A. B. PLUMMER.

ORTHOPEDIC PAD.

APPLICATION FILED JULY 23, 1918.

1,336,979. Patented Apr. 13, 1920.

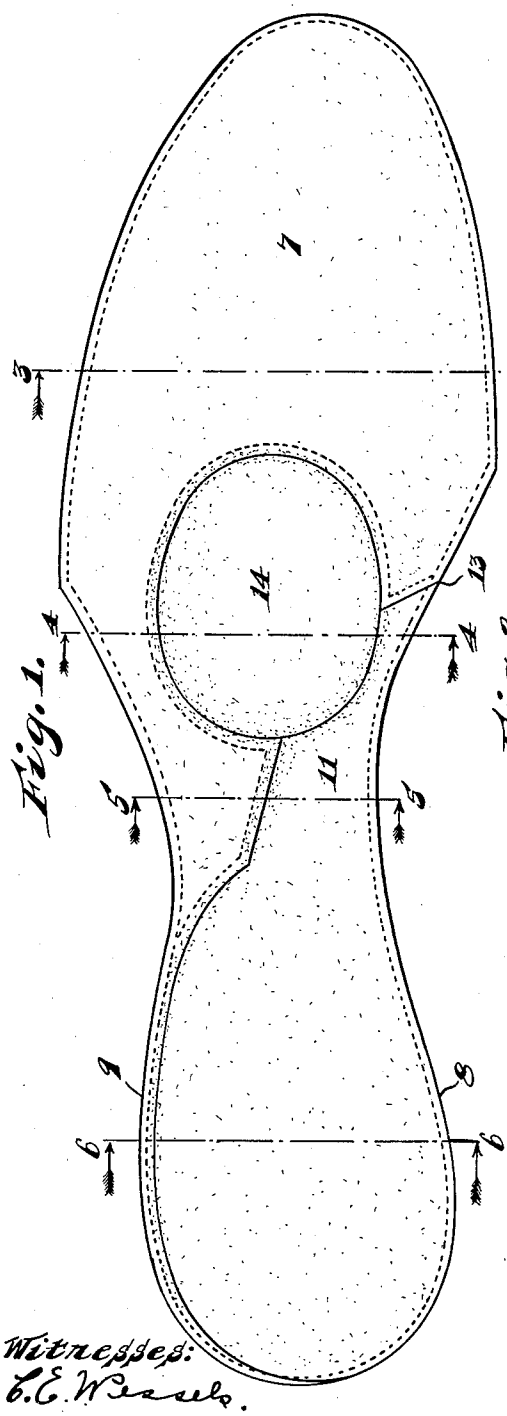


Fig. 1.



Fig. 2.



Fig. 3.

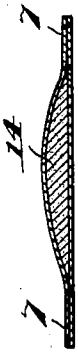


Fig. 4.



Fig. 5.



Fig. 6.

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# UNITED STATES PATENT OFFICE.

ARTHUR BUCKLAND PLUMMER, OF CHICAGO, ILLINOIS.

## ORTHOPEDIC PAD.

1,336,979. Specification of Letters Patent. Patented Apr. 13, 1920.

Application filed July 23, 1918. Serial No. 246,307.

*To all whom it may concern:*

Be it known that I, ARTHUR BUCKLAND PLUMMER, a subject of the King of England, (who have declared my intention of becoming a citizen of the United States,) and a resident of the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Orthopedic Pads, of which the following is a specification.

My invention relates to improvements in orthopedic pads, and has for its object the provision of an improved device of this character arranged and adapted to correct and reform the usual slight deformities and incorrect positions of the human foot, thus greatly strengthening the same and tending to prevent the formation or effecting a cure of corns, bunions and the like on the human foot.

Other objects will appear hereinafter.

The invention consists in the combinations and arrangements of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which:

Figure 1, is a top plan view of an orthopedic pad embodying the invention and designed for use on the left foot,

Fig. 2, a side view of the same,

Fig. 3, a section taken on line 3—3 of Fig. 1,

Fig. 4, a section taken on line 4—4 of Fig. 1,

Fig. 5, a section taken on line 5—5 of Fig. 1,

Fig. 6, a section taken on line 6—6 of Fig. 1.

The preferred form of construction, as illustrated in the drawings, comprises a flat body 7 in the form of a heavy leather insole, adapted to fit within the bottom of an ordinary boot or shoe and given a general shape or configuration for this purpose, as shown and corresponding in outline to an ordinary insole as indicated. A correcting pad 8 is arranged on the body 7 along the rear inner edge thereof, sloping or diminishing in height or thickness toward the opposite or outer edge 9, and entirely disappearing at said outer edge, as indicated in Figs. 1 and 6. The pad 8 extends from the extreme rear portion of the body 7 where it is gradually sloped off as at 10 to substantially the central portion of body 7, the forward portion of said pad at the central portion of the body 7 and under the instep of the wearer narrowing as shown in Figs. 1 and 5 to substantially one-half of the width of the body 7. The forward portion of the pad 8 slopes off to nothing, as indicated at 12, and terminates at line 13 at a point substantially opposite the center of a central pad 14. The pad 14 is positioned centrally in the body 7 just to the rear of the tread portion thereof so as to be positioned just to the rear of the ball of the foot and forward of the instep thereof, which is substantially along or immediately to the rear of the section line 3—3 on Fig. 1. The pad 14 is highest at its central portion and slopes therefrom in all directions, terminating well within the sides of the body 7, and is of a height substantially equal to the highest or thickest portion of the pad 8.

The construction illustrated is designed for the left foot, the one for the right foot being precisely the same except turned over or reversed. The orthopedic pad thus provided has a tendency to straighten the position of the foot in walking, tending to prevent outward running over of the heel portion of a boot or shoe and consequent weakening of the foot and ankle. It also has a tendency to cause the toes to lie flat in the shoe, thus preventing the formation of corns or bunions thereon. These beneficial effects are due to the joint action of the various features of the construction disclosed.

The conjoint action of the different features of the pad is due to a peculiarity in the method of walking of the majority of the Caucasian race. In walking barefooted, the foot is carried with the toe pointed slightly outwardly and with the heel twisted slightly outwardly with reference to the forward or ball portion of the foot. This results in the rear outer edge of the heel striking the earth first and the ball of the foot and toes striking the earth an instant later and in flat condition, which tends to spread the toes and give each toe individual and proper contact with the earth. But when the foot is confined by a rigid shoe or boot, this action cannot take place. Due

to this rigidity, the twisting of the heel also twists the forward portion of the foot so that the ball or tread portion thereof strikes the earth in an outwardly inclined position, tending to throw the forward portion of the foot and the toes outwardly in the shoe. This action has a tendency to cause the outer and smaller toes to curve inwardly under the inner and larger ones, thus tending to distort the foot and cause corns and bunions. This tendency in walking is apparent from the fact that most people tend to wear over the outer rear edge of the heel of their shoes. The presence of the correcting pad 8 along the inner rear edge of the body 7 causes the heel to rest naturally in slightly twisted relation with respect to the ball or tread portion of the foot and thus prevents the wearer from twisting the shoe in walking, causing the shoe heel to strike the ground straight and untwisted. The ball or tread portion of the foot will naturally tend to strike the ground flat and untwisted if permitted, so that the pad 8 thus causes the ball or tread portion of the foot to strike the ground in flat position, and if the ball portion of the foot were unconfined, this would naturally have a tendency to spread and straighten the toes and give each toe individual and proper contact. However, the ball of the foot is confined by the shoe or boot and this natural action is thus prevented in the absence of means for inducing the same. The presence of the pad 14, however, in the central portion of the shoe, just to the rear of the ball of the foot and forward of the instep thereof has a tendency to cause proper spreading and straightening of the toes when the ball of the foot is brought down in flat relation on the top of said pad 14. As previously indicated, the pad 8 causes the ball of the foot to come down on the pad 14 in flat condition, so that the conjoint action of the pads 8 and 14 produce the results desired.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claims.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. An orthopedic pad comprising a body adapted to fit within the bottom of a boot or shoe; a correcting pad arranged at the inner edge along the rear portion of said body and sloping off toward the outer side thereof; and a correcting pad located centrally of said body just to the rear of the tread portion thereof and forward of the instep portion, the remaining portions of said body being substantially flat and of uniform thickness, substantially as described.

2. An orthopedic pad comprising a body adapted to fit within the bottom of a boot or shoe; a correcting pad arranged at the inner edge and along the rear portion of said body and sloping off toward the outer side thereof; and a correcting pad located centrally of said body just to the rear of the tread portion thereof and forward of the instep portion and of substantially the same height as said edge pad, the remaining portions of said body being substantially flat and of uniform thickness, substantially as described.

3. An orthopedic pad comprising a body adapted to fit within the bottom of a boot or shoe; a correcting pad arranged at the inner edge and along the rear portion of said body and sloping off toward the outer side thereof, said correcting pad extending from the rear to substantially the center of said body and sloping off at both front and rear; and a correcting pad located centrally of said body just to the rear of the tread portion thereof and forward of the instep portion, said central pad being highest at its central portion and sloping therefrom in all directions, the remaining portions of said body being substantially flat and of uniform thickness, substantially as described.

4. An orthopedic pad comprising a body adapted to fit within the bottom of a boot or shoe; a correcting pad arranged at the inner edge along the rear portion of said body and sloping off toward the outer side thereof, said correcting pad extending from the rear to substantially the center of said body and sloping at both front and rear; and a correcting pad located centrally of said body just to the rear of the tread portion thereof and forward of the instep portion and of substantially the same height as said edge pad, said central pad being highest at its central portion and sloping therefrom in all directions, the remaining portions of said body being substantially flat and of uniform thickness, substantially as described.

5. An orthopedic pad comprising a body adapted to fit within the bottom of a boot or shoe; a correcting pad arranged at the inner edge and along the rear portion of said body and sloping off toward and entirely disappearing at the outer side thereof, said correcting pad extending from the rear to substantially the center of said body, and narrowing at the center of said body to substantially one-half the width thereof, and sloping at both front and rear; and a correcting pad located centrally of said body just to the rear of the tread portion thereof and forward of the instep portion, and of substantially the same height as the highest

portion of said edge pad, said central pad being highest at its central portion and sloping therefrom in all directions and entirely terminating well within the edges of said body, the remaining portions of said body being substantially flat and of uniform thickness, substantially as described.

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

A. BUCKLAND PLUMMER.

Witnesses:

JOSHUA R. H. POTTS,

HELEN F. LILLIS.