

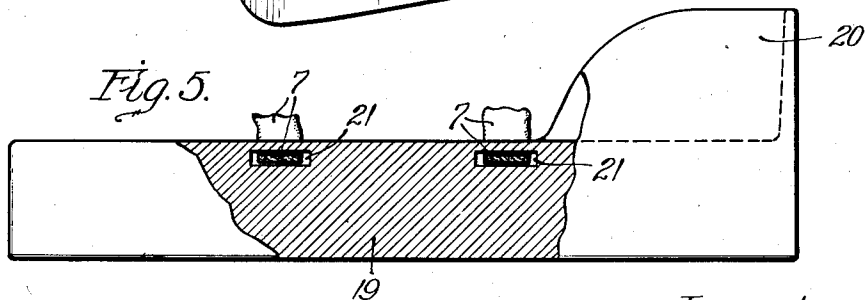
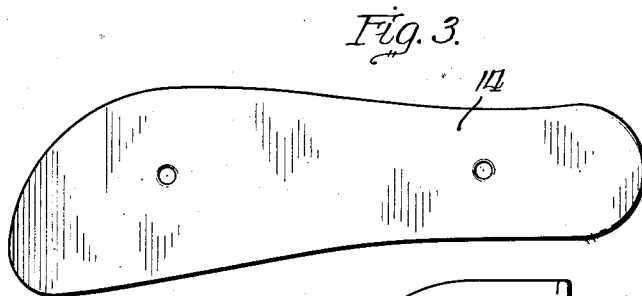
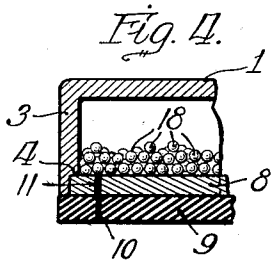
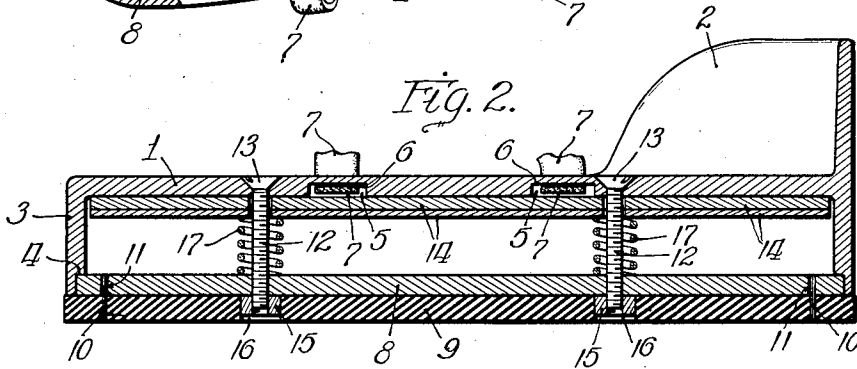
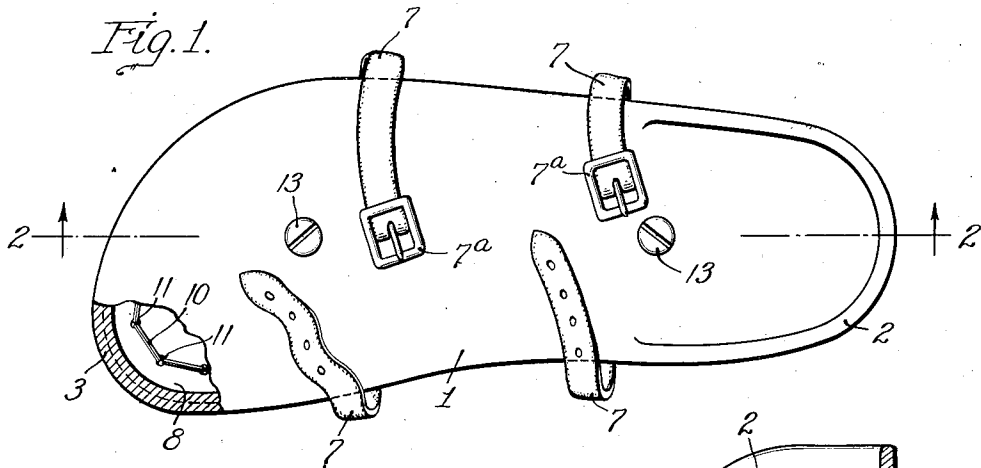
Feb. 12, 1935.

R. A. WOOD

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EXERCISING SHOE

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EXERCISING SHOE

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4 Claims. (Cl. 36—2.5)

This invention relates to devices for use in executing physical exercises, and has to do more particularly with such a device in the form of a shoe.

5 In performing certain physical exercises, it is desirable that weights be attached to the feet and that some of the exercises be performed while in a sitting or reclining position, and others be performed while in an upright or standing position. It is also desirable that the weights attached to the feet be capable of being varied to suit the physical condition of the person performing the exercises. It is an object of my invention to provide a device in the form of a shoe which can readily be attached to the feet, this device being suitable for use when a person is in either a standing position or a reclining position. A further object is to provide a device of the character stated having means whereby the weight of the device may be varied with expedition and facility to suit the physical condition of the person employing the device. Further objects and advantages of my invention will appear from the detail description.

25 In the drawing:—

Figure 1 is a plan view of an exercising shoe embodying my invention, partly broken away and in section;

30 Figure 2 is a section taken substantially on line 2—2 of Figure 1;

Figure 3 is a plan view of one of the weight plates;

35 Figure 4 is a fragmentary sectional view, taken vertically through the shoe, and illustrating the use of weight elements other than plates;

Figure 5 is an elevation, partly broken away and in section, of a modified form of shoe.

40 Conveniently, the shoe of my invention is in the form of a metallic casting comprising a top plate 1 which approximately conforms in plan to the shape of the human foot. This plate is provided, at the heel portion thereof, with an upwardly extending flange 2 rigid with the plate and conveniently cast integral therewith, this flange fitting about the heel of the user in the use of the device. Plate 1 is provided with a depending peripheral flange 3, interiorly rabbeted at 4, at its lower end.

50 Flange 3 is provided, at each side thereof, with two spaced slots 5 aligned with grooves 6 extending transversely of top plate 1 in the under face thereof. The slots 5 and grooves 6 accommodate straps 7 provided with buckles 7a, these straps being of suitable length to extend upward

over a person's foot for securing the device thereon.

A bottom closure plate 8, conforming in shape to the top plate 1, seats snugly in the rabbeted lower end of flange 3 and provides a closure for the lower end of the hollow casing defined by this flange and the top plate 1. A cushion sole 9, formed of rubber or other suitable material, is secured to the under face of plate 8 and projects beyond this plate beneath the lower end of flange 3. Conveniently, sole 9 is secured to plate 8 by stitching 10, plate 8 being suitably bored at 11 to accommodate this stitching, though the sole may be secured to plate 8 in any other suitable or preferred manner. The projecting peripheral portion of sole 9 serves as a shield for the lower edge of flange 3 and also provides a seal for the joint between plate 8 and flange 3 which is effective to prevent entry of moisture or foreign materials into the hollow casing.

Closure plate 8 may be removably secured in position in any suitable or preferred manner. Preferably, I provide suitably disposed bolts 12 which pass through the top plate 1, the heads 13 of these bolts tapering downward and being countersunk in the top plate with their upper surfaces flush therewith. The bolts pass through aligned openings in weight plates 14 disposed within and conforming in plan to the casing defined by the top plate and the flange 3. The bolts 12 also pass through the bottom closure plate 8 and screw into nuts 15 which fit tightly into corresponding openings 16 provided in the sole 9, these nuts being frictionally held in position. Coil springs 17, of suitable strength, are disposed about the bolts 12 and are confined under compression between the lower plates 14 and the upper face of bottom plate 8. With the weight plates 14 properly positioned within the casing and the bolts 12 inserted through the plate 1 and plates 14 and 8, plate 8 is held seated against the expansive force of springs 17 and the bolts are screwed into the nuts 15, thus securing plate 8 tightly in position. The device is then ready for use, and any objectionable looseness or play of the weight plates 14 is prevented by the springs 17. It will be understood that any other suitable or preferred means may be provided for holding the weight plates against objectionable looseness, though the coil springs 17 are ordinarily satisfactory for this purpose.

It will be noted that the plates 14 are of different thicknesses. By employing weight plates of different thicknesses, and changing the number

of weight plates employed, it is possible to vary the weight of the device within wide limits, as desired or as conditions may require.

Instead of employing weight plates for adjusting the weight of the device, other suitable weight elements may be utilized. In Figure 4 I have shown a quantity of weight elements 18 in the form of metal pellets or shot disposed within the casing of the device. These shot may be placed within the casing by removing plate 8, or, if desired, one of the bolts 12 may be removed temporarily and the shot poured into the casing through the bolt opening thus provided. The shot 18 may be used either in conjunction with the weight plates 14 or independently thereof, as desired. When shot or similar weight elements are used alone, the coil springs 17 may be omitted. In general, I prefer to employ the weight plates 14 for adjusting the weight of the device, since the weight is more uniformly distributed when these plates are employed. In many instances, however, the use of shot 18 or similar weight elements is satisfactory.

The device illustrated in Figures 1 to 4, inclusive, is intended more particularly for use by beginners taking a course of exercises for which this device is particularly adapted. It is desirable that the device be of light weight when beginning the course, to eliminate possibility of the user injuring or straining himself. As the course proceeds, the weight of the device may be increased as justified, in the manner previously described. After a person has completed the course, or in the case of a person of unusual physical strength, it may be desirable to provide a device of appreciably greater weight than the device of Figures 1 to 4, inclusive, even when this device is fully loaded with weight elements. In order to meet this condition, I have provided the modified form of device shown in Figure 5. This device comprises a thick plate 19 conforming in plan to the shape of the human foot, and provided, at its heel portion, with an upwardly extending peripheral flange 20. The plate 19 thus comprises a top portion conforming in plan to the shape of the human foot and an integral depending weight portion of sufficient thickness to impart to the device the desired weight. The device of Figure 5 is conveniently cast as a unit from a heavy metal or alloy, such as bronze, iron, or the like. This plate is provided with transverse slots 21 which accommodate the securing straps 7.

In the device illustrated in Figures 1 to 4, inclusive, the hollow casing comprising the top plate 1 and flange 3, and the bottom closure plate 8, are all preferably formed of aluminum or other suitable light material. This device is, therefore, of considerably less weight than the device illustrated in Figure 5 and, as above noted, is particularly suitable for use by beginners taking up

a definite course of physical exercises. It will be noted that the device closely approximates a shoe and is suitable for exercises when the person is either in an upright or standing position, or in a sitting or reclining position, which is of importance, since it is necessary that the person taking the prescribed course of exercises occupy various positions.

What I claim is:—

1. In a device of the character described, a top plate approximately conforming in plan to the shape of the human foot and provided with a depending peripheral flange defining with the plate a hollow casing, said flange being interiorly rabbetted at its lower end, a bottom closure plate seating in the rabbetted lower end of said flange, a cushion sole secured to the under face of the bottom plate and extending therebeyond beneath the flange, weight plates disposed within the casing, securing members extending from the top plate through the weight plates and releasably secured to the bottom plate, and means cooperating with said members for restraining movement of said weight plates away from said top plate, the top plate being provided at the heel portion thereof with an upwardly extending peripheral flange.

2. In a device of the character described, a top plate approximately conforming in plan to the shape of the human foot and provided with a depending peripheral flange defining with the plate a hollow casing, said flange being interiorly rabbetted at its lower end, a bottom closure plate seating in the rabbetted lower end of said flange, a cushion sole secured to the under face of the bottom plate and extending therebeyond beneath the flange, weight plates disposed within the casing, securing members extending from the top plate through the weight plates and releasably secured to the bottom plate, and means cooperating with said members for restraining movement of said weight plates away from said top plate.

3. In a device of the character described, a top plate approximately conforming in plan to the shape of the human foot and provided with a depending peripheral flange defining with the plate a hollow casing adapted for reception of weight elements, a closure plate for the bottom of the casing, and means for releasably securing said closure plate to the casing.

4. In a device of the character described, a top plate approximately conforming in plan to the shape of the human foot, a hollow casing rigid with and depending from said plate, the casing substantially conforming in plan to the plate and being provided with an opening for insertion into and removal from said casing of weight elements, and removable closure means for said opening.

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