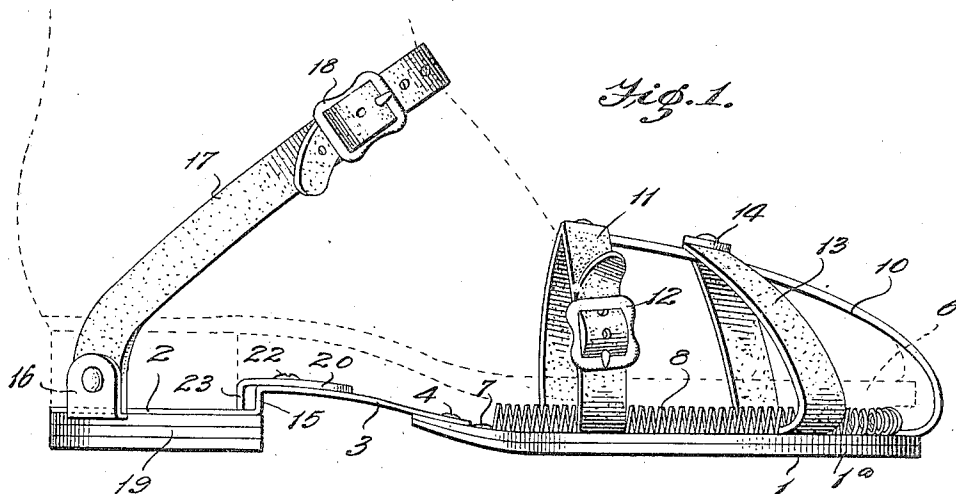
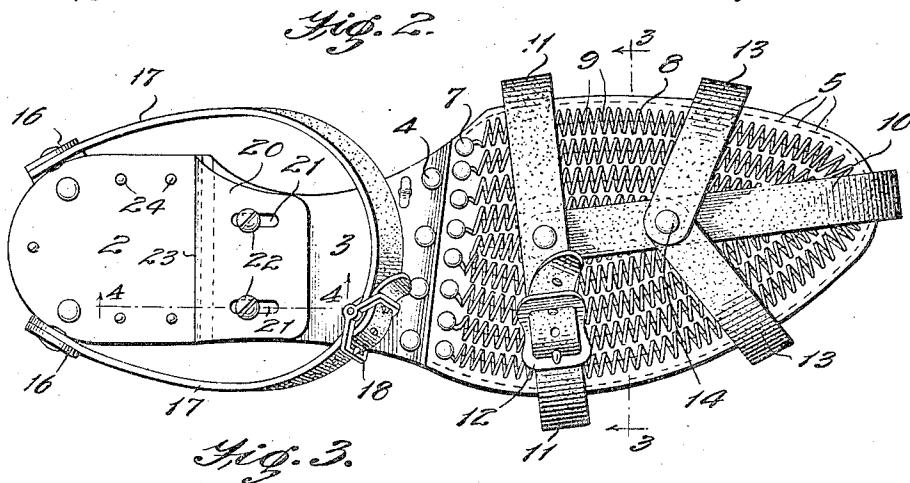
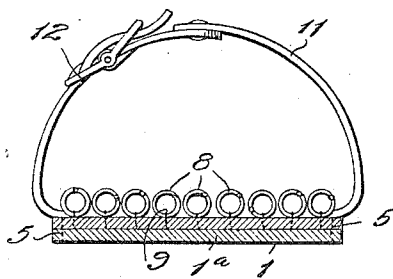
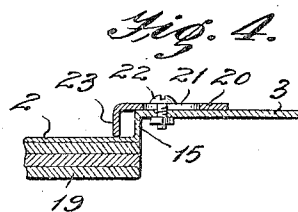


J. W. MOORE.
DETACHABLE SOLE.
APPLICATION FILED APR. 15, 1920.

1,377,908.

Patented May 10, 1921.



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UNITED STATES PATENT OFFICE.

JAMES W. MOORE, OF NORFOLK, VIRGINIA.

DETACHABLE SOLE.

1,377,908.

Specification of Letters Patent.

Patented May 10, 1921.

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To all whom it may concern:

Be it known that I, JAMES W. MOORE, citizen of the United States, residing at Norfolk, in the county of Norfolk and State of Virginia, have invented certain new and useful Improvements in Detachable Soles; 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 new and useful improvements in shoe sole protectors, the main object of the present invention being the provision of a protector adapted to be detachably applied to the sole of an ordinary shoe to protect the same from heated surfaces and also to protect the same from unusual wear or uneven and rough surfaces.

A further object of the invention is the provision of a detachable sole or protector for shoes adapted to be removably applied to the shoe and so constructed as to provide for thorough circulation of air between the protector and the sole of the shoe so as to prevent the heat from coming in contact with the sole of an ordinary shoe when the person wearing the shoe is obliged to either stand or travel on a heated surface.

A still further object of the invention is the provision of a detachable shoe sole protector which can be quickly and readily applied to an ordinary shoe or detached therefrom and is preferably constructed of fire-proof material to adapt the same for accommodation on heated surfaces and also provided with means to insure a circulation of air between the sole of the shoe and the protector to prevent the heat from the heated surfaces coming in contact with the shoe itself.

Another object of the invention is the provision of a detachable sole protector for shoes having means thereon for providing adjustment to adapt the heel portion of the shoe to various sized heels.

With the above and other objects in view, the invention consists in the novel features and construction, the combination and arrangement of parts hereinafter more fully set forth, pointed out in the claims and shown in the accompanying drawings, in which—

Figure 1 is a side elevation of my im-

proved shoe sole protector, illustrating a shoe in position in dotted lines,

Fig. 2 is a top plan view,

Fig. 3 is a transverse sectional view taken on the line 3—3 of Fig. 2, looking in the direction of the arrows,

Fig. 4 is a longitudinal, sectional view taken on the line 4—4 of Fig. 2, looking in the direction of the arrows.

In the construction of my improved shoe sole protector, the sole portion 1 is preferably formed of fire-proof material such as asbestos or the like, while the heel plate 2 and instep portion 3 are formed of any suitable metallic material and attached to the inner end of the sole 1 by means of the rivets 4, the attachment being preferably made at the point where the sole of the shoe recedes into the instep. The sole portion 1 is formed in two separate pieces, suitably stitched together as shown at 5, and it will be understood that while I have shown and described the two sole portions secured together by stitching, it will be understood that any other suitable form of fastening means may be used. The idea of having the sole portion 1 formed in two portions is that when the outer sole portion, generally indicated by the numeral 1^a, becomes worn down, it can be readily replaced by a new one which will prolong the life of the protector.

In order to space the sole portion 1 of the protector from the sole 6 of the shoe as indicated in dotted lines to provide a circulating surface between the two soles, coil springs are disposed between the two soles and in applying the coil springs, which are secured to the inner section of the sole, they are arranged to form a plurality of substantially U-shaped loops, the ends of which are secured to the inner end of the sole 1 by means of the rivets 7. In attaching the coil springs to the inner section of the sole 1, one end of the outer loop is first attached to the outermost rivet 7 on one side of the sole, thence extended outwardly toward the toe of the sole and conforming to the outline of the sole, thence extended rearwardly along the other side of the sole to the outermost rivet on the opposite side of the sole from the first rivet. The second set of springs is arranged in a similar manner and so on until a sufficient number of series have been arranged upon the sole of the shoe to

entirely cover the same. These springs which are generally indicated by the numeral 8 are secured to the inner section of the sole 1 by stitching as shown at 9, this stitching only extending through the inner or first section of the sole so as not to be exposed to the wearing surface.

In order to secure the toe portion of the sole to a shoe, suitable straps are provided which include a central strap 10, one end of which is secured to the toe portion of the sole and extended upwardly and inwardly to conform to the shape of the shoe and having its inner end connected with one end of the transverse strap 11. This transverse strap 11 is formed in two pieces, each piece being secured to one side of the sole and extended upwardly over the toe of the shoe and the outer ends connected by a buckle 12. Additional strap members 13 are provided, each having one end secured to the sole 1 and the other end extended upwardly to conform to the shape of the toe of the shoe and pivotally connected to the strap 10 at 14. These straps 13 are preferably disposed at an angle with respect to the strap 10 so as to firmly engage with the sides of the toe of the shoe to securely hold the sole member 1 in position with respect to the sole 6 of the shoe. The heel plate 2 is connected to the sole 1 through the medium of the instep portion 3 and the heel plate itself is shaped to conform to the general outline of shoe heels and the instep plate 3 made to conform with the general outline of the instep of an ordinary shoe having its forward end connected to the sole 1, as shown, by the rivets 4. The heel plate 2 and the instep portion 3 are integrally connected by means of the upright portion 15 which is adapted to correspond with the front face of the heel of the shoe. In order to secure the heel of the protector to the heel of the shoe, suitable perforated ears 16 are connected with the heel portion at a point adjacent the rear end thereof and to which the lower ends of the straps 17 are fastened, these straps extending upwardly upon opposite sides of the shoe and connected by means of the buckle 18. In order to construct a heel of sufficient thickness to compensate for the thickness of the sole 1 and the spring members 8, there are attached to the outer face of the heel plate 2, suitable lifts herein shown as three in number and generally indicated by the numeral 19 and are to be formed of any suitable fire-proof material to correspond with the material in the sole 1.

In order to accommodate the heel plate 2 to different sized heels, an adjustable plate 20 is attached to the instep 3 and provided for adjustment by having the plate 20 provided with the slots 21 in which are fitted the screw bolts 22, carried by the instep so that the plate 20 can be adjusted longitudi-

nally of the protector. The end of the plate adjacent the heel plate 2 is provided with a down-turned flange 23, adapted to be arranged parallel with the portion 15 and adjustable with respect to the heel plate 2 so that when a shoe heel is positioned upon the plate 2, the plate 20 can be adjusted so that the portion 23 will engage with the inner face of the heel of the shoe as illustrated in Fig. 1. From this, it will be apparent that the heel portion of the protector can be readily adapted to fit shoe heels of various sizes.

From the above description, taken in connection with the accompanying drawings, it will be readily apparent that I have provided a detachable protector adapted to be used for application to a shoe where it is necessary for a person wearing the shoe to stand or travel on a heated surface, so as to prevent the heat from reaching the foot of the wearer. This is readily carried out by having the coil springs 8 disposed between the sole 1 of the protector and the sole of the shoe so as to provide a thorough circulation of air between the sole of the shoe and the sole 1. It will also be apparent that my improved protector can be quickly and readily attached to a shoe or removed therefrom and the heel portion readily adjusted to accommodate various sized heels. It will also be apparent that in the construction of the sole portion of the shoe, it is preferred to have the same in two pieces or sections as indicated by the numerals 1 and 2^a so that the outer section can be readily exchanged for a new one when the same becomes worn and that the lift sections 19 on the heel can also be readily interchanged as the innermost lift is riveted to the plate 2 by means of the rivets 24, while the other lifts are secured to this inner lift in any suitable manner to permit them to be detached and replaced by new ones should the case desire.

What I claim is:

1. A shoe sole protector comprising a sole portion, a metallic heel portion, connected with the sole portion, a plurality of helical springs arranged upon the upper face of the sole portion to provide an air ventilating space between the sole portion of the protector and the sole of the shoe and means for attaching the protector to a shoe.

2. A protector of the class described including a sole portion of fire-proof material, a metallic heel portion attached to one end thereof, a lift attached to the heel portion, a plurality of coil springs secured to the upper face of the sole portion of the protector whereby to provide an air ventilating space between the sole of the shoe and the sole portion of the protector and means for attaching the protector to a shoe.

3. A protector including a sole portion, a heel portion attached to one end thereof, coil

5 springs secured to the upper face of the sole portion whereby to space the sole portion of the protector from the sole of a shoe perforated ears connected with the heel portion, straps connected to the ears and adapted to be connected for embracing a shoe and additional strap members connected to the sole portion for embracing the toe portion of a shoe whereby to secure the protector to the shoe.

10 4. A protector of the class described including a toe portion, a heel portion connected to one end thereof, an adjustable plate carried by the heel portion for adapting the heel plate to various sized heels and means for detachably connecting the protector to a shoe.

15 5. A protector of the class described including a toe portion, a heel portion, an in-

step portion connecting the heel with the toe portion, an adjustable plate carried by the instep portion and provided with an angular flange member for engaging the heel of a shoe whereby to adapt the heel portion to various sized heels.

25 6. A protector of the class described including a toe portion, a heel portion, an adjustable plate movable with respect to the heel portion whereby to adapt said heel portion to various sized heels, coil spring members attached to the upper face of the toe portion whereby to space the same from the sole of a shoe to provide for the circulation of air between said sole portion and toe portion and means for detachably connecting the protector to a shoe.

In testimony whereof I affix my signature.

JAMES W. MOORE.