

July 1, 1952

H. A. EVEREST ET AL

2,601,889

DETACHABLE FOOTREST FOR WHEEL CHAIRS

Filed Aug. 1, 1949

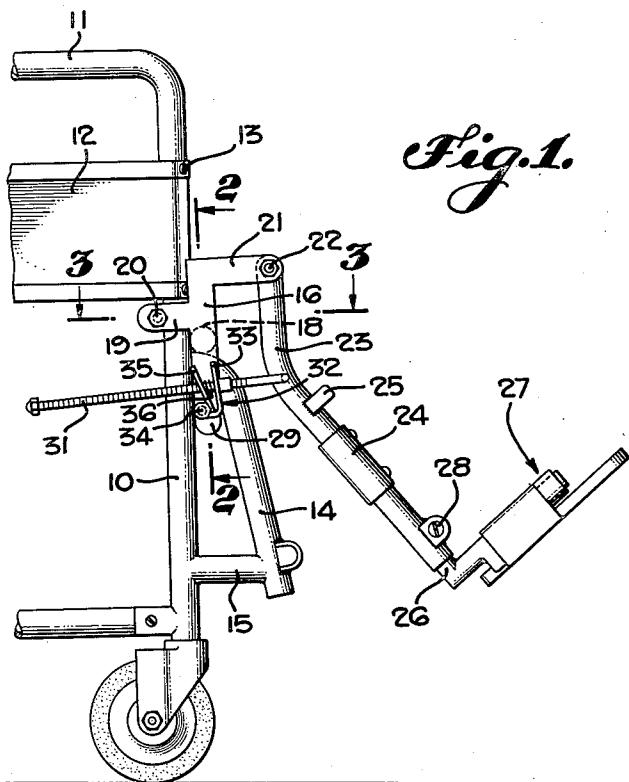


Fig. 1.

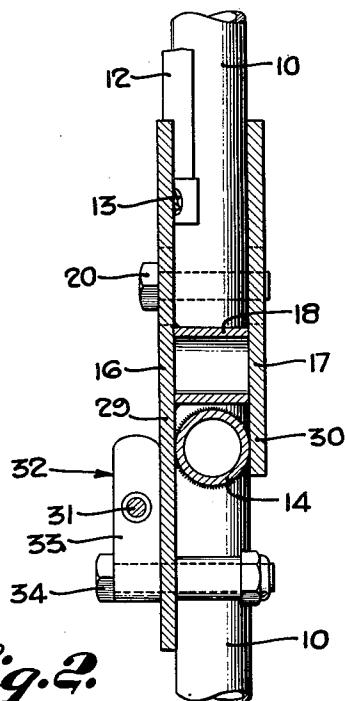


Fig. 2.

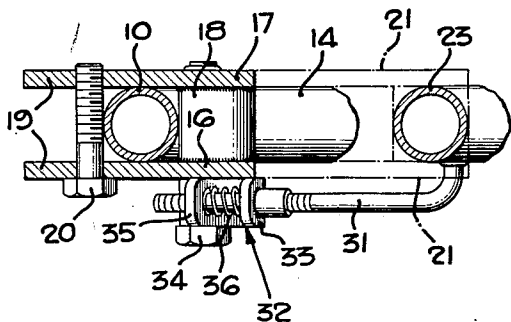


Fig. 3.

HERBERT A. EVEREST,
HARRY C. JENNINGS,
INVENTORS

BY
Hazard & Miller
ATTORNEYS

UNITED STATES PATENT OFFICE

2,601,889

DETACHABLE FOOTREST FOR
WHEEL CHAIRSHerbert A. Everest and Harry C. Jennings,
Los Angeles, Calif.

Application August 1, 1949, Serial No. 107,874

5 Claims. (Cl. 155—171)

1

2

This invention relates to a detachable footrest for wheel chairs and the like.

An object of the invention is to provide a wheel chair foot and leg rest which can be optionally applied to a wheel chair or removed therefrom.

Another object of the invention is to provide a detachable foot and leg rest for wheel chairs consisting essentially of a clamp that may be applied to the leg of a conventional wheel chair and which has pivotally connected thereto a foot and leg rest which can be held in any adjusted position by means of a brace and a clamp engageable therewith which is pivotally mounted upon the first-mentioned clamp. A feature of the construction resides in the fact that the clamp which is applicable to the leg of the wheel chair is so designed as to arrange the pivot for the foot and leg rest at a point slightly above and somewhat forwardly of the forward edge of the seat of the wheel chair so that the axis of swinging movement of the foot and leg rest will substantially coincide with the axis of swinging movement at the knees of the user of the chair. By such an arrangement as disclosed in our copending application Serial No. 617,022, filed September 18, 1945, now Patent No. 2,520,309, considerable ease is afforded the user of the chair in all positions of adjustment of the foot and leg rest.

Many conventional types of wheel chairs are now in general use which have arms or bars rigidly secured to the forward sides of the forward legs of the chair and which extend forwardly and downwardly therefrom and which have been utilized heretofore to mount a footrest at their lower ends. The improved detachable foot and leg rest is so designed that its clamp by which it can be attached is arranged to engage this downwardly and forwardly extending arm and thus assist in holding the clamp against displacement.

With the foregoing and other objects in view, which will be made manifest in the following detailed description and specifically pointed out in the appended claims, reference is had to the accompanying drawings for an illustrative embodiment of the invention, wherein:

Figure 1 is a partial view in side elevation of a portion of a conventional wheel chair illustrating the detachable foot and leg rest embodying the present invention as having been applied thereto;

Fig. 2 is a vertical section taken substantially upon the line 2—2 upon Fig. 1; and

Fig. 3 is a horizontal section taken substantially upon the line 3—3 upon Fig. 1.

Referring to the accompanying drawings wherein similar reference characters designate

similar parts throughout, 10 indicates a forward leg of a conventional wheel chair at the top of which there is an arm rest 11. 12 indicates a side of the wheel chair which is connected such as by rivets 13 to the leg 10. The seat (not shown) for the wheel chair is positioned approximately even with the bottom of the side 12 when the chair is in expanded or extended condition at the time of use. Many conventional wheel chairs now in use have arms or bars 14 secured to the forward sides of the legs 10 and which extend downwardly and forwardly therefrom. These bars are usually braced at their lower ends as indicated at 15 and when present have been utilized to mount a footrest thereon.

The improved detachable footrest consists of a form of clamp composed of opposed clamping members 16 and 17. These members are connected together by means of a spacer 18 welded or otherwise secured between the opposed members so that they are rigidly secured to each other. Above the spacer the members 16 and 17 provide rearwardly extending ears 19 which are apertured to receive a clamping bolt 20 disposed behind the leg 10. This bolt serves to draw the opposed ears towards each other into clamping engagement upon the leg 10 it being understood that the width of the spacer 18 is substantially equal to the width or thickness of the leg 10 so that it is merely necessary to spring the ears towards each other on tightening the bolt 20 to effect a clamping engagement.

The members 16 and 17 also provide above the spacer 18 a pair of angular ears 21 that extend upwardly and forwardly so as to position a pivot pin 22 supported thereby slightly above and somewhat forwardly of the forward edge of the seat. This pivot pin is located so as to be substantially coincident with the axis of swinging movement at the knees of the average user of the wheel chair. A foot and leg rest is pivoted by means of the pivot pin 22 between the angular ears 21. This foot and leg rest consists of a tubular member 23 that is preferably angular in form and which has adjustably mounted thereon by means of a friction clamp 24 a leg rest (not shown) which is engageable with a stop 25 when swung from its normal position or that position in which it is used. The bottom of the arm 23 is split and telescopically receives the extension 26 on the footrest generally indicated at 27. A bolt 28 on being loosened and tightened enables the extension 26 to be adjusted in or out of the arm 23 so as to properly position the footrest with relation to the desires of the user.

3

Both clamping members 16 and 17 have downwardly extending extensions 29 and 30, the extension 29 which is on the outer side of the leg 10 being somewhat longer than the extension 30. Both of these extensions, however, are designed to extend downwardly across the sides of the arm or bar 14 thus utilizing the bar as a means for steadying the clamp formed by the members 16 and 17 and the spacer 18 and cooperating with the clamping ears 19 in resisting rotation of the clamp with relation to the leg 10. A brace 31 is pivotally mounted on the arm 23 and extends rearwardly through a punch clamp 32 that is pivotally mounted on the extension 29. This clamp merely consists of an angular member 33 pivotally mounted as at 34 on the extension 29. A cooperative clamping member 35 has its lower end positioned adjacent the knuckle on the angular member 33 which surrounds the pivot pin and is urged into spaced relation from the member 33 by an intervening compression spring 36. The brace 31 slidably extends through both of these members and when the clamp 32 is released the clamp is effective to bind upon and lock the brace against sliding movement relatively thereto. The surface of the brace may be knurled or roughened to assist in this binding or gripping action.

When it is desired to apply the detachable foot and leg rest embodying the present invention to a conventional wheel chair the extensions 29 and 30 are merely slipped over the top of the bar 14. The ears 19 are slipped rearwardly over the leg 10 and the clamping bolt 20 is applied and tightened. The foot and leg rest can be removed in the converse manner. The clamp 32 being mounted on the extension 29 is, of course, applied and removed as part of the primary or main clamp. Downward movement of the main clamp with relation to the leg is, of course, resisted by the spacer 18 which may engage the top of the bar 14 if the ears 19 are not adequately clamped. Also the engagement of the extensions 29 and 30 with the bar 14 will hold the primary clamp against rotation relative to the leg 10 in the event that the bolt 20 should loosen.

Various changes may be made in the details of construction without departing from the spirit and scope of the invention as defined by the appended claims.

We claim:

1. A detachable footrest for wheel chairs comprising a pair of opposed members, a spacer secured between the members spacing them approximately the width of the leg of the wheel chair to which it is applicable, there being ears on said members extending rearwardly from adjacent the spacer, a bolt receivable there-through for tightening said members in clamping relation on the leg, and ears on said members disposed upwardly and forwardly of the spacer, and a foot and leg rest pivotally mounted between the last mentioned ears.

2. A detachable footrest for wheel chairs comprising a pair of opposed members, a spacer secured between the members spacing them ap-

4

proximately the width of the leg of the wheel chair to which it is applicable, there being ears on said members extending rearwardly from adjacent the spacer, a bolt receivable there-through for tightening said members in clamping relation on the leg, and ears on said members disposed upwardly and forwardly of the spacer, and a foot and leg rest pivotally mounted between the last mentioned ears, said members having downwardly extending extensions adapted to be positioned against opposite sides of an arm or bar extending downwardly and forwardly from the leg of the chair.

3. A detachable footrest for wheel chairs comprising a pair of opposed members, a spacer secured between the members spacing them approximately the width of the leg of the wheel chair to which it is applicable, there being ears on said members extending rearwardly from adjacent the spacer, a bolt receivable there-through for tightening said members in clamping relation on the leg, and ears on said members disposed upwardly and forwardly of the spacer, a foot and leg rest pivotally mounted between the last mentioned ears, a brace pivotally secured to the leg rest, and a clamp pivotally mounted upon the outermost of said members engageable with the brace to hold the brace in adjusted position.

4. A detachable foot and leg rest for wheel chairs comprising a clamp applicable to a leg of the wheel chair, a foot and leg rest pivotally mounted upon said clamp, a brace pivotally connected to the foot and leg rest, and a clamp on the first mentioned clamp engageable with the brace to hold the brace in adjusted position.

5. A detachable foot and leg rest for wheel chairs comprising a pair of opposed members, a spacer secured between the members spacing them approximately the width of the leg of the wheel chair to which it is applicable, downwardly extending extensions on said members below the spacer, rearwardly extending clamping ears on said members adjacent the spacer, a clamping bolt connecting the clamping ears, a pair of angular ears extending upwardly and forwardly from the spacer, a foot and leg rest, pivotally mounted upon the last mentioned ears, a brace pivotally connected to the foot and leg rest and a clamp pivotally mounted upon the outermost of said members engageable with the brace for holding the brace in adjusted position with respect to said members.

HERBERT A. EVEREST.
HARRY C. JENNINGS.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
388,981	La Barbe	Sept. 4, 1888
1,400,625	Rawlinson	Dec. 20, 1921
1,868,658	Emmert	July 26, 1932
2,278,078	Kahn	Mar. 31, 1942
2,520,309	Everest	Aug. 29, 1950