

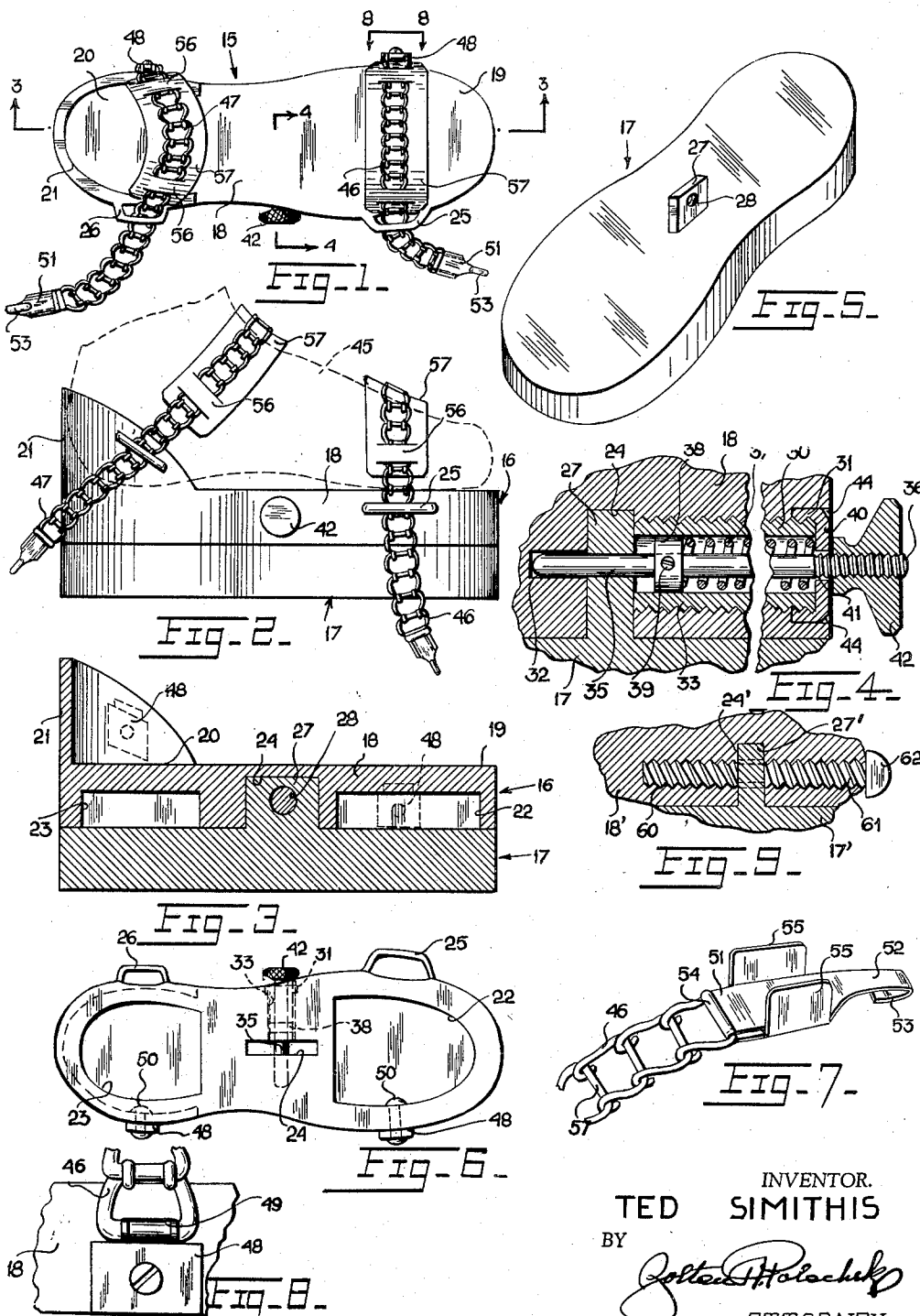
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INTERCHANGEABLE EXERCISING SHOE

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INTERCHANGEABLE EXERCISING SHOE

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This invention relates to the art of developing the muscles of the human body and, more particularly, to shoes for developing the muscles of the legs.

A principal object of the present invention is to provide a shoe of the sandal type with weighted means for exercising the muscles of the calf of the leg of the user.

A further object of the invention is to provide a shoe of this kind wherein the weighted means is adjustable and interchangeable.

A specific object of the invention is to provide a sandal type shoe with a readily attachable and detachable weighted member.

It is also proposed to provide a weighted shoe that is simple and rugged in construction and which can be manufactured and sold at a reasonable cost.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claims in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

Fig. 1 is a top plan view of a shoe embodying my invention.

Fig. 2 is a side elevational view thereof, with a foot shown thereon, in dash lines, with the fastening means in unfastened position.

Fig. 3 is a longitudinal sectional view taken on the plane of the line 3-3 of Fig. 1.

Fig. 4 is an enlarged cross-sectional view taken on the plane of the line 4-4 of Fig. 1.

Fig. 5 is a top perspective view of the weighted member.

Fig. 6 is a bottom plan view of the shoe member.

Fig. 7 is an enlarged perspective view of the latch on a fastening member.

Fig. 8 is a detail view of the anchorage for the end of the fastening member at the toe end of the shoe.

Fig. 9 is a sectional detail view showing a modified form of means for holding the shoe member and weighted member in interlocking relation.

Referring to the drawings in detail, a shoe embodying my invention is shown in Fig. 1 and designated generally at 15. This shoe is of the sandal type and comprises broadly a shoe member 16 and a weighted member 17. The shoe member is cast from iron and comprises a plate 18 shaped to conform to the shape of the sole of the human foot, thereby providing a front foot or toe portion 19 and a heel portion 20. An arcuate shaped plate 21 is formed above and around the periphery of the heel portion 20 of the sole and constitutes the upper heel portion of the shoe.

On its undersurface, the plate 18 is formed with recesses 22 and 23, in the front portion and heel portion, respectively, thereof, and midway the length of the plate,

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an elongated narrow slot 24 is formed extending lengthwise of the plate.

On one side, of the front portion 19 of the sole plate 18, a metal loop member 25 is secured thereto and extends laterally thereof, and on the same side of the sole plate on the upper heel portion 21 there is a loop member 26 of similar construction secured thereto and extending in the same direction as the loop member 25. The loop members may be secured by soldering, welding or the like.

The weighted member 17, as best seen in Fig. 5, is cast of iron and is shaped similarly to the sole plate 18 of the shoe member 16. Midway the ends thereof, on its upper surface, there is a bearing bracket in the form of a plate 27 of a shape conforming to the shape of the slot 24 in the sole plate 18 but of slightly smaller dimensions so that it can readily fit therein. The bracket is formed with a central opening 28.

In assembling the shoe, the foot member 16 is superposed over the weighted member 17 with the bearing plate 27 fitted in the slot 24 whereby the shoe member and weighted member are interlocked.

Means is provided for detachably holding the shoe member and weighted member in interlocked relation and is best seen in Fig. 4. An opening 30 is formed in the sole plate 18 of the shoe member 16 midway its ends and intermediate its top and bottom surfaces. The opening extends from the outer periphery of the sole plate inwardly intersecting the slot 24 therein and extending inwardly of the slot. The opening is enlarged at its outer end forming a countersunk portion 31 and is reduced at its inner end beyond the slot 24 as indicated at 32. The opening is internally screw-threaded between the enlarged and reduced portions thereof to receive an externally screw-threaded sleeve 33, the inner end of the sleeve terminating at the adjacent edge of the slot 24, and the outer end thereof terminating in the countersunk portion 31. A pin 35 having a smooth shank portion and having one end threaded as indicated at 36 extends through the sleeve 33 and through the opening 28 in the bearing bracket 27 and into the reduced portion 32 of the opening 30.

A compression spring 37 is sleeved around the pin 35 with one end seated on a collar 38 secured on the pin by a set screw 39, and with its other end impinging against a shallow cup-shaped member 40 having internal screw threads engaging the threads on the sleeve 33. The threaded end 36 of the pin extends through and outwardly of a central opening 41 in the cup-shaped member. A knurled finger knob 42 is detachably threaded on the protruding end of the pin. The spring 37 urges the pin inwardly so that its inner end extends through the bracket 27 and into the reduced portion 32 of the opening 30 beyond the slot 24 thereby holding the shoe member 16 and weighted member 17 in locked position. The shoe and weighted members are readily disassembled by merely unscrewing the knob 42 and cup-shaped member 40 and withdrawing the pin. The base of the cup-shaped member 40 is preferably formed with opposed notches 44 to receive a tool for turning the same.

The shoe is readily attached to the foot 45 of the wearer as shown in Fig. 2 by means of a toe chain 46 and an ankle chain 47. Each chain is similarly fastened at one end to the sole plate 18 of the shoe member 16 and similarly latched in holding position. The fastening means for each chain consists of an anchoring plate 48 secured to the endmost link of the chain by means of a tubular bearing 49. The plate is fastened to the side surface of the shoe plate 18 on the side opposite the loops 25 and 26 by means of a rivet 50 extending

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through the adjacent side wall of the respective recess and through the anchoring plate, the recess permitting this positioning of the rivet.

On the other free end of each chain there is a clasp member comprising a plate 51 with a reduced extension 52 at one end and bent at the extremity thereof into a hook. The other end of the plate 51 is formed with a loop 54 looped around the endmost link of the chain. The plate is formed with wing portions 55 extending perpendicularly to the plate in the direction opposite to the direction of bending of the hook 53. When using the chains for attaching the shoe to the foot, the chains are preferably threaded through end loops 56 formed on pads 57 made of strips of cushioning material so as to protect the foot of the wearer.

The recesses 22 and 23 in the shoe member 16 reduce the weight thereof, permit fastening of the ends of the chains and serve as a depository for foreign substance liable to be scraped off the top surface of the weighted member so as to provide a smooth flat surface for the chain is passed through its respective loop member shoe member on the weighted member. The free end of 25 or 26 and then turned upon itself to bring the hook 53 of the latching member 51 in position to hook over the cross piece 57 of a link of the chain and the wings 55 in position to straddle the links of the chain for detachably fastening the chain in fastening position.

In Fig. 9, a modified form of means for holding the shoe and weighted members in interlocked relation is shown. In this form, the sole plate 18' is formed with an elongated screw-threaded opening 60 extending inwardly from the side surface thereof, intersecting and extending inwardly of the slot 24' therein. The opening in the bearing bracket 27' of the weighted member 17 is internally screw-threaded. An elongated screw 61 extends through the opening 60 and through the opening in the bracket member 27' and inwardly thereof. The screw is formed with a head 62 larger in diameter than the diameter of the opening 60 for turning the screw.

The shoe is particularly adapted for developing the muscles of the calf of the leg and the foot of the user. When the shoe is chained onto the foot, the leg may be flexed to lift the toe portion of the shoe off the floor or the like in order to develop certain muscles of the leg and strengthen the foot, and in course of time flexed to lift the heel portion thereof in order to develop other muscles. Gradually the shoe may be lifted entirely off of the floor and the leg flexed outwardly in order to more fully develop the muscles of the calf of the leg.

Weighted members of varying weights to accommodate personal requirements can readily be attached to the foot member so that the development may be progressive and comfortable. In practice, the shoe has been found to function satisfactorily with weighted members weighing five pounds, ten pounds, twenty pounds and thirty pounds. The chains are sufficiently stout to remain fastened under the hardest usage.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that

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I do not limit myself to the precise constructions herein-disclosed and that various changes and modifications may be made within the scope of the invention as defined in the appended claims.

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

1. A weighted shoe for developing the lower muscles of the leg comprising a thick metal plate shaped to conform to the shape of the foot of the wearer, said plate having a central slot in its undersurface and having a lateral opening intersecting said slot, a similarly shaped weighted member having a protruding bearing bracket on its upper surface interfitted in the slot in the metal plate, said bearing bracket having a central opening therein, and a spring-pressed pin extending through the lateral opening in the metal plate and through the central opening in the bearing bracket for holding the plate and weighted member in interfitting relation.

2. A weighted shoe for developing the lower muscles of the leg comprising a thick metal plate shaped to conform to the shape of the foot of the wearer, said plate having a central slot in its undersurface and having a lateral opening intersecting said slot, a similarly shaped weighted member having a protruding bearing bracket on its upper surface interfitted in the slot in the metal plate, said bearing bracket having a central opening therein, and a pin extending through the lateral opening in the metal plate and through the central opening in the bearing bracket for holding the plate and weighted member in interfitting relation, and a compression spring sleeved around said pin for urging said pin into holding position.

3. A weighted shoe for developing the lower muscles of the leg comprising a thick metal plate shaped to conform to the shape of the foot of the wearer, said plate having a central slot in its undersurface and having a lateral opening intersecting said slot and extending inwardly thereof, a similarly shaped weighted member having a protruding bearing bracket on its upper surface interfitted in the slot in the metal plate, said bearing bracket having a central opening therein, a sleeve in the lateral opening in the metal plate, an elongated pin extending through said sleeve and through the central opening in the bearing bracket and into the inward extension of the lateral opening beyond the slot, for holding the plate and weighted member in interfitting relation, a cup-shaped member detachably mounted on the outer end of the sleeve, a collar detachably secured to the pin inside the sleeve, a compression spring sleeved around said pin and having one end seated against said collar and its other end against said cup-shaped member for urging the pin to holding position, and a finger knob on the outer end of the pin.

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