

May 25, 1937.

L. B. ADAMS

2,081,655

ORTHOPEDIC SANDAL

Filed April 25, 1935

2 Sheets-Sheet 1

FIG. 1

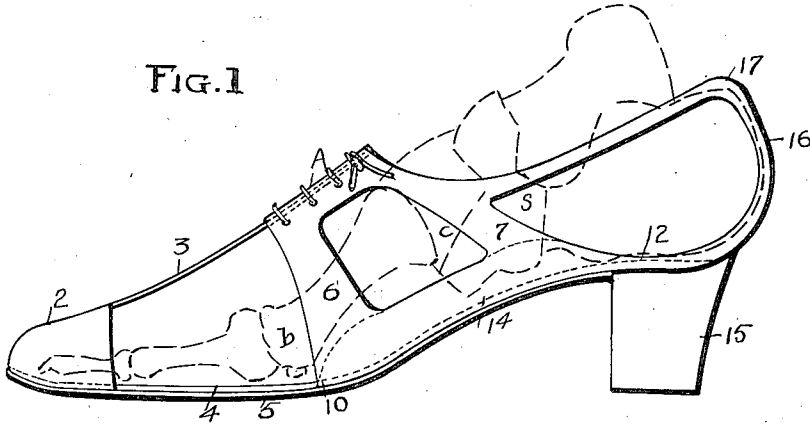


FIG. 2

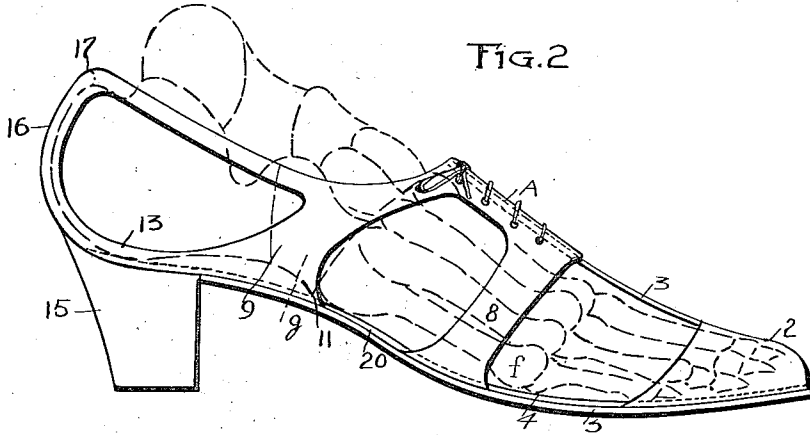
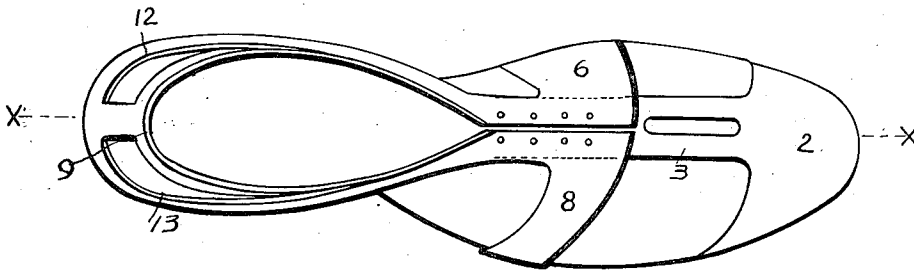


FIG. 3



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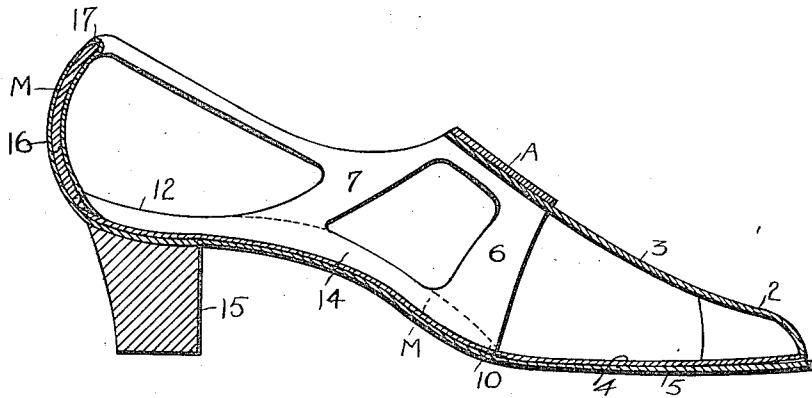
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FIG. 4.



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# UNITED STATES PATENT OFFICE

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## ORTHOPEDIC SANDAL

Loney B. Adams, St. Petersburg, Fla.

Application April 25, 1935, Serial No. 18,137

2 Claims. (Cl. 36—8.5)

My invention relates to orthopedic sandal shoes. The foot consists of a number of bones divided as follows, the phalanges or toes, the metatarsus and tarsus or heel and ankle joint.

5 Each phalange has three bones with the exception of the large toe which has two bones. The metatarsus has five bones each of which corresponds to the respective toe. Next is the  
10 tarsus which has seven bones as follows, three cuneiform, scaphoid, cuboid, astragalus, and os-calsis, each bone forming a joint with the succeeding bone. Each bone in the foot is supplied with arteries, nerves and a number of  
15 muscles and ligaments. Take for instance the muscles and ligaments which are attached to the toes and arch of the foot, these are constantly stretched when a person walks and should this continue and become too great, these muscles and ligaments become weakened allowing the  
20 bones to become distorted and press against a nerve causing pain or against an artery which would interfere with the natural circulation of the blood supply in the foot.

25 The principal object of my invention is to provide an orthopedic sandal shoe which is so constructed as to prevent or relieve the foot of these and many other distortions or malformations and give the foot correct support.

30 From the drawings and description it will be found that there are several other novel advantages to my invention.

The various objects and advantages are attained by the construction illustrated in the accompanying drawings, wherein,

35 Fig. 1 and Fig. 2 are side views of my orthopedic sandal shoe illustrating the inside and outside respectively, with an outlined skeleton of the foot.

40 Fig. 3 is a plan view of my orthopedic sandal shoe.

Fig. 4 is a sectional view on the line X—X, Fig. 3.

Similar reference characters refer to similar or like parts throughout the several views.

45 By reference to the drawings it will be noted that my orthopedic sandal consists of an upper having a relatively soft pliable tip portion 2, which by reason of its extending from the forepart of the sandal to approximately the middle  
50 of the first phalanges joint of the first and fifth toes of the wearer, and being shaped as shown, gives the sandal sufficient resistance against foot disturbance at this point.

55 When the sandal is applied to the foot, the tip portion 2, having its lower edges stitched or

otherwise secured in place between inner and outer soles 4 and 5 respectively, serves to encase or cover and support the toes in proper position. The tip portion also acts as a support for the forepart of the soles thereby preventing 5 the latter from any undesirable movements.

A tongue 3, preferably integrally formed on the tip portion, extends rearwardly and upwardly to the vamp portion "A" which vamp is provided with side supporting straps 6 and 8 of soft 10 pliable material extending downwardly at the forepart thereof with the lower ends being fitted in between the inner and outer soles and secured thereto by stitching or the like. Thus it will be noted that the strap member 6 is so ar- 15 ranged that the same is positioned to the rear of the head of the first metatarsis (b), otherwise known as the bunion joint. Another side supporting strap 7 spaced from and to the rear of strap 6, extends from the rear end of the vamp 20 to the soles, and thus serves as a support for the cuneiform (c) and scaphoid (s), as illustrated in Figure 1.

Whereas strap support member 8, on the other side of the vamp, fits to the rear of and relieves 25 the strain on the head of the fifth metatarsus (f), as illustrated in Figure 2. A fourth supporting strap member 9, extending downwardly from the rear end of the vamp and spaced from strap 8, is likewise secured between the soles 4 and 5 30 and serves as a support for the cuboid (g) bone.

The upper of my sandal is provided with a counter strap portion 16 positioned at the rear end of the sandal and extending downwardly from the upper rim of the upper and secured 35 between the inner and outer soles.

The upper portion is preferably formed at the lower edge thereof with the downwardly and inwardly extending or cupped side edges 12 and 13 respectively of suitable stiffened material 40 extending from the rear thereof to the points 10 and 11 at the forepart of the side strap members 6 and 9 respectively. These cupped sides or edges provide an additional support or brace for the counter 16 and thereby efficiently sup- 45 port a fleshy or flabby heel thus holding and retaining the same firmly in position on the sole.

A longitudinal strap 14 is preferably formed integrally with the side supporting straps 6 and 7 thus providing a side support for an arch sup- 50 port, should such a member be used. This side support 14 is particularly advantageous in that it serves as a means for ventilating or causing air to circulate through the arch. It is known that there is a certain amount of play between 55

the arch of the foot and the shank of the sandal which results in body heat being created. However when the foot is lifted there is a tendency to create a vacuum between the arch of the foot  
 5 and the shank of the sandal which results in cool or fresh air being drawn or sucked into the sandal at the low or uncupped edge of the sole, as at 20, extending between the straps 8 and 9, and when the foot is lowered the air will be  
 10 forced out of the sandal over the top edge of the side supporting strap 14 thereby cooling the arch of the foot.

What I claim:

1. An orthopedic sandal of the character de-  
 15 scribed comprising inner and outer soles, a heel, an upper portion, said portion having a tip section at the forepart of the soles for housing the toes, an upstanding heel supporting member se-  
 20 cured to said soles and to the rear of said upper portion, said upper portion having attached thereto two spaced strap members on each side thereof, said spaced strap members extending  
 25 downwardly from said upper portion and secured to said soles, the forward strap members of said upper portion being positioned slightly to the rear of the forward ends of the inner and outer metatarsus bones and supporting the metatarsal

portion of the foot, and the rearward strap mem-  
 5 bers depending from the upper portion and secured to the soles, and being positioned opposite to and supporting the scaphoid, cuboid and cuneiform bones.

2. An orthopedic sandal of the character de-  
 10 scribed comprising inner and outer soles, a heel, an upper portion, said portion having a tip section at the forepart of the soles for housing the toes, an upstanding heel supporting member se-  
 15 cured to said soles and to the rear of said upper portion, said upper portion having attached thereto two spaced strap members on each side thereof, said spaced strap members extending  
 20 downwardly from said upper portion and secured to said soles, the forward strap members of said upper portion being positioned slightly to the rear of the forward ends of the inner and outer metatarsus bones and supporting the metatarsal  
 25 portion of the foot, and the rearward strap members depending from the upper portion and secured to the soles, and being positioned opposite to and supporting the scaphoid, cuboid and cuneiform bones, and an inner longitudinal arch supporting strap extending between the inner strap members at the lower ends thereof.

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