This invention relates to leg rests for invalids and the like and more particularly to such a device for supporting a leg of an invalid or other patient in a selectively elevated, bent, or other position for comfort or treatment of the leg.

The objects of the invention are to provide a leg rest which is adjustable to support a leg in different positions and in any desired relative angle when the person is sitting in a chair or lying on a bed; to provide a leg rest that is adjustable in height at each end and also at a point accommodating the knee joint for proper elevation and inclination of the various parts of the leg; to provide a leg rest which is substantially collapsible whereby when not in use it may be conveniently stored to occupy a minimum of space; to provide a leg rest that is adjustable in length from the knee to the foot portion for accommodating various sized persons; to provide a leg rest member with cushioned coverings to protect the leg from contact with metal or the like members of the structure; and to provide a leg rest of sturdy construction, neat in appearance, that is simple and easily adjusted to any desired elevation and inclination for the proper positioning of the leg member.

In accomplishing these and other objects of the present invention, I have provided improved details of structure, the preferred forms of which are illustrated in the accompanying drawings, wherein:

Fig. 1 is a perspective view of a leg rest constructed in accordance with the present invention.
Fig. 2 is a side elevation of the leg rest.
Fig. 3 is a longitudinal sectional view through the leg rest taken on the line 3—3, Fig. 1.
Fig. 4 is a side elevation of the leg rest with the portions thereof at different elevations and inclinations from that shown in Fig. 2.
Fig. 5 is a transverse sectional view through the leg rest on the line 5—5, Fig. 4.

This invention provides a mounting which permits the leg section 22 to be pivoted relative to the bracket 19 and also adjusted vertically thereof due to the slot 21 in the flanges 20. The narrow end of the section 23 terminates as at 34. Arms 35 extend longitudinally along the section 23 and are secured thereto, said arms extend beyond the end 34 of said section and are provided with apertures 36 for pivotally mounting the end of the section 23 as later described.

The leg supporting section 26 is arcuate in transverse cross section and is preferably formed of metal or the like. The end 37 of section 26 is provided with a flange 38 suitably secured to arms 39 adjacent the side edges 40 of the section 26.
the arms 32 extending longitudinally alongside of the section 26 and in spaced relation thereto to permit section 25 to slide between the arms 39 in the section 25. The arms 39 extend beyond the end 37 of the section 26 and have laterally extending threaded shanks 41 adapted to extend through the apertures 36 in the arms 35 for pivotal connection said arms 35 and 39 with the adjacent ends 34 and 37 of the sections 23 and 26 in spaced relation. The shanks 41 extend through apertures 42 of bar members 43 and threaded on said shanks are nuts 44 for drawing the arms 35, 39 and bar 43 into tight engagement whereby said respective members are selectively pivotal or may be rigidly secured together.

The bars 43 are slidably and telescopically mounted in sleeves 45 adapted to extend downwardly along the outer side of the flanges 10 of the rails 7 and 8. The lower ends of the sleeves being provided with laterally and inwardly extending lugs 46 which extend through the slots 11 and are adapted to engage the notches 12. The inner ends of the lugs are preferably provided with heads 47 whereby the heads and sleeves cooperate to prevent lateral displacement of the sleeves relative to the flanges 10. With this arrangement the lugs may be selectively placed in any of the notches 12 to cooperate with the telescoping mounting of the bars 43 in the sleeves 45 for adjusting the height of the connection of the arms 35 and 39 above the connection of the arms 43 and 39 above the connection of the bar 43 relative to the sleeve 45 to form a rigid structure having the leg supporting section 23 secured in selected position.

Movement of the lug 46 into engagement with the various notches provides a quick adjustment of the height of the central portion of the leg support and the adjustment of the position of the bar 43 relative to the sleeve 45 provides additional adjustment, but when the lugs 46 are engaged with the notch 12, the setscrews tightened and the nuts 44 and 39 tightened to form a rigid structure the leg supporting section 23 is secured in selected position.

The leg supporting section 25 is preferably formed of sheet metal and is arched in transverse cross section to conform to the curvature of the section 25 to permit sliding engagement of the respective sections. The section 25 is preferably provided with laterally and outwardly extending threaded shanks 50 longitudinally spaced thereon and adapted to extend through spaced slots 51 extending longitudinally of the arms 39, nuts 52 being threaded on the shanks 50 to rigidly secure the leg supporting sections 25 and 26 against relative longitudinal movement when adjusted to the selected length of the combined sections.

The free end of the leg section 25 is preferably provided with a bar member 53 extending transversely and secured to the under face thereof, said bar member terminating in legs 54 having ends provided with laterally extended threaded shanks 55 adapted to extend through apertures 56 in the ends of bar members 57, nuts 58 being threadedly mounted on the shanks 55 to engage the bar members to the legs 54 and form rigid connections therebetween. When the nuts 58 are loosened, the bars 57 may be pivoted relative to the leg 54.

The bars 51 are slidably and telescopically mounted in sleeves 59 which extend downwardly along the outside of flanges 16 of the rails 13 and 14. The ends of the sleeves 59 are provided with lugs 60 which extend inwardly through the slots 17 and are adapted to be selectively positioned in the notches 18, the inner ends of the lugs 60 preferably being provided with heads 61 to prevent disengagement of the sleeves 59 from the flanges 19. The sleeves 59 are provided with setscrews 63 threaded therein and adapted to engage the bars 57 for securing the bars and sleeves in selected adjusted position. With this arrangement the selective placement of the lugs 60 in the notches 18 and the selective extension of the bars 57 relative to the sleeves 59 will provide selective adjustment of the height of the end of the leg member 25 above the base 2. A cushion of sponge rubber or other suitable material 62 is preferably cut to conform to the curvature of the leg sections 23, 25 and 26 whereby the side edges 63 of said cushion extend slightly beyond the side edges of the respective support members to protect the person in contact with said side edges. It is preferred that the cushion member be of one piece and extend beyond the free end of the leg supporting section 25 as at 64 whereby the heel of the person does not have a rigid support.

The leg rest may be used with or without a foot support. In cases where a foot support is deemed desirable, an arm 55 having a longitudinal slot 65 therein is secured to the underside of the leg support section 25 by a screw and nut arrangement 66, whereby said arm may be selectively adjusted longitudinally of the leg supporting member 25. The arm is positioned downwardly and upwardly as at 61 and has its ends secured as at 65 to a plate member 66 which extends substantially perpendicularly to the leg supporting member 25. The plate 69 is preferably provided with a cushion member 70, such as sponge rubber, or the like, to engage the bottom of the foot of a person whose leg is supported on the leg rest. The foot support, being adjustable longitudinally of the leg supporting member 25 and only the end 64 of the cushion 82 being under the heel of the foot, provides the proper pressure on the ball of the foot to hold same in position.

In using the device constructed as described, the nuts 33, 44, 52 and 59 are all loosened and the lugs 45 and 60 disengaged from the notches 12 and 18 respectively whereby the leg supporting members may be collapsed substantially to the upper surface of the base to occupy a minimum space, as for storage. This collapsed condition is also desirable when placing the rest under the leg of an invalid or other patient, then by locating the shanks 41 which form the pivotal connection of the arms 35 and 33 in alignment with the knee joint, the leg supporting sections 25 and 26 may be extended or collapsed as desired to adjust same to the proper length for the lower leg of the patient. The nuts 52 may then be tightened to secure the leg supporting sections 25 and 26 in adjusted position. The telescoping braces formed by the bars 43 and sleeves 45 are then moved by disengaging the lugs 45 from the notches 12 and moving same in the slots 11 to raise the pivotal connection of the arms 35 and 39. When the desired position of the telescoping brace member is obtained, the lugs 46 are engaged with the adjacent notch 12 and the setscrews 49 may be loosened to further adjust the bars 43 relative to the sleeves 45 to provide the proper adjustment of the height of the knee of the patient. The setscrew 48 is then tightened. The end 27 of the leg section 23 is raised until said section provides the proper sup-
port under the thigh portion of the leg. The nut 53 is then tightened to retain the section 23 in adjusted position.

The telescoping braces formed by the bars 57 and sleeves 58 are then moved to disengage the lugs 59 from the notches 18 whereby said lugs are moved along the slots 17 to raise the free end of the leg supporting portion formed by the sections 25 and 26. The lugs 59 may be engaged with suitable notches 18 to provide approximately the desired angularity of the telescopic braces and then by loosening the setscrews 61 and adjusting the relative position of the bars 57 in the sleeves 58 the proper adjustment of the free end of the supporting sections 25 and 26 may be obtained. The setscrew 61 is then tightened.

The nut 66 is loosened whereby the arm 65 may be moved relative to the leg section 25 until the cushion 55 on the plate 49 engages the ball portion of the foot to support same in proper position.

It will be evident that the sectional character of this leg and foot rest is adapted for use in a variety of conditions and any place where it may be desired to take a leg in an elevated or bent position and may be adjusted to provide desired inclination and support according to the needs of the patient. Also the leg rest may be used with traction devices for the treatment of fractures and the like. By being constructed of sheet metal or other light weight material it may be inexpensively manufactured but when in use forms an effective and secure support for the leg throughout the length thereof as desired.

The invention may be more fully understood from the following detailed description, in which reference is made to the accompanying drawings and in which:

What I claim is:

Patent is:

1. A leg rest comprising, an elongated base, an elongated leg support including a plurality of sections, one of said sections being spaced longitudinally from the next adjacent section, means pivotally connecting the spaced sections, means adjacent each end of the leg support and having adjustable connection with the base for adjacent supporting the respective ends of the leg support in selected spaced relation to the base, brace means adjustable in length and connected to the leg support intermediate its ends and adapted to be clamped thereto, and means on said brace means for adjustably connecting same to the base for supporting the intermediate portions of the leg supporting sections in selected spaced relation with the base whereby the sections are inclined relative to the base.

2. A leg rest comprising, an elongated base, an elongated leg support including a plurality of sections, one of said sections being spaced longitudinally from the next adjacent section, means pivotally connecting the spaced sections, means adjacent each end of the leg support and having adjustable connection with the base for adjustably supporting the respective ends of the leg support in selected spaced relation to the base, brace means adjustable in length and connected to the means for pivotally connecting the sections and adapted to be clamped thereto, and means on said brace means for adjustably connecting same to the base at points spaced longitudinally of said base for supporting the intermediate portions of the leg supporting sections in selected spaced relation with the base whereby the sections are inclined relative to the base.

3. A leg rest comprising, an elongated base, an elongated leg support including a plurality of sections, means adjustably connecting one of the sections to the base for adjustment of the spacing of one end thereof from the base and adapted to be clamped thereto, brace means adjustable in length pivotally connected adjacent to the other end of said section and adapted to be clamped thereto, means on the brace means for adjustably connecting same to the base at points spaced longitudinally thereof for supporting said section at selected inclined positions, means connecting the other leg support sections for adjustment longitudinally relative to each other, one of said other sections being pivotally connected to the adjustable brace means and means adjustably connected to the base for adjustably supporting said other sections in inclined positions relative to the base.

4. A leg rest comprising, an elongated base, an elongated leg support including a plurality of sections, means adjustably connecting one of the sections to the base for adjustment of the spacing of one end thereof from the base and adapted to be clamped thereto, brace means adjustable in length pivotally connected adjacent to the other end of said section and adapted to be clamped thereto, rails extending longitudinally of the base and having a plurality of spaced notches, means on the brace means for selectively engaging said notches for supporting said section at selected inclined positions, means connecting the other leg support sections for adjustment longitudinally relative to each other, one of said other sections being pivotally connected to the adjustable brace means and means adjustably connected to the base for adjustably supporting said other sections in inclined positions relative to the base.

5. A leg rest comprising, an elongated base, an elongated leg support including a plurality of sections, means adjustably connecting one of the sections to the base for adjustment of the spacing of one end thereof from the base and adapted to be clamped thereto, brace means adjustable in length pivotally connected adjacent to the other end of said section and adapted to be clamped thereto, rails extending longitudinally of the base and having a plurality of spaced notches, means on the brace means for selectively engaging said notches for supporting said section at selected inclined positions, means connecting the other leg support sections for adjustment longitudinally relative to each other, one of said other sections being pivotally connected to the adjustable brace means and means adjustably connected to the base for adjustably supporting said other sections in inclined positions relative to the base.

AURELIA E. KENWORTHY.

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