

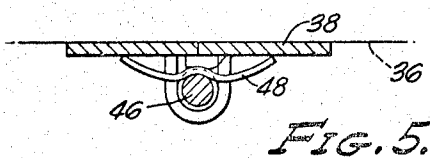
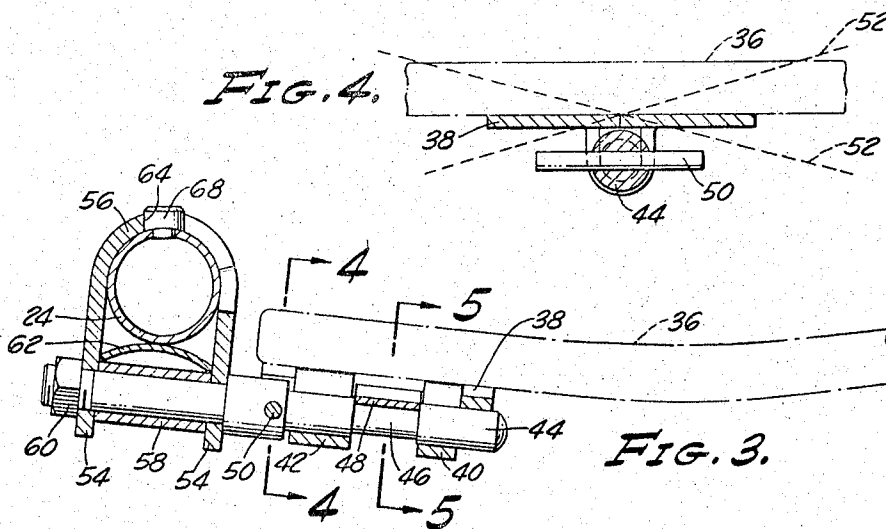
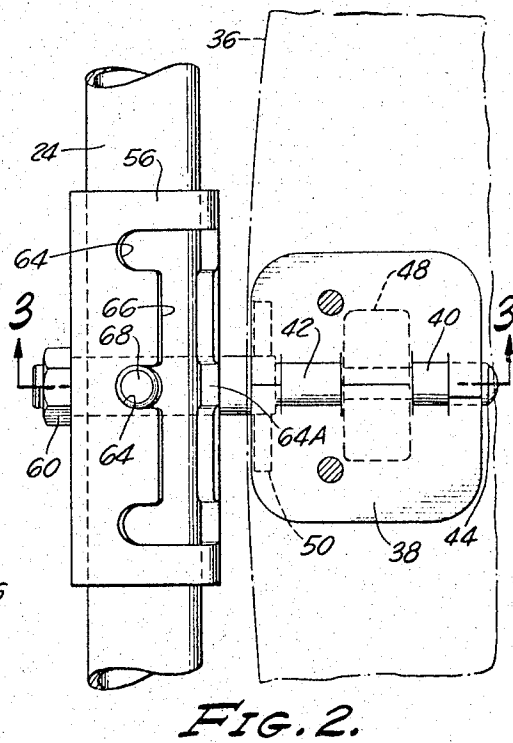
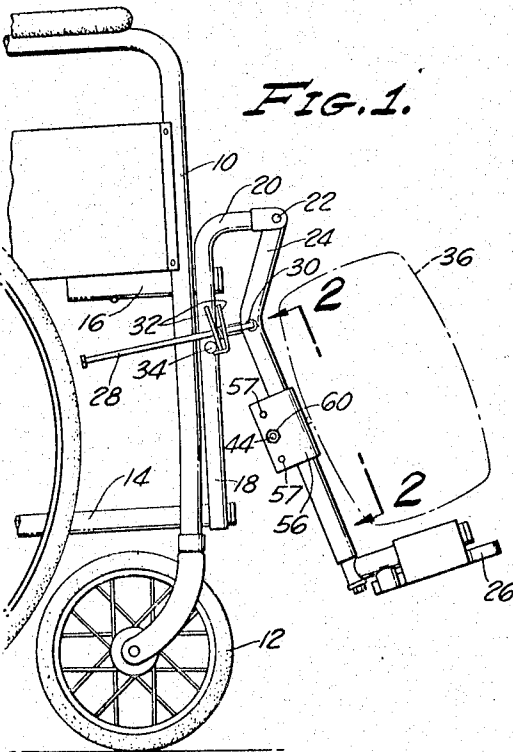
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ADJUSTABLE LEGREST FOR WHEEL CHAIRS

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ADJUSTABLE LEGREST FOR WHEEL CHAIRS

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2 Claims. (Cl. 297—437)

This is a division of my copending application Serial No. 332,686, filed December 23, 1963, for Adjustable Legrest for Wheel Chairs, now Patent No. 3,249,388, granted May 3, 1966.

This invention relates to a legrest for wheel chairs and more particularly one which is adapted to be utilized with and supported by a wheel chair footrest structure.

It is an object of the invention to provide a legrest structure which will support an intermediate portion of the lower leg, such as the calf of the leg, wherein the legrest can be swung into and out of a leg-supporting position and also can be adjusted longitudinally of the footrest structure so that it can be accommodated to patients whose legs vary in length, and also to different required positions of leg support for medical purposes.

Another object of the invention is to provide a simply constructed and readily adjustable legrest which can be easily manipulated without tools by the patient if desired.

A further object of the invention is to provide a legrest structure wherein the structure providing the swinging movement and the longitudinal adjustment on the footrest is incorporated in a single unit which is economical to manufacture and does not interfere with the comfort of the patient.

The above and other objects of the invention will more fully appear from the following description in connection with the accompanying drawings, in which:

FIG. 1 is a side elevational view of the forward portion of the wheel chair with an embodiment of the invention incorporated therewith, the legrest panel being shown in broken lines;

FIG. 2 is an enlarged fragmentary detail taken approximately on the line 2—2 of FIG. 1;

FIG. 3 is a sectional detail taken approximately on the line 3—3 of FIG. 2;

FIG. 4 is a sectional detail taken approximately on the line 4—4 of FIG. 3;

FIG. 5 is a sectional detail taken approximately on the line 5—5 of FIG. 3.

In FIG. 1 there is shown the side forward portion of a wheel chair including a forward upright frame member 10 supported by a caster wheel 12. The wheel chair includes a lower frame side member 14 and an upwardly spaced horizontal tubular member 16 which support between their forward ends a vertical member 18 having a forwardly disposed upper end 20 to which is pivotally secured at 22 a footrest bracket 24. The footrest bracket extends generally downwardly and has suitably mounted thereon a footrest 26, the details of which are not shown because they are not pertinent to the present invention. The footrest bracket 24 is adapted to swing forwardly and upwardly and be held in any desired position to which it is swung by means of a rod 28 pivotally secured to the footrest bracket 24, as indicated at 30. The rod 28 passes through a pair of spring-biased locking plates 32, one of which is secured to the footrest upright member 18, as shown at 34.

The legrest unit includes a legrest panel 36 having a plate 38 on its underside. Said plate 38 has a pair of U-shaped lugs 40 and 42 bent downwardly therefrom to provide journals for a supporting pivot pin 44. The pivot

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pin has a reduced portion 46 against which bears a leaf spring 48, best shown in FIG. 5, the ends of the spring being bowed to press against the underside of the plate 38. With this construction the plate 38 and legrest panel 36 can be oscillated about the supporting pivot 44 and frictionally held in the adjusted position of tilt or oscillation. Tilting or oscillating movement of the legrest panel 36 is limited by pin 50 which extends through the pivot pin 44 beneath the plate 38, as shown in FIGS. 2, 3 and 4. The limit of tilt of the legrest panel is provided by contact of the plate 38 with either end of the pin 50, and such limit is indicated by the broken lines 52 in FIG. 4.

The pivot pin 44 extends to the left, as shown in FIGS. 2 and 3, through the straight parallel arms 54 of a U-shaped clamp 56 which lies about the cylindrical footrest bracket 24.

Between the arms 54 on the pivot pin 44 is a spacer bushing 58 and the left end of the pivot pin is provided with a nut 60 by means of which the clamp arms 54 are tightened against the ends of the bushing 58. A bowed leaf spring 62 is interposed between the clamp arms 54 and an adjacent portion of the cylindrical footrest bracket 24 to provide a frictional bracket on the clamp 56 when it is moved relative to the footrest bracket 24.

The clamp 56 is provided with three slot portions 64 which are disposed circumferentially of the cylindrical footrest bracket 24, and said slot portions 64 are connected by a longitudinally disposed slot portion 66 which intersects the arcuate slot portions 64 between the ends of the latter. A pin 68 extends into and is welded or otherwise secured to the cylindrical bracket 24 and is of such diameter that it will be received in the circumferential slot portions 64 and the longitudinal slot portion 66 of the clamp 56.

The legrest panel 36 with its supporting pivot pin 44 and the clamp 56 can be swung about the cylindrical bracket 24 and relative to the pin 68 by partial rotation of the clamp 56 about the bracket with the pin 68 aligned with one of the circumferential slot portions 64.

In the position shown in FIG. 2, the legrest 36 is in leg-supporting position. The locking pin 68 is in the left end of the intermediate circumferential slot portion 64. If the legrest is swung counter-clockwise, the clamp 56 of course will move in the same direction and the locking pin 68 will move to the right portion 64A of the intermediate circumferential slot portion 64. Then the legrest will lie generally in a vertical plane, as indicated in FIG. 1, and be prevented from moving longitudinally of the footrest bracket 24.

When it is desirable to move the legrest downwardly on the footrest bracket 24, the legrest and its clamp 56 are swung to align the locking pin 68 with the longitudinally disposed slot portion 66, and the clamp pushed down on the footrest bracket 24 until the pin 68 lies in the upper circumferential slot portion 64. Conversely, the legrest can be moved upwardly on the footrest bracket 24, and the locking pin 68 disposed in the lowermost circumferential slot portion 64. If the footrest is then swung clockwise, the pin 68 will lie in the left end of the lower circumferential slot 64 and be held in leg-supporting position and locked against movement longitudinally of the footrest bracket.

In order to provide for additional lengthwise adjustment of the clamp 56 on the cylindrical footrest bracket 24, the clamp is provided with transversely axial apertures 57, as indicated in FIG. 1. The pivot pin 44 can be inserted in either of said apertures 57 to move the legrest 36 longitudinally of the footrest bracket 24 distances additional to those longitudinal adjustments provided by the locking pin 68 and the circumferential groove portions 64.

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From the foregoing, it will be seen that I have provided a legrest structure for wheel chairs wherein the legrest can be swung into and out of the leg-supporting position and also can be adjusted lengthwise of the footrest bracket to accommodate the support to patients of different heights and leg lengths, or for other therapeutic or medical reasons. The adjusting structure is simple and easily manipulated and is compact and does not interfere with the comfort of the patient.

It will, of course, be understood that various changes can be made in the form, details, arrangement and proportions of the various parts, without departing from the spirit of the invention.

I claim:

1. In combination with a wheel chair having a cylindrical footrest bracket thereon, a legrest panel for said bracket, a clamp supporting said legrest panel and lying at least partially about said footrest bracket, one of said footrest bracket and clamp having pin means thereon, and the other having slot means receiving the pin means for relative movement of the pin means in the slot means,

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said slot means having a longitudinal portion lying lengthwise relative to the longitudinal axis of the cylindrical footrest bracket, said slot means also having at least a pair of circumferentially disposed portions spaced longitudinally disposed portion spaced longitudinally of said longitudinal portion and being of substantially the same shape at opposite sides of said longitudinal slot means.

2. The structure in claim 1, and said longitudinal and circumferential slot portions each having parallel side walls.

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