Feb. 5, 1935. A. T. VANCE 1,989,899

FOOT EXERCISING DEVICE

Filed July 25, 1932

Fig. 1.

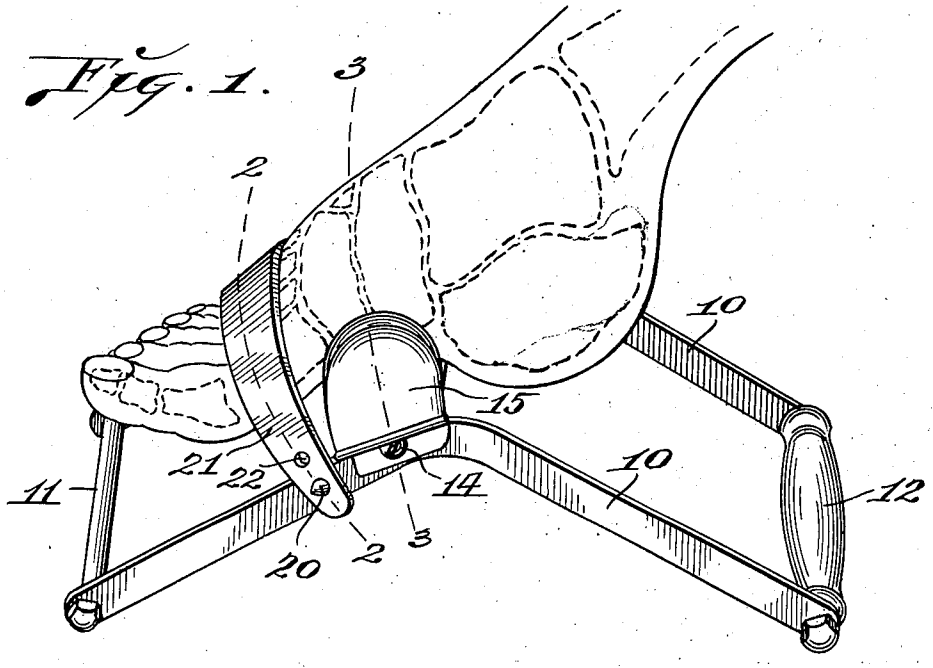


Fig. 2.

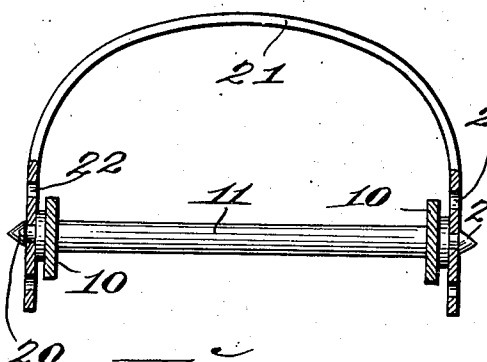


Fig. 3.

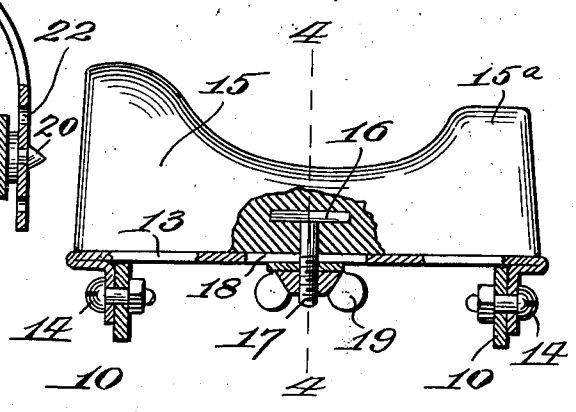
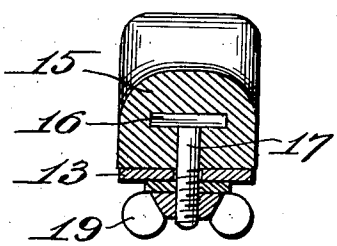


Fig. 4.



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FOOT EXERCISING DEVICE

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Application July 25, 1932, Serial No. 624,527

4 Claims. (Cl. 128—69)

My invention relates to a device that is especially designed for the exercise of the feet and the principal object of my invention is, to provide a relatively simple, practical and inexpensive device that is composed of few parts and which may be conveniently used without undue discomfort for the treatment of fallen arches as well as for exercising and strengthening the muscles and ligaments of the feet and increasing the circulation of blood through the veins and capillaries.

Further objects of my invention are, to provide a foot exercising device that may be applied to the foot and manually manipulated or positioned upon the floor or other surface and used by application of the foot to the saddle block that forms a part of the device and further, to provide a device of the character referred to that is readily adjustable so as to be used for exercising feet of different sizes and likewise upon either right or lefthand foot.

With the foregoing and other objects in view, my invention consists in certain novel features of construction and arrangements of parts that will be hereinafter more fully described and claimed and illustrated in the accompanying drawing in which:

Fig. 1 is a perspective view of a foot exercising device constructed in accordance with my invention and showing a foot in position upon the device for adjustment and exercise.

Fig. 2 is a transverse section taken approximately on the line 2—2 of Fig. 1.

Fig. 3 is a cross section taken approximately on the line 3—3 of Fig. 1.

Fig. 4 is a cross section taken on the line 4—4 of Fig. 3.

Referring by numerals to the accompanying drawing which illustrates a preferred embodiment of my invention, 10, 10 designate the side rails of the frame of the adjusting device, which side rails are preferably formed from straps of metal that are bent at or near their central portions so that the end portions of each rail are oppositely inclined with respect to each other.

The forward ends of the side rails 10 are rigidly connected by a transverse rod 11 and the rear ends of said rails are connected by a transversely disposed handle 12.

A transversely disposed plate 13 overlies the side rails 10 at a point slightly in advance of the longitudinal centers thereof and the ends of this plate are bent downward so as to occupy positions immediately against the outer face of the side rails.

These depending ends of plate 13 are detachably connected to the rails 10 in any suitable manner, but principally by means of bolts such as 14.

Removably and adjustably positioned on plate 13 is a saddle block 15, preferably formed of rubber and the intermediate portion of the upper edge of this block is curved lengthwise so as to conform with the transverse curvature of the instep portion of the foot or that portion below the arch of the foot.

This curved intermediate portion of the saddle block is also rounded or curved in cross section in order to form a comfortable support for the foot when the latter is positioned upon the saddle block.

Imbedded in the central portion of the body of block 15 is the head 16 of a screw 17 and this screw passes downwardly through a longitudinally disposed slot 18 that is formed in the intermediate portion of plate 13.

The end of screw 17 that projects below plate 13 receives a winged nut 19, which when tightened, clamps the saddle block in adjusted position upon plate 13.

The construction just described enables the saddle block to be adjusted a considerable distance laterally in both directions upon the supporting plate 13 and, by loosening the winged nut 19, the saddle block may be turned end for end so as to accommodate either the right or the left foot.

Projecting outwardly from the side faces of the rails 10, immediately in front of the ends of plate 13, are headed studs 20 that are adapted to receive the ends of a transversely disposed strap 21 of flexible material such as leather, fabric or rubber and each end of this strap is provided with a plurality of apertures 22 that are adapted to receive the studs 20.

That portion of strap 21 between the ends that are secured to the studs 20 is arched as illustrated in Fig. 2 and when the adjusting and exercising device is used the forward portion of the foot is inserted beneath the strap so that the intermediate or instep portion of the foot rests comfortably upon the curved upper surface of the saddle block 15.

In the use of my improved foot exercising device, the same may be placed on the floor and the foot applied to the device with the forward portion of said foot positioned beneath the strap 21 and the intermediate portion of the foot resting on block 15.

The user of the device now moves the heel portion of the foot vertically and laterally with

the block 15 serving as a support and fulcrum and thus practically all bones, muscles and ligaments in the foot are moved and strengthened so as to produce the desired strength and flexibility and at the same time the blood flow through the arteries and veins in the foot is materially increased.

The device may also be manually manipulated to exercise the muscles and ligaments in the foot and to impart movement to the bones therein and when such manual action takes place the foot applied to the device, as illustrated in Fig. 1, is lifted from the floor and the handle 12 is manually engaged.

The device is now rocked lengthwise and laterally with the foot serving as a bearing for the device during such rocking movement and this action is highly effective in imparting the desired exercising movements to the muscles, ligaments and bones of the foot.

When the foot is properly applied to the device for exercise, as illustrated in Fig. 1, the flexible strap 21 overlies that portion of the foot that contains the metatarsal bones and the elastic block 15 underlies that portion of the foot that contains the scaphoid and the internal, middle and external cuneiform bones and the movement imparted to these bones and the ligaments associated therewith, will be imparted to the adjacent metatarsal bones as well as the flanges and also to the astragalus and the os calces.

Thus the use of my improved foot exercising device acts upon practically all bones, muscles and ligaments in the foot so as to strengthen same and such exercise is effective in bringing about a highly beneficial increase of blood flow through all veins and arteries in the foot.

Lateral adjustment of the saddle block 15 upon frame 13 may be quickly and conveniently accomplished by loosening winged nut 19 and then shifting the block to the desired position and then tightening the winged nut and likewise the block may be turned end for end so as to be applied to either foot.

Block 15 may be adjusted laterally on the frame so as to bring the knob or point 15^a directly beneath the cuboid bone so as to exert pressure thereupon.

Strap 21 may be swung forwardly or rearwardly upon the axis formed by the studs 20 so as to have anterior or posterior bearing upon the metatarsal bones. Obviously as block 15 is adjusted to its limit of movements in both directions laterally upon the supporting frame, a smaller opening for the foot is provided between the block and the strap 21 and thus increased bearing or pressure is provided for the internal cuneiform and the cuboid bones.

Thus it will be seen that I have provided a relatively simple, practical and inexpensive device that may be conveniently and effectively utilized for exercising and producing flexibility in the foot.

It will be understood that minor changes in the size, form and construction of the various parts of my improved foot exercising device may be made and substituted for those herein shown and described without departing from the spirit of the invention, the scope of which is set forth in the appended claims.

I claim as my invention:

1. In a foot exercising device, a frame, comprising a pair of arched side rails, a rail connecting the forward ends of said side rails, a handle connecting the rear ends of said side rails and a transversely disposed saddle block mounted on the apices of the arched side rails.

2. In a foot exercising device, a frame, comprising a pair of arched side rails, a rail connecting the forward ends of said side rails, a handle connecting the rear ends of said side rails, a transversely disposed saddle block mounted on the apices of the arched side rails and a transversely disposed strap positioned in front of said saddle block with its ends adjustably connected to said arched side rails.

3. In a foot exercising device, a frame comprising arched side rails, a rail connecting the forward ends of said side rails, a handle connecting the rear ends of said side rails, a transversely disposed plate mounted on the apices of said arched side rails and a saddle block adjustably mounted on said plate.

4. In a foot exercising device, a frame comprising arched side rails, a rail connecting the forward ends of said side rails, a handle connecting the rear ends of said side rails, a transversely disposed plate mounted on the apices of said arched side rails, a saddle block adjustably mounted on said plate and a transversely arranged strap positioned in front of said saddle block with its ends adjustably connected to said arched side rails.

ARLYN T. VANCE.