

March 5, 1946.

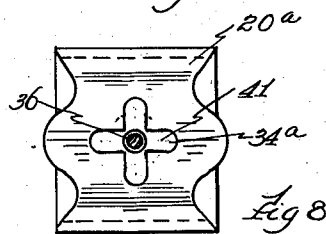
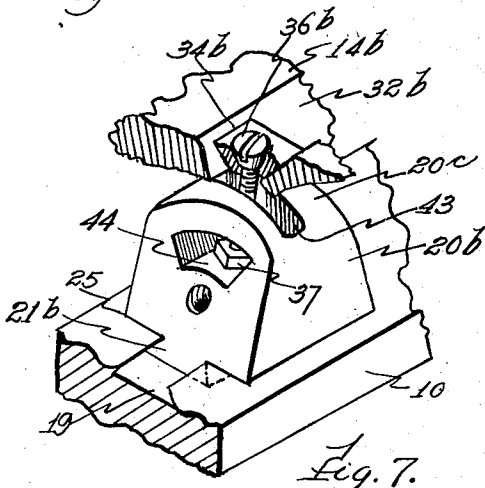
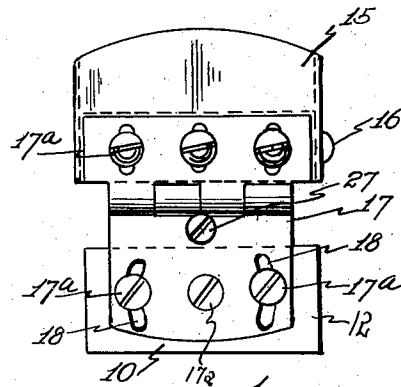
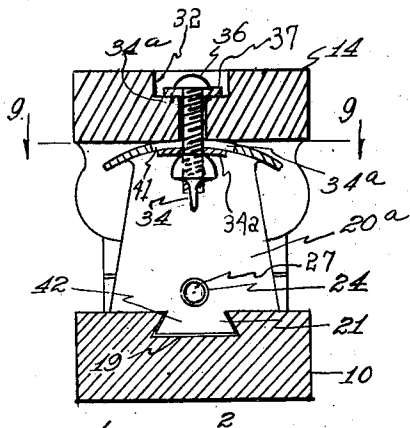
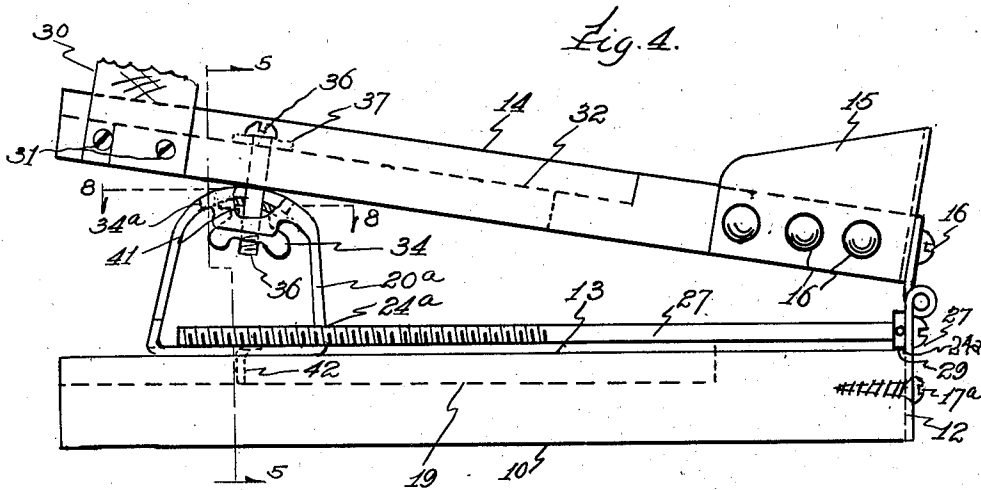
I. OLEISKY

2,395,936

POSTURE CORRECTING DEVICE

Filed Oct. 12, 1944

2 Sheets-Sheet 2



Inventor
Isadore Oleisky.
by John F. Brezina
Attorney.

UNITED STATES PATENT OFFICE

2,395,936

POSTURE CORRECTING DEVICE

Isadore Oleisky, Chicago, Ill.

Application October 12, 1944, Serial No. 558,403

11 Claims. (Cl. 128—80)

My invention relates to an adjustable and foot correcting device and a method of treatment aiming at the cure of acute, chronic and infectious diseases by a correction of the mechanics of the body, adapted to be used by attachments to the human foot or by merely standing on such device for relatively short intervals of time in order to accomplish the benefits hereinafter described.

More particularly my invention is designed and adapted for correcting deformities of the bones, reducing or eliminating abnormal contraction and abnormal stretching of the muscles brought about by improper employment of heel and sole lifts without due regard or understanding of the mechanics of the body.

In treatment, the principle of leverage is employed to fatigue contracted (hypertonic) muscles, thereby causing stretches (hypotonic) muscles to develop spasm which is the only thing that can draw bones, organs and other tissues closer to their ideal position or state. Methods now practiced or applied increase distortion and deformity. The object of my device is to decrease distortion, deformity and fatigue, and to increase vitality and prolongation of useful life. Such objective keeps in mind the correct employment of heel and sole lifts based on the anatomical and medical fact that the feet are the foundation of the body.

Congenital deformities normally maintain a part of the muscles in abnormal contraction and another part thereof in abnormal stretch. In many instances, such deformities are further increased and aggravated by gravity alone, gravity coupled with other forces such as overload, fatigue, diet and other external forces which compel further contraction of the already deformity-set contracted muscles. In some types of congenital deformities, it is the deformities of the bones which determine what particular muscles should be contracted or stretched in order to bring about partial or full correction. Congenital deformities usually cause certain bones to twist exercising torsion and normally creates a state of abnormal strain upon not only the muscles but all parts of the body and causing incorrect posture.

Presently known treatments, having as their purpose the correction of these conditions, both medical and manipulative, have been haphazard, and in the relatively limited number of cases where favorable results have been obtained, they have been accidental.

Correct diagnosis is necessary for successful cure and correction. The symptoms which are

present and which are manifestations of varying degrees of torque caused thereby should be carefully analyzed and it should be ascertained what bones have deviated from the ideal positions.

After this has been ascertained, it can then be determined what bones have deviated from the ideal position and correct determination can be made as to the direction of "drive" that must be imparted to reduce the torsion and deformity of the patient's body. It is indispensable that correct diagnosis and correct treatment be practiced in order successfully to accomplish the elimination of distortion and deformity and so as to avoid any increase thereof. Such practice includes steps which reduce torque and which will move parts of the body in directions opposite to the paths that the parts took in attaining the particular distortion.

In treatment of many types of deformities, it is advisable to employ the principle of leverage to fatigue contracted muscles in order to compel them to gradually return to normal state and thereby to draw the bones and organs to their ideal positions. I have found that in the employment of either sole lifts and of lifts for the toe-ends of the feet, based upon anatomical facts, the feet are the foundation of the body and that the proper treatment will eliminate the deformity which has set the direction of the twist and which treatment will reverse the direction of torque wholly or partly causing deformity.

It is an object of my invention to provide means and devices of the herein described class which may be satisfactorily used for the correction of incorrect posture and of congenital deformities, and which include two or more pivotally connected members adjustable with relation to each other and adapted to be either stood upon at intervals or attached to the feet and walked upon for a relatively short period of time.

A further object of my invention is the provision of adjustable deformity correcting devices comprising portable units which include two or more block-like members which are separable one from the other and which may be mounted and connected together in various relative positions, wherein the upper surface of one of said members will be positioned and inclined in relation with the other, and which units are adapted to support the feet in the desired positions, which positions are necessary for the contraction of some muscles and the stretch of other muscles and for more correct positioning of bones and other parts of the body.

A further object of my invention is the provi-

sion of deformity correcting devices of the class described comprising a plurality of block-like members, certain of which are separably connected, and brace members or spacer-parts adjustably interposed between the separable block-like members and releasably secured in desired positions so as to releasably mount the uppermost member in any desired inclined position with relation to the lower or base member, and which when stood upon or walked with will exercise various muscles in such manner as to gradually correct conditions which cause the deformity.

The object of my invention, therefore is to provide a posture and foot corrective device which at one operation will contribute to the reduction and gradual elimination of faulty posture control.

A further object of my invention is to provide an appliance, apparatus or corrective device for the feet, with adjustable parts and functions to correct congenital and other deformities.

A further object of my invention is to have the adjustable parts function in a manner and mode suited to the needs of the congenital deformity to be corrected.

A further object of my invention is to provide a foot appliance, apparatus or device for the mechanical correction of the evils and ills of torque and torsion in any difficulty.

A further object of my invention is to provide an apparatus, appliance or device which can be used for the correction of congenital and post-congenital deformities resulting from such deformities and in the method of treatment and care of the primary causes of diseases by use of the herein described apparatus, appliance or device as a shoe to be worn and adjusted to suit the needs of the deformity corrective measures and treatment.

A further object of my invention is to provide an apparatus, appliance or device solely as a mechanical medium employed for the correction of body deformities.

Other and further objects of my invention will be apparent from the following descriptions and claims.

My invention is described in the following specifications with reference to numerals of reference on the accompanying two drawings.

Fig. 1 is a side elevational view of my posture an foot correcting device, illustrating certain parts in cross-section.

Fig. 2 is an end elevational view of the right hand end portion of illustration, Fig. 1.

Fig. 3 is a cross-sectional view taken on a vertical plane indicated by line 3—3 of Fig. 1.

Fig. 4 is a side elevational view of the modified form of my posture and foot correcting device, with certain parts broken away.

Fig. 5 is a cross-sectional view taken on a vertical plane, indicated by line 5—5 of Fig. 4.

Fig. 6 is an end elevational view looking at the right hand end portion illustrated in Fig. 4.

Fig. 7 is a perspective view, with parts broken away illustrating an apertured spacer-block constructed of wood instead of the arcuate metal spacer-member 20 in relation to fragments of the base illustrated in Fig. 4, but for the same purpose of being slidably adjustable to achieve the necessary incline of sole- or upper-member 14 of the device.

Fig. 8 is a top plan view of the movable brace which is illustrated in side elevation in the left portion of Fig. 4, and taken substantially along the line 8—8 of Fig. 4.

Fig. 9 is a side elevational view of the foot

corrective device similar to the construction shown in Fig. 4 and including the foot engaging block or member and slidable adjustable block adapted to form a complete satisfactory corrective device which is adjustable either longitudinally or transversely.

Referring to Figs. 1 and 4, reference numeral 10 designates a substantially elongated base or base member which may be made of wood, metal or other suitable material, and which terminates on opposite ends 11 and 12 and whose upper face is designated by numeral 13.

Reference numeral 14 designates a foot engaging elongated member made of wood or other suitable material and of length preferably greater than that of the normal human foot. Said foot engaging member or support 14, preferably, has its heel-end beveled or rounded and an optional arcuate guard 15 fastened to said rounded end by suitable fastening means, such as nails or tacks 16, as illustrated in Figs. 1, 2, 4 and 6.

A suitable hinge composed of a pair of cooperating hinge knuckles, or equivalent pivoting elements and designated as 17 has its upper part secured by suitable fastening means to the heel-end face of the foot engaging or sole-support 14 and preferably beneath the intermediate portion of the heel-guard 15. The lower part of hinge 17, which preferably, though optionally, has its lower edge 17b arcuate and spaced from the lowermost corner of base 10, is adjustably secured to the end surface of base 10 by screws 17a or equivalent releasable fastening means. Said lower part of hinge 17 is preferably provided with a pair of arcuate slots 18 through which the outer screws are mounted, and which screws thread into the heel-end of base 10 so as to provide for optional transverse rocking movement of the foot-engaging support 14 through the medium of adjustable pivoting of said hinge 17, for the purpose of selectively achieving any one or a number of inclined positions of the foot-support or sole-support 14.

The base 10 is provided with an inwardly flaring locking groove 19 extending longitudinally along upper face 13 thereof as illustrated in the cross section of Figs. 3 and 5 and whose general position is illustrated in broken lines in Figs. 1 and 4, and which is also illustrated in Figs. 5 and 7.

Said locking groove 19 forms a guideway and is adapted to receive the integral tongue or extension 21 of the slidable adjustable brace, support or bracket 20, as illustrated in Figs. 3, 5 and 7.

The slidable bracket, support or brace 20 may be made of wood, metal or other suitable material and extends upwardly and terminates in ball, extension or head 22, as illustrated in Figs. 3 and 4. Said ball or head 22 is adapted to slide in slot, groove or channel 23 formed longitudinally in foot-engaging support 14, and which is preferably of narrower breadth at its opening than the breadth of the inner part of said groove or channel 23, as illustrated in Figs. 2 and 3.

The foot-engaging member or pivotal support 14 is provided with a downwardly opening longitudinally extending centrally disposed groove 23, as shown in Fig. 3, and which is of a size to receive rounded head 22 to permit the sliding movement of the latter.

I will now describe the means for adjusting and holding the slidably mounted support, brace or bracket 20, (Figs. 1 and 2) in the desired position to which it may be adjusted according to the requirements of the particular case. This support,

brace or bracket 20 is provided with a transversely extending passage 24 which, in cases where the bracket is made of metal, is internally threaded. In instances where said bracket is made of wood, as in Figs. 1 and 2, an optionally internally threaded nut 25 may be mounted in an enlarged portion of said passage 24. Where nut 25 is mounted as stated, it threadingly engages screw 27.

As shown in Fig. 1, upon one end of base 10 is secured a substantially right-angled bracket 26 by means of a suitable screw or screws as illustrated in Fig. 1, and said bracket 26 has its upwardly extending portion passaged and has inserted therethrough, and rotatively mounted therein, one end portion of an externally threaded adjusting or set screw 27 which threadingly engages the threaded passage of nut 25 in brace 20. Said nut 25 is optionally secured in the enlarged portion of the transverse passage by an optional set screw 28 shown in dotted lines in Fig. 1.

A suitable flange or collar 29 is mounted upon the adjusting screw 27 adjacent to the inner face of the bracket 26. It will be understood that rotation of the screw 27, through means of rotating its accessible head, will move the base or bracket 20 longitudinally with respect to said base 10 and said foot support 14 to effect sliding movement between the head 22 and groove 23 and between the downwardly projecting tongue 21 and groove 19, and that counter-movement will move said base or bracket 20 in the opposite direction so as to selectively position and adjust the foot supporting member 14 at the desired angle and incline from end to end.

Some faulty foot conditions and incorrect posture, especially those which are caused by incorrect and improper muscle actions, require for their partial or full correction that the user exercise those muscles which actually hold the foot in faulty position, and some of these conditions require standing upon the corrective device with the toes towards the lower part and while the user's weight or a part thereof is supported upon the foot. These faulty foot and posture conditions are those which require a stretching of the muscles surrounding the forward portion of the ankle and the contraction of the muscles adjacent the heel. In these types of instances, the user will place his foot upon the corrective device with the toes adjacent and at least partially against the foot retaining member or counter at the lower end of the device, and at the same time support his weight thereon preferably for frequent intervals and as described by a specialist.

The said unit may also be used for temporary periods as a corrective sandal, it being only necessary to utilize straps or uppers capable of being attached about the foot.

Referring to Fig. 4, reference numeral 30 designates a strip of leather or other material fastened at or near the toe end of the foot-engaging elongated member by screws 31.

The degree of the fault of the particular foot, or degree of the incorrect posture as analyzed by an experienced advisor, will determine the positions the foot of the user should be in during corrective treatments, and devices of the construction I describe and illustrate readily permit the change and adjustment of the corrective device to meet the corrective requirements of the foot conditions and incorrect postures.

For example, in some individuals having incorrect posture, a definite fault and conditions are

found in one foot as compared to the other, and after analysis and determination of the exercises to be given to each respective foot and to the body, two separate corrective devices of the general type described may easily be adjusted to entirely different and often opposite positions to be used by the patient by standing thereon for desired periods of time at daily or similar intervals, or by walking therewith after attaching the same with the aid of strap or similar means (as fragmentarily illustrated in Fig. 4 at numeral 30).

Referring to Fig. 4, the base block 10 has secured to its heel-end, substantially as indicated at 12, one portion of a hinge, and the upper block 14 is hingeably or pivotally connected with said hinge by screws or the like in the usual manner as shown in Figs. 4 and 6. The end portion of the upper or sole-support block 14 has secured thereon a flexible counter or retaining member 15 by a plurality of nails as indicated for the purpose herein described.

In the modified form of Figs. 4 and 6, the externally threaded adjusting or set screw 27, instead of being journaled in bracket 26 of Fig. 1, is journaled in a hole in the lower section of hinge 17 (see Figs. 5 and 6), and is held by collar or thrust member 29 secured on screw 27 adjacent hinge 17, as illustrated in Fig. 4.

As illustrated in Figs. 4, 5 and 8, and Fig. 7, the base block 10 has an upwardly opening dove-tail groove 19 therein extending substantially but not entirely along its length. The spaced member or block 20, which may be made of wood, metal or other suitable material, has a downwardly extending dove-tail integral tongue or projection 21 (Fig. 7) which fits into and slidably engages the groove 19; the lower faces of side portions of the base surface of said spacer member 20 sliding along the upper surface of block 10. The upper or sole-supporting block or member 14 has formed therein a longitudinally extending opening or groove 32 which is of a width sufficient to receive the bolt or screw-head 35 of a bolt 36, and said groove 32 extends from the toe-end of block 14 to a substantial distance beyond the mid-point of said block 14.

It will be understood from the foregoing that the brace member 20 is slidably mounted with respect to said base block 10 and upper block 14 and that movement of the brace or spacer member or block in either direction will respectively increase or decrease the incline of upper block 14.

I provide an easily adjustable means for holding the slidably mounted brace member 20, whether by means as illustrated in Figs. 1 and 3, or as illustrated in Figs. 4, 5 and 7, in desired position, or by adjusting to the desired position the angle of the upper block 14 as illustrated in Figs. 4, 5 and 7.

A headed bolt 36, which preferably has a washer 37 thereon, is first inserted through the channel or groove 32 and then into the upper openings or slot 41 formed in the metal bracket or brace 20—a as shown in Figs. 4, 5 and 9. Said slot or opening in the saddle-like brace 20—a is preferably a cross in shape as illustrated in Fig. 8, and a portion of which slot or opening 41 is shown in Fig. 4. The saddle-like brace 20—a is preferably formed of one strip of metal which is bent as illustrated in Fig. 4, and has one end portion thereof terminating in an integral dove-tailed tongue 42 as shown in Figs. 4 and 5. Said downwardly bent projecting tongue slides in the dove-tailed channel or groove 19 of base 10, as shown in Figs. 4 and 5.

The upper portion of said metal brace 20—a is preferably rounded, both in a longitudinal direction with respect to the long axis of the device, as well as transversely, it being understood that when the foot-engaging member 14 is adjusted to tilt or incline in a transverse direction, the under face of the forward portion of the foot-engaging member 14 will nevertheless rest upon some portion of the upper rounded face of the metal brace 20—a, and regardless of what adjusted transverse or longitudinal incline is attained by manually adjusted movement, the bolt 36 will be in a position to project through some portion of said cross-shaped slot 41 so as to efficiently provide for the releasable mounting on the lower threaded end of said bolt 36 of a winged nut 34 as well as a optional washer 34—a above said wing nut 34.

By tightening the released nut 34 after either transverse or longitudinal adjustment in the manner herein described, the forward end portion of foot engaging member 14 will be secured in the desired position as stated. When it is desired to adjust said member 14 to the desired transverse incline, the central screw 1, passing through the lower strap of hinge 17, is released and likewise the outer screws 17—a are released, and after the positioning of the foot-engaging member 14 to the desired incline while the wing nut 34 is released, the screws 17—a of said hinge may be tightened.

Referring to the form of Figs. 4, 5 and 8, the brace 20—a has formed in the upwardly extending portion thereof nearest the hinge 17 a threaded aperture 24—a which is threadingly engaged by the elongated metal adjusting screw 27 which is journaled in an aperture formed in the upper portion of the lower strap of the hinge 17, and which adjusting mounted screw 27 also has secured thereon the thrust and retaining collar 29 as stated.

Referring to Fig. 7, I show therein a slightly modified shape and form of slidable brace 20—b, which has its integral dove-tailed tongue or extension 21—b slidably engaging the dove-tailed groove 19 in the base 10, only a fragment of which is therein illustrated. As shown in this Fig. 7, the block 20—b may be of wood, plastic or other suitable material, and the same has formed therein a transversely extending slot 43 which extends downwardly a short distance and merges with a slot 44 which preferably opens the forward face of said brace 20—b.

In said Fig. 7, I illustrate a broken side intermediate segment of a foot engaging member 14—b having a central longitudinally extending slot 32—b therein, which is preferably bevelled and substantially of V-shaped cross section. A bolt 36—b, preferably having a bevelled washer 34—b thereon, is positioned so that the bevelled surface of said washer 34—b will frictionally engage the under surface partially defining the slot 32—b. A nut 37 is adapted to be releasably secured on the lower end portion of the said bolt 36—b, as partially illustrated in Fig. 7.

The upper face of the brace 20—b is preferably rounded or bevelled and the same is designated as 20—c so that when the foot engaging member 14—b is inclined transversely it will nevertheless rest upon a substantial portion of the said rounded surface 20—c of said brace 20—b.

In Fig. 9 I illustrate the lower parts of brace 20—A as resting directly on the floor or other supporting surface, and with the bottom face of the brace engaging such supporting surface. In this

manner the unit may be satisfactorily used in the aforesaid manner without any base connected thereto.

I desire to point out that the foot engaging block-like member 14, such as illustrated in Fig. 4 may have one end thereof, for example the heel end, positioned directly upon the floor or other supporting surface, and that the movably mounted spacer member, such as 20 or 20—a having a flat bottom surface, may be likewise positioned directly upon a floor or other supporting surface and adjustably positioned to the desirable point so as to support the foot engaging block member 14 at the desired incline. I have illustrated in Fig. 9 this construction which can be satisfactorily used to accomplish the novel advantages and use which I have hereinbefore recited. In such construction wherein the base block may be entirely omitted, the desired position of the brace 20 or 20—a may be attained by loosening the wing nut 34 and bolt 36 and re-tying the same after movement of braces 20 or 20—a to the desired positions.

Inasmuch as many foot deformities and incorrect posture conditions require correction treatment in transverse or side to side direction, my device and particularly the adjusting means including the adjustable typically mounted hinge permit the user to adjust the transversely extending plane of the foot support 14 to the desired degree by releasing the screws 31 of the lower butt-of hinge 17, and pivoting said hinge and thereupon re-tightening said screws 31 to thereby position and hold the foot supporting member 14 in any desired inclined plane which is within the limits of and which would be needed for foot corrective purposes.

I am aware that various changes may be made in the embodiment of the invention herein specifically described without departing from or sacrificing any of the advantages of the invention or any features thereof.

I claim as my invention:

1. In an adjustable foot exercising device; a pair of upper and lower elongated grooved blocks having adjacent ends removably and pivotally connected together at said adjacent ends, the lower block providing a base, said lower block having an upwardly opening longitudinal groove; a pivoting member connecting one adjacent end of each said blocks; a spacer-member having a slidable connection with the base block groove, and having a slidable connection with the upper block whereby longitudinal movement of said spacer-block or member will pivot upwardly one end portion of said upper block and adjust the incline thereof to the desired position.

2. In an adjustable posture correcting device; a pair of upper and lower elongated blocks; having one end thereof adjacent to each other; a pivoting member pivotally connecting said blocks together at one adjacent end; the blocks being substantially flat; a movable spacer-member between and normally engaging said blocks; and screw means rotatably connected with respect to one of said blocks and threadingly engaging said spacer-member so that rotation of said screw will move said spacer-member longitudinally with respect to said blocks to thereby position said upper block in the desired inclined position.

3. In a foot exercising and posture correcting device of the described class, an elongated base; an elongated upper foot-engaging member removably connected to one end of said base; said base having an upwardly opening longitudinal

guideway therein; a spacer-member having an extension slidably engaging the guideway of said base block and having an upper portion engaging said upper block; a threaded adjusting bolt mounted in and engaging said spacer-member; the rotation of the bolt being adapted to slide said spacer-member longitudinally with respect to said blocks to thereby adjust the position of said foot-engaging member.

4. In a foot exercising and posture correcting device of the described class; an elongated base; an elongated upper foot-engaging member removably connected to one end of said base; said base and said upper foot-engaging member having a longitudinal guideway therein; a spacer-member having an extension slidably engaging the guideway of said base block; said spacer-member having an upper extension and a cross pin in said extension, said extension and pin slidably engaging the longitudinal guideway of said upper block; a journaled adjusting bolt threadingly engaging said spacer-member; the rotation of the bolt being adapted to slide said spacer-member longitudinally to adjust the relative positions of said blocks to thereby move said base.

5. In a foot exercising and posture correcting device; a base block; an upper elongated block-like member providing a foot support and separably connected to said base block and adapted to be engaged by the user's foot; a spacing and brace member having a slidable connection with said upper block-like member, whereby said base block is slidable longitudinally to move said block and said member toward or away from each other; and manually adjustable means for sliding said brace member in either direction to thereby adjust the relative positions of said block-like member and said base block.

6. In a foot exercising and posture correcting device; a base block; an upper elongated block-like foot-engaging member separably connected to said base block and adapted to be engaged by the user's foot; a brace member having a slidable connection with said base block and having a slidable connection with said upper block-like member whereby said base block is slidable longitudinally to move said block and said member toward or away from each other; manually adjustable means for sliding said brace member in either direction to thereby adjust the relative positions of said block-like member and said base block; and a foot-engaging member connected to said upper block adapted to aid in retaining the user's foot in position on said upper block.

7. In an adjustable foot exercising device; a pair of upper and lower adjacent elongated grooved blocks; an adjustable hinge removably and pivotally connecting said blocks together at one adjacent end, said hinge having slots thereon; screws securing said hinge to said blocks, said lower block having an upwardly opening longitudinal groove; a brace having a slidable connection

with the base block groove whereby longitudinal movement of said brace will pivot the upper block and adjust the longitudinal incline thereof to the desired position, said hinge being releasable from said blocks to provide for adjusting the transverse incline of said upper block.

8. In a posture correcting device an elongated foot support having a central longitudinal slot therein forming a guideway; a brace member having an upper reduced extension mounted in and slidably engaging said guideway, the lower portion of said brace being adapted to engage a supporting surface; a longitudinally extending adjusting bolt operatively connected to one end of said foot support and having a threaded connection with said brace whereby the said bolt, upon rotating, will move said brace in either direction to adjust the inclination of said foot support.

9. In a posture correcting device, an elongated centrally slotted foot engaging member; a downwardly extending slotted plate secured to one end of said foot support; releasable screws securing said plate to said foot support, said plate being adjustable so as to selectively adjust the transverse incline of said foot support; a downwardly extending brace having its upper portion in sliding engagement with said foot support slot, a releasable screw connecting said foot support and said brace, the longitudinal movement of said brace being adapted to increase or decrease the longitudinal incline of said foot support.

10. In a posture correcting device, an elongated centrally slotted foot support; a downwardly extending slotted plate secured to one end of said foot support; releasable screws securing said plate to said foot support, said plate being adjustable so as to selectively adjust the transverse incline of said foot support; a downwardly extending brace having a ball joint on its upper end in sliding engagement with said foot support slot, a releasable adjusting screw connecting said plate and said brace, the longitudinal movement of said brace being adapted to increase or decrease the longitudinal incline of said foot support.

11. In a posture correcting device, an elongated centrally slotted foot engaging member; an elongated base; a pivotal connecting element connecting one end of said base and of said foot engaging member; a brace having upper reduced portion slidable in the slot of said foot engaging member and the lower end of said base being slidable on said base; said pivotally connecting element being adjustable to selectively set said foot engaging member in varied transversely inclined positions; and an adjusting screw operatively connected to said pivotally connecting member and engaging said brace and adapted, on rotation, to move said brace longitudinally to selectively adjust the longitudinal incline of said foot engaging member.

ISADORE OLEISKY.