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DETACHABLE FOOT REST ASSEMBLY FOR INVALID CHAIRS

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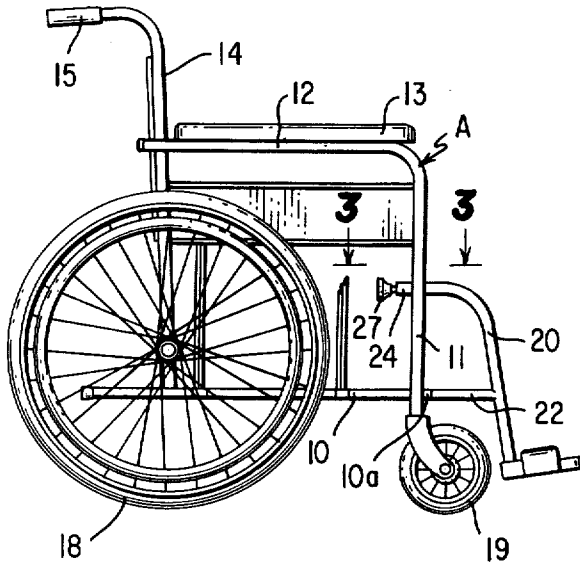


Fig. 1

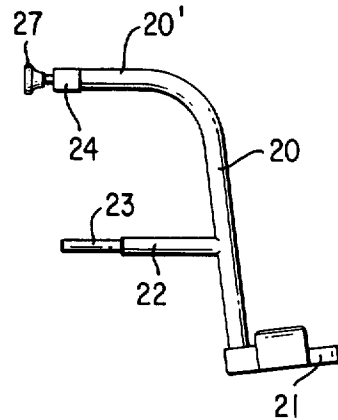


Fig. 4

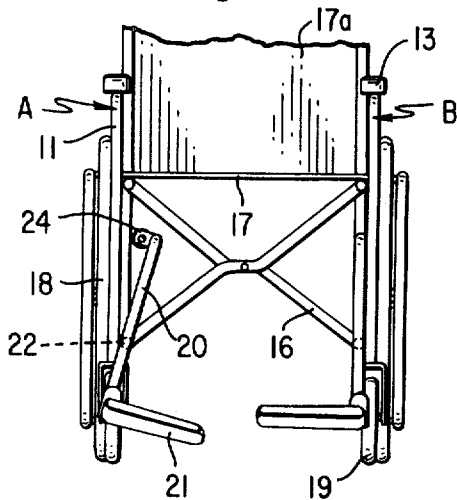


Fig. 2

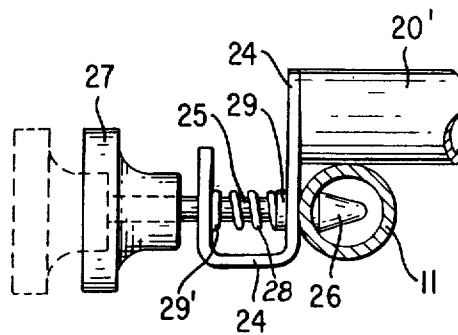


Fig. 3

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DETACHABLE FOOT REST ASSEMBLY FOR INVALID CHAIRS

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This invention relates to invalid chairs but more particularly to foot rests for such chairs and an object is to produce a new and improved foot rest assembly for invalid chairs which is a separate unit that can be readily and easily applied and positively secured to the chair in position of use and, when its use is not desired, can be simply removed without requiring the use of special tools.

Other objects and advantages of the invention will hereinafter appear, and for purposes of illustration but not of limitation, an embodiment of the invention is shown on the accompanying drawings in which

Figure 1 is a side elevation of an invalid wheel chair with a foot rest assembly mounted in position of use;

Figure 2 is a front elevation of the wheel chair shown in Figure 1, a part of the back being broken away, and showing both foot rest assemblies mounted on the chair, one of the assemblies being unlatched to enable the same to be removed;

Figure 3 is an enlarged sectional view substantially on the line 3—3 of Figure 1; and

Figure 4 is a side elevation of one of the foot rest assemblies.

The illustrated embodiment of the invention comprises an invalid wheel chair having laterally spaced upright side frames A and B which in the main are formed of metal tubes. Each side frame has a lower horizontal rail 10 and a vertically disposed front rail 11 which is bent rearwardly at its upper end to provide an upper horizontal rail 12 substantially parallel to the lower rail 10. As shown on each upper horizontal rail 12 is a suitable arm rest 13. At the rear end portion of each lower horizontal rail 10 is a vertically disposed rail 14 which is fixed to the rear end portion of the adjacent upper horizontal rail 12. The vertical rail 14 extends above the rail 12 and is bent rearwardly at its upper end to receive rubber hand grips 15.

Suitably pivoted on the lower horizontal rails 10 and spaced from each other are fore and aft X braces 16 consisting of a pair of flat metallic arms, which are pivoted intermediate their ends, as indicated on Figure 2. The upper ends of the X braces connect to horizontal rails to which a flexible seat panel 17 is suitably secured. Connecting the upper end portions of the rear vertical rails 14 is a flexible back rest 17a.

Suitably journaled on the lower end portion of each of the rear vertical rails 14 is a large wheel 18 provided with hand rims to enable the chair to be propelled by the occupant. At the lower ends of each of the front vertical rails 11 is a caster 19. Thus the chair can be moved from place to place by the occupant or can be pushed by someone grasping the hand grips 15. When not in use the chair can be collapsed by moving the two side frames A and B toward each other.

A detachable foot rest assembly is provided for each of the side frames A and B so that a foot rest is available for each foot of the occupant of the chair. Since the two assemblies are identical, a description of one will suffice. Each assembly has an upwardly and rearwardly inclined tubular metallic arm 20 at the lower end of

which is a foot rest platform 21 extending laterally inward from the arm 20, as indicated on Figure 2. The foot rest platform 21 is pivotally mounted at the lower end of the arm 20 so that it can be swung upwardly to a position out of use. The mounting of the platform 21 is not shown on the drawings because it forms no part of the present invention because the same is well known and understood by those skilled in this art.

Slightly less than half way of the length of the arm 20 is an integral rearwardly extending rigid tubular arm 22. At the rear end of the tube 22 is a reduced rod-like extension 23 which is of such size as to fit within the forwardly projecting portion 10a of the lower horizontal rail 10. It will be noted from an examination of Figure 1 that the rail 10 which is disposed on the inside of and rigidly secured to the vertical rail 11 projects slightly forward beyond the rail 11. This end is left open and is of a size and shape to admit the rod-like extension 23. The fit is such as to enable rocking of the leg rest assembly about the lower rail 10 as an axis.

The upper end of the arm 20 curves rearwardly to provide an extension 20' which is substantially parallel to the rigid intermediate arm 22. The extension 20' is slightly shorter than the rigid arm 22 plus the extension 23 and secured to the free end portion of the extension 20' is a spring biased latch.

The spring biased latch in this instance comprises a substantially J-shaped sheet metal frame 24 which is formed with registering apertures to receive a latch pin 25. At the outer end of the latch pin 25 is a tapered latching nose 26. The nose 26 is adapted to pass through an aperture (not shown) in the adjacent portion of the front vertical upright rail 11. Fixed to the latch pin 25 is a washer 29 which acts as a stop upon abutting against one arm of the frame 24. A coil spring 28 abuts at one end against the washer 29 and at the other end against a washer 29' which freely encircles the latch pin and abuts against the other arm of the frame 24. On the outside of the frame is a handle knob 27 which upon being moved to the broken line position of Figure 3, retracts the latching nose 26 away from the rail 11 enabling the foot rest assembly to be rocked laterally, as indicated at the left side of Figure 2. Thereafter by a forward movement of the assembly it may be detached from the lower rail 10.

In the mounting of each leg rest assembly it is simply necessary to slide the extension 23 into the tubular extension 10a and then rock the assembly toward the respective upright 11 and cause the tapered nose 26 to enter through the aperture in the rail 11, thereby positively and securely holding the leg rest in the position of use so that it cannot accidentally become detached. However when it is desired to detach the foot rest assembly, this may be accomplished very simply as above described.

Numerous changes in details of construction, arrangement, operation and choice of materials may be effected without departing from the spirit of the invention, especially as defined in the appended claims.

What we claim is:

1. In an invalid chair having a pair of laterally spaced side frames, each frame having at the front a vertically disposed rail, the improvement which comprises a detachable foot rest assembly for each side frame, each assembly provided with an up and down arm, a foot rest platform at the lower end of the arm, means providing a detachable pivotal connection between an intermediate portion of the arm and the adjacent side frame enabling the arm to rock upon an axis at right angles to the vertical rail and to be connected to and disconnected therefrom at will, said pivotal means comprising an arm rigid with said up and down arm and projecting rearwardly therefrom and having socketed engagement with a part of the adjacent side frame, a spring biased latch carried

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by the upper end portion of said up and down arm, a nose on said latch for positive engagement with the vertically disposed rail of the respective side frame, and manual means for disengaging said nose from said rail whereby to release said latch.

2. In an invalid chair having a pair of laterally spaced side frames, each frame having at the front a vertically disposed rail and a horizontal tubular rail at the lower portion thereof, the improvement which comprises a detachable foot rest assembly for each side frame, each assembly provided with an up and down arm, a foot rest platform at the lower end of the arm, means providing a detachable pivotal connection between an intermediate portion of the arm and the adjacent side frame enabling the arm to rock upon an axis at right angles to the vertical rail and to be connected to and disconnected therefrom at will, said pivotal means comprising an arm rigid with and extending rearwardly from the lower portion of

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said up and down arm, said horizontal rail having an open front end telescopingly receiving the rear end portion of said rigid arm, a rearwardly extending upper end on said up and down arm terminating at the vertical frame rail to abut thereagainst, a latch on the rearwardly extending upper end of the arm for locking the arm to the vertical rail, and means for releasing said latch for unlocking the arm from the vertical rail for enabling lateral pivoting of the arm and subsequent removal of the assembly from the vertical rail.

References Cited in the file of this patent

UNITED STATES PATENTS

15	2,509,972	Gottfried	May 30, 1950
	2,592,449	Miller	Apr. 8, 1952
	2,762,422	Stratton	Sept. 11, 1956
	2,859,800	Jennings	Nov. 11, 1958