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LEG REST

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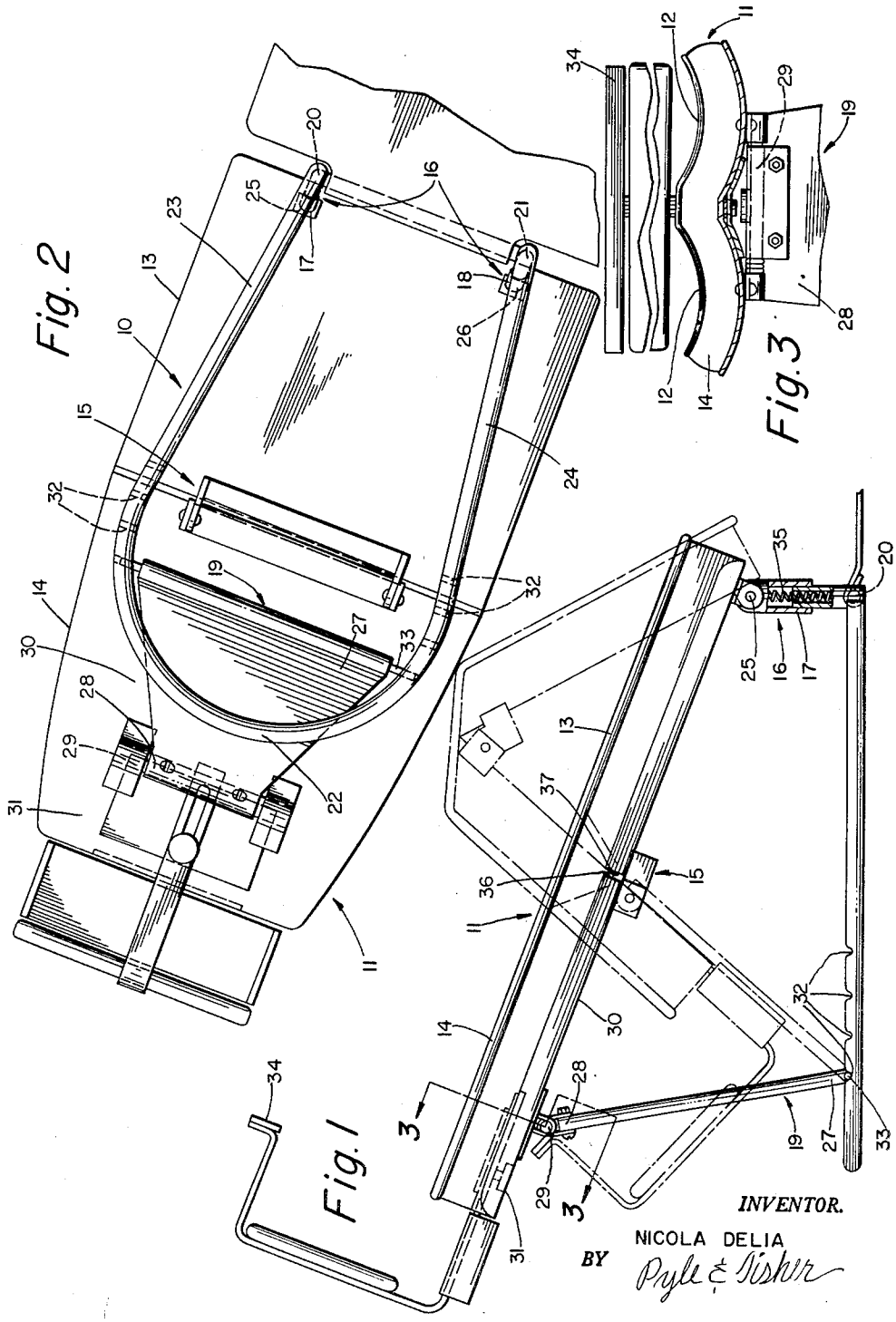


Fig. 1

Fig. 2

Fig. 3

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LEG REST

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This invention relates to leg rest devices and more particularly to leg support devices adapted to be selectively positioned.

It is often desirable to have one's legs supported in an elevated position. Various elevated positions are comfortable to a person and have therapeutic value, such as resting fatigued muscles and helping circulation. Very often doctors recommend that the legs be supported in this elevated position, but full value of this elevated position cannot be achieved with pillows, padding, and the like. Also, only one elevated position may become uncomfortable for a patient over a period of time and greater value can be achieved by shifting to a different elevated position. Most people would prefer to be able to easily and quickly shift the position, unaided by other people, and thereby continuously enjoy the maximum benefits of therapeutic value of elevated support positions. Devices of this type are old in the art, but this invention introduces new and novel means of selectively supporting the legs elevated in either a straight or a bent position.

Therefore, one of the principal objects of this invention is to provide a new and novel device for supporting legs in an elevated position, which position is selectively either a straight or a bent position.

Another object of this invention is to provide a new and novel device adapted so the user can select one of two positions by exerting pressure on the device with his feet.

A related object of this invention is to provide a leg rest which has pivotally joined sections, unsupported at the joint for supporting one's legs in either of two selected positions.

Still another object of this invention is to provide a new and novel leg rest having two leg support sections pivotally joined, a base, and an arrangement of support members between the base and the leg prop section so that the joint may move with respect to the base as the device is changed from one selected position to another.

A further object of the invention is to provide a novel and improved device made in accordance with the foregoing objects and which can be readily collapsed for storage.

Other objects and a fuller understanding of the invention may be had by referring to the following description and claims, taken in conjunction with the accompanying drawings, in which:

FIGURE 1 is a side elevational view of the device;

FIGURE 2 is a bottom plan view of the device of FIGURE 1; and,

FIGURE 3 is a sectional view taken along line 3—3 of FIGURE 2.

Referring to the drawings, a base 10 is provided. The base 10 has a horseshoe configuration with a curved section 22 and a first and second end portion 23 and 24 respectively. The device also includes a leg support 11. The leg support 11 has two parallel leg support channels 12 suitable for comfortably supporting human legs. The leg support 11 also has an upper leg section 13 and a lower leg section 14. A hinge member 15 serves as a pivot means to pivotally join the two leg sections 13, 14. The base 10 carries a first prop member 16 comprising a first support post 17 and a second support post 18. The first support post 17 is joined to the first end portion of the base 23 at 20, and the second support post 18 is joined to the second end portion of the base 24 at 21. Springs 35 act as shock absorbers in each of the support posts 17 and 18. The first support post 17 is pivotally joined to the upper

leg section 13 at 25, and the second support post 18 is pivotally joined to the upper leg section 13 at 26. A second prop member 19 has a second end portion 28 which is pivotally joined to the lower leg section 14 at 29. The curved portion of the base 22 has a plurality of second prop member receiving positioners 32 which may, as in disclosed form, be notches. The second prop member 19 has a first end portion 27 and means consisting of a pin and holder 33 to pivotally connect the first end 27 to the base 10 in selected second prop member receiving notches 32.

The lower leg section 14 has an included portion 30 between the pivotal joint 29 and the hinge member 15. The lower leg section also has an extension portion 31 on the opposite side of the pivotal joint 29. The lower leg section has first shoulder means 36, and the upper leg section has second shoulder means 37. A toe bar 34 is carried by the lower leg section 14 and is in operative connection therewith. A seating pad 40 is provided which is attached to the base 10, and is adapted to lie flat on the floor, to provide support for the torso of the user.

Because of this new and novel construction of the therapeutic device, it is possible for the person using it to rest his legs to exert pressure on the toe bar and select one of two positions.

In the first or straight position, which is best illustrated in FIGURE 1, it will be seen that the lower leg section 14 forms a continuation of the upper leg section 13 in the same plane, and the leg support 11 is at an angle with the base 10. It will be seen in this position that the legs are held straight and at an angle with the body. The second prop member 19 in this new and novel construction forms an acute angle with the included portion 30; the first and second shoulder means 36, 37 are in abutment. This second operative position is shown in phantom in FIGURE 1. In this position the upper leg section 13 and the lower leg section 14 are in angular relationship with each other which could be characterized as a bent position to provide knee support. In the bent or second position, the second prop member 19 forms an obtuse angle with the included portion 30; the first and second shoulders 36 and 37 are not in abutment. In the bent position the extension portion 31 abuts the second prop member 19, and the hinge member 15 is at a greater distance from the base 10 than in the straight position. It will be seen that in this bent position the legs are bent at the knees, but still both the upper and lower legs are supported.

Because of this new and novel design it is possible for the person using the device to change from the straight to the bent position or bent to straight position by exerting pressure with his feet while he remains in a reclined position. To change the device from the straight position to the bent position, the person exerts a pressure on the toe bar 34 in a direction generally down and toward himself. As he exerts this pressure, the upper leg section 13 and lower leg section 14 will pivot about the hinge member 15, and the hinge member 15 will move away from the base 10. At the same time the second prop member 19 will move in an arcuate path about the pivotal connection 33. These two related actions will cause the angle formed by the second prop member 19 and the included portion 30 to change from acute to obtuse and this action will continue until it is arrested by the extension portion 31 coming into abutment with the second prop member 19.

To change from the bent position to the straight position the person using this new and novel device exerts a pressure by his feet on the toe bar in a direction generally up and away from himself. The movement of the parts will be exactly reversed from what it was in changing from the straight to the bent position, and the movement will continue until the first and second shoulder means 36 and 37 abut. A person need not remove his legs from this

device while it is being changed from one position to another, nor does he need outside help to change positions; nor does he need to use any part of his body other than his legs. During the change from the straight position to the bent position the person's legs rest on the device and his legs move from a straight to a bent position. In fact his legs and feet provide, in part, the motive power to change from one position to another. Also in changing from the bent to the straight position, the person's legs remain on the device and move with it going from a bent position to a straight position.

Although this invention has been described in its preferred form with a certain degree of particularity, it is understood that the present disclosure of the preferred form has been made only by way of example and that numerous changes in the details of construction and the combination and arrangement of parts may be resorted to without departing from the spirit and the scope of the invention as hereinafter claimed.

What is claimed is:

1. A leg rest device comprising an elongated base, a leg support having two parallel leg support channels, said leg support having upper leg section and lower leg section, a hinge member pivotally joining said upper and lower leg sections of said leg rest, a first prop member comprising first and second support posts, said support posts carried by said base and substantially normal thereto, said first and second support posts being parallel to each other and approximately equal in length, each of said support posts being pivotally joined to said upper leg section of said leg rest at places spaced from said hinge member; a second prop member having first and second spaced end portions, said second prop member being longer than either of said support posts, said second end portion of said second prop member being pivotally joined to said lower leg section of said leg rest away from said hinge member, said lower leg section having an included portion between said hinge member and said pivotal joint of said second prop member, and said lower leg section of said leg rest, and having an extension portion on the opposite side of said pivotal joint of said lower leg section of said leg rest and said second prop member; said first end portion of said second prop member being pivotally connected directly to said base; said device having first and second operative positions, in said first operative position said lower leg section of said leg rest forming a continuation of said upper leg section of said leg rest in the same plane as said upper leg section, in said first operative position said second prop member and the said included portion of said lower leg section forming an acute angle; in said second operative position said first and second sections of said leg rest being at an angle with respect to each other, in said second position the second prop member and the included portion of said lower leg section forming an obtuse angle, in said second position said extension portion of said second section of said leg rest abutting said second prop member, in said second position said hinge member being spaced farther from said base than in said first position, said lower leg section having first shoulder means, said upper leg section having second shoulder means, said first and second shoulder means in abutment in said first operative position; and a toe bar extending from said second section of said leg support and in operative connection therewith, whereby exerted pressure on the toe bar is transmitted to select said first and second positions.

2. A leg rest comprising, a leg support having an upper leg section and a lower leg section, hinge means pivotally joining said sections together in longitudinally aligned relationship, said sections being relatively pivotal about the axis of the hinge means from an aligned straight position to a bent position, a first prop member pivotally connected to said upper leg section at a place spaced from said hinge means, said first prop member being carried directly by said base, a second prop member spaced from the first prop member and pivotally connected directly to said base, said second prop member being pivotally joined to said lower leg section at a place spaced from said hinge means, said hinge means including means co-actable with the sections to limit relative pivotal movement in one direction and thereby locate said straight position, and said second prop member co-acting with the lower leg section and thereby locating the bent position.

3. In the device of claim 2 the provision of a toe bar extending from said lower leg section and in operative connection therewith, said toe bar positioned to transmit selectively applied force to move the leg rest from the straight position to the bent position and from the bent position to the straight position.

4. In a leg rest having a base, a leg support including an upper and a lower leg section, hinge means pivotally joining said sections, first and second spaced members carried by the base and pivotally joined to the upper and lower leg sections respectively, said leg rest having a bent position and a straight position wherein the upper and lower leg support sections are aligned, the improvement which comprises, a toe bar, said toe bar being rigidly connected to the lower leg section, said toe bar having a foot receiving portion spaced from said lower leg section and having a pair of pressure transmitting surfaces each parallel to said lower leg section, said surfaces being adapted to transmit a force applied to one surface to cause the leg rest to move to its straight position and a force applied to the other surface to cause the leg rest to move to its bent position.

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