereby doing away with the air-tube b , a projection of solid indiarubber g is constructed at each end of the cushion the same as at d . A sock h of leather or any textile fabric which can be removed is provided to cover the cushion a . The cushion a can be placed in position in the heel p of the boot or shoe by compress- 55 ing it between the fingers and thumb and

then placing the projections b and d in the recesses e and f of the case j in the cavity. When the heel is brought down as in the act of walking, the body's weight rests on the sock h over the cushion which 60 acts as a spring to the heel; at the same time being resilient it acts as a shock-reducer to the human body thereby causing less fatigue. This form of heel should be of special use to invalids and all boot and 65 shoe-wearers, from the fact that it obviates slipping which so often occurs when ordinary rubber is placed on the external part of the boot or shoe.

The present construction is distinguished 70 by the ease with which the cushion can be placed in position; by being easy of access for removal for filling with air by the tube b ; by the cheapness of the article when manufactured; the simplicity of construction; the principle of walking on air by 75 means of a cushion fitted in the heel of the boot or shoe; the cushion being resilient acts as a spring to the human body causing less fatigue; and by the fact that it can 80 be fitted to any boot or shoe for ladies, gentlemen and children.

What I claim as my invention and desire to secure by Letters Patent of the United States is:—

1. A boot or shoe heel provided with an interior cavity, in combination with a case conformably fitting in said cavity and having recesses in its opposite ends, and a pneumatic cushion fitting in said case and 90 having projections at its opposite ends which fit in said recesses to maintain said cushion in position.

2. A boot or shoe heel provided with an interior cavity, in combination with a metallic case conformably fitting in said cavity and having recesses in its opposite ends, and a sealed, inflated cushion fitting in said case and provided at opposite ends with projections of thick rubber which fit in said 100 recesses to maintain said cushion in position.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

GEORGE TERRY TRIST FREEMAN.

Witnesses:

H. W. DE GRUCHY,
GEORGE WHITMORE.