

April 5, 1966

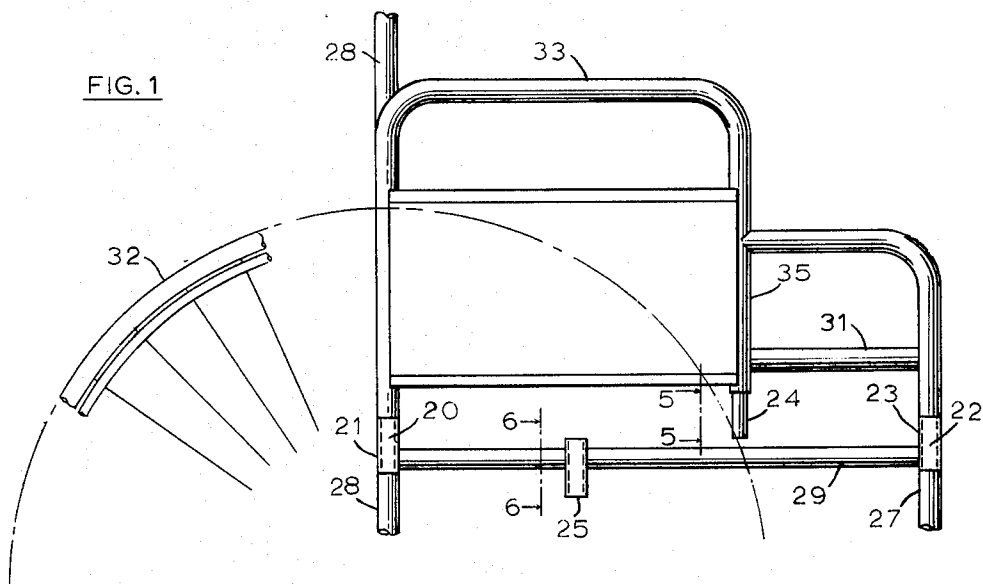
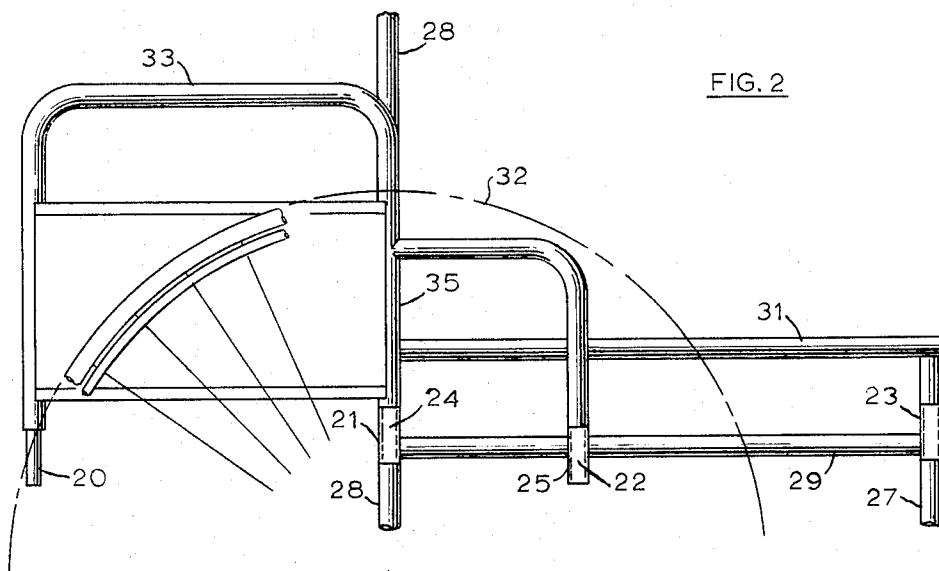
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3,244,453

SUPPORT FOR REMOVABLE WHEEL CHAIR ARMS

Filed Oct. 29, 1964

3 Sheets-Sheet 1



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April 5, 1966

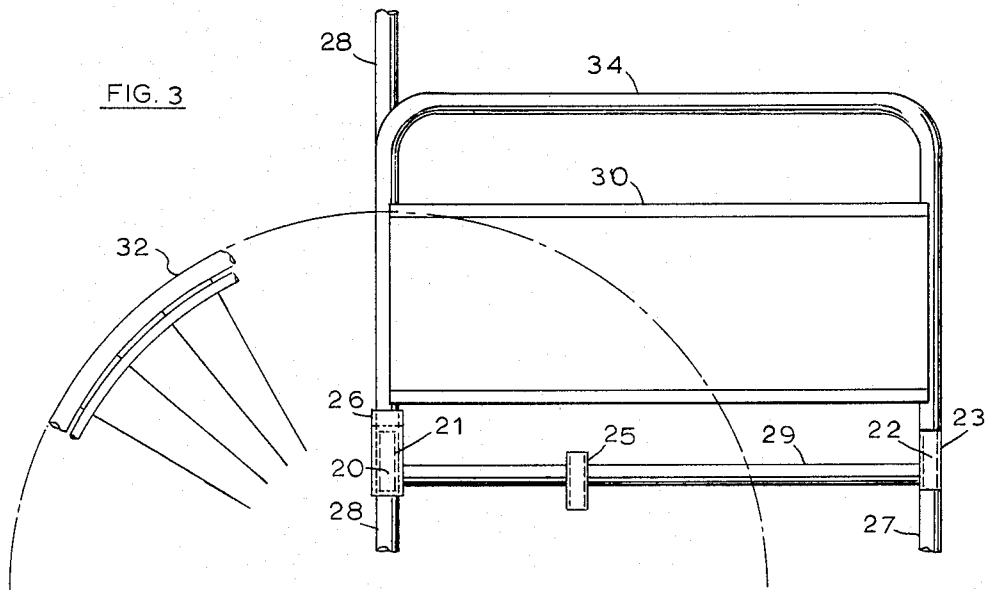
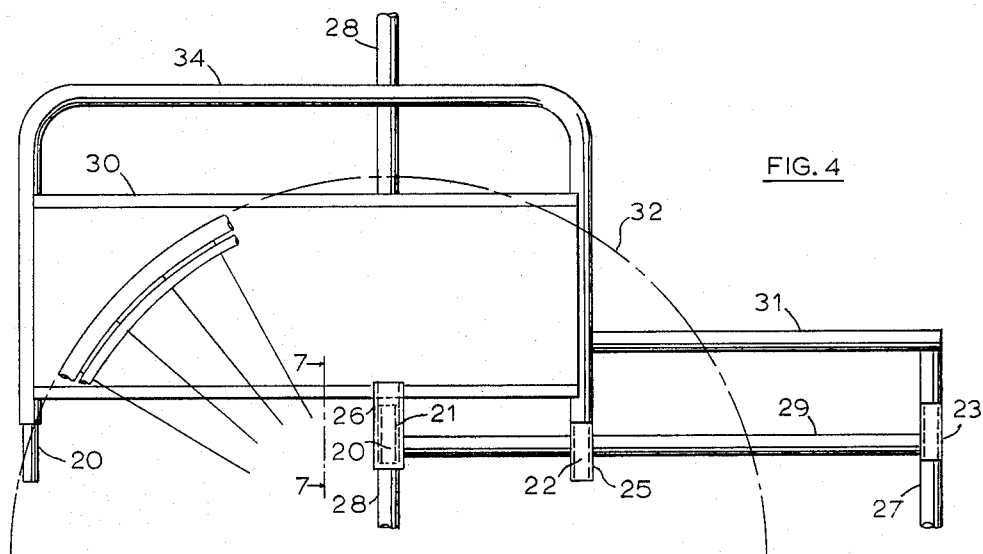
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SUPPORT FOR REMOVABLE WHEEL CHAIR ARMS

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SUPPORT FOR REMOVABLE WHEEL CHAIR ARMS

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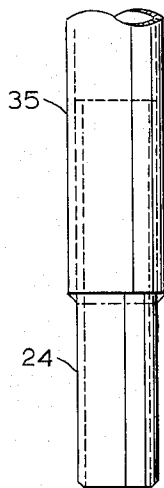


FIG. 5

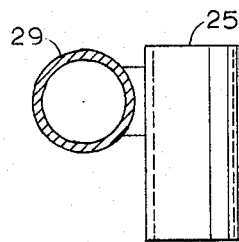


FIG. 6

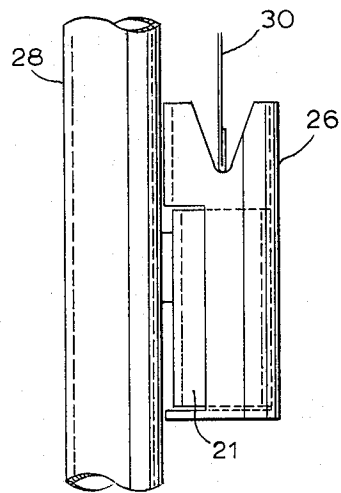


FIG. 7

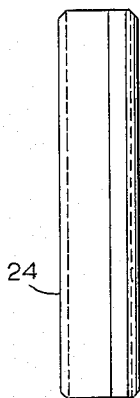


FIG. 8

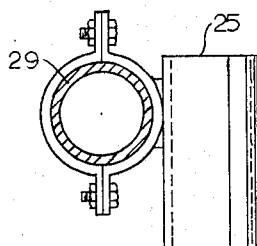


FIG. 9

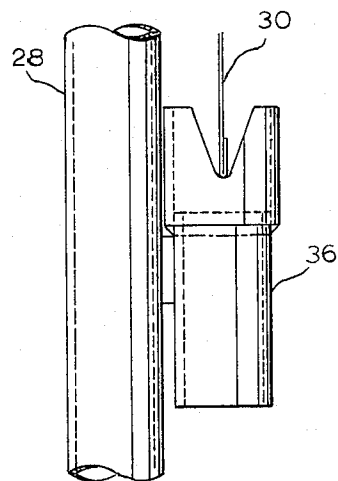


FIG. 10

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SUPPORT FOR REMOVABLE WHEEL CHAIR ARMS

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4 Claims. (Cl. 297-416)

This invention relates to invalid wheel chairs and, more particularly, to invalid wheel chairs with removable arms.

An object of this invention is to provide means on a wheel chair with removable arms, for supporting these arms toward the rear of the wheel chair whenever they are withdrawn and not required. In this position the portion of the seat bar and hence the seat which is not behind the drive wheel, as seen from the side, is left free for entering or leaving by the side. Thus the wheel chair user may slide in or out of the chair as if the removable arms were completely taken away from the chair.

Another object of the invention is to provide means on a wheel chair with removable arms, for supporting these arms toward the rear of the wheel chair and thus eliminate dependency on an external location for disposing of the arms. In a conventional wheel chair with removable arms it is necessary to place the arms which have been removed somewhere external to the chair such as on a piece of furniture, or in another person's hands or the like.

Also an object of the invention is to permit a wheel chair with removable arms to always have the removable arms handily available even though they have been withdrawn. When a conventional wheel chair with removable arms has the arms removed it is necessary to return to the place where the removed arms are located to replace them. By making use of this invention the wheel chair user may conveniently replace the removed arms by having them continuously available on the wheel chair, irrespective of the location of the wheel chair at the time.

Still another object of the invention is to provide an orderly way of withdrawing and setting aside the removable arms whenever they are not required. With this invention any disorderly way of setting aside the removable arms is eliminated since the arms may be set back on the wheel chair itself without cluttering up any possible location external to the wheel chair.

A further object of the invention is to provide a neat, orderly and well organized and assembled appearance for demonstrating and picturing a wheel chair with removable arms in the withdrawn position. Whenever a conventional wheel chair with removable arms is pictured or illustrated the arms which have been removed, if shown, would probably be placed on the wheel chair seat. By being able to set the removable arms toward the rear of the wheel chair when in the withdrawn position, the arms appear to form an integral part of the wheel chair structure rather than a separate loose item.

Other objects of the invention are that the parts required to support the withdrawn removable arms toward the rear of the wheel chair are of simple construction, they are few in number and may be provided as integral parts or accessories of the wheel chair. Because of this last feature, in addition to incorporating details of the invention on newly designed wheel chairs, by means of the accessories existing model wheel chairs with removable arms may also take advantage thereof.

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 wheel chair with desk type removable arms, illustrating a removable arm placed in the normally used forward position;

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FIGURE 2 is a partial view in side elevation of a wheel chair with desk type removable arms, illustrating a removable arm set back toward the rear of the wheel chair in the withdrawn position;

5 FIGURE 3 is a partial view in side elevation of a wheel chair with regular type removable arms, illustrating a removable arm placed in the normally used forward position;

10 FIGURE 4 is a partial view in side elevation of a wheel chair with regular type removable arms, illustrating a removable arm set back toward the rear of the wheel chair in the withdrawn position;

15 FIGURE 5 is a view on an enlarged scale taken substantially along the line 5-5 on FIGURE 1 in the direction indicated;

FIGURE 6 is a view on an enlarged scale taken substantially along the line 6-6 on FIGURE 1 in the direction indicated;

20 FIGURE 7 is a view on an enlarged scale taken substantially along the line 7-7 on FIGURE 4 in the direction indicated;

FIGURE 8 is a view on an enlarged scale of an insertable accessory stem performing a similar function to the stem shown in FIGURE 5 and may be regarded as taken substantially along the line 5-5 on FIGURE 1;

25 FIGURE 9 is a view on an enlarged scale of an attachable accessory item performing a similar function to the item shown in FIGURE 6 and may be regarded as taken substantially along the line 6-6 on FIGURE 1;

30 FIGURE 10 is a view on an enlarged scale of a permanently attached item performing a similar function to the assembly shown in FIGURE 7 and would be located substantially along the line 7-7 on FIGURE 4.

Referring to the accompanying drawings wherein similar reference characters designate similar parts throughout, a portion of the conventional wheel chair with removable arms and the parts with which the present invention is concerned comprises a drive wheel 32 fitted to each of two side frames on which the removable arms are mounted. On each side frame are the horizontal bar or rod 29 fastened between the front leg 27 and rear leg, back and handle support 28. The seat tube or bar 31 is just above the horizontal member 29. Fastened on the horizontal member 29 are sockets 21 and 23.

45 By lowering the stems 20 and 22 of a removable arm structure into the sockets 21 and 23 respectively on the wheel chair frame, until downward movement thereof is stopped by the engagement of the shoulders on the stems with the top surface of the sockets, the removable arm 33 or 34 becomes located in the normally used forward position on the wheel chair as detailed in FIGURES 1 and 3.

In order to be able to set a removable arm toward the rear of the wheel chair whenever it is withdrawn, additional components which form the essential elements of the invention are required and these depend on whether removable arms of the desk type 33, regular type 34 or both are to be interchangeably used. When use is made of desk type removable arms 33 as shown in FIGURES 1 and 2, stem 24 is added to the intermediate vertical tubular member 35 of the removable arm in a way similar to existing stems 20 and 22 and is generally of a similar material. Also, socket 25 which is similar to existing sockets 21 and 23, is added to the horizontal member 29 by being welded, brazed or otherwise secured thereon. This is positioned at a level so as to receive the existing stem 22 firmly while the existing socket 21 is receiving stem 24. Thus when the removable desk type arm is withdrawn it can be set toward the rear of the wheel chair by having its items 22 and 24 supported on the wheel chair frame in the sockets 25 and 21 respec-

tively. When use is made of regular type removable arms 34 as shown in FIGURES 3 and 4, socket 25 which is similar to existing sockets 21 and 23, is added, as in the case when using desk type removable arms 33, to the horizontal member 29. Also, fitted to socket 21 is an adapter 26, or other suitably mounted adapter, made of rubber, plastic or other suitable material. Whenever the regular type arms 34 are withdrawn and set back toward the rear of the wheel chair, socket 25 supports the existing stem 22 while the adapter 26 receives the regular type removable arm panel 30. Also, socket 25 is positioned at a level so as to support the existing stem 22 firmly while the adapter 26 is receiving the arm panel 30 and it is positioned in such a way as to permit complete interchangeability of the desk type 33 and regular type 34 removable arms, provided the former is fitted with stem 24.

FIGURES 8 and 9 detail attachable accessory items which perform the same function as stem 24 and socket 25 respectively, while FIGURE 10 details a socket 36 which has the combined features of socket 21 with adapter 26 fitted thereon and is permanently attached to the horizontal member 29 on the wheel chair frame.

While this invention has been described with particular reference to the construction shown in the drawings and while various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claims.

Having thus completely and fully described the invention, what I claim as new and desire to protect by Letters Patent of the United States is:

1. A wheel chair with removable desk type or regular type arms having a set of stems and sockets attached to the wheel chair frame and its associated desk type or regular type removable arms in such a way as to permit their interchangeability and placement, in addition to the normally used position, in a position which is set back out of the way toward the rear of the wheel chair structure.

2. A conventional wheel chair of the type having a drive wheel rotatably mounted on the rear leg of each side frame thereof and having a removable arm frame which is detachably fitted onto each side frame thereof in which

position it functions as an arm support and means so that said arm frame may be detachably fitted onto said wheel chair side frame in a position set back from the normally used position in which position it is stored without functioning as an arm support.

3. A conventional wheel chair of the type having a drive wheel rotatably mounted on the rear leg of each side frame thereof and having a removable arm frame which is detachably fitted onto each side frame thereof in which position it functions as an arm support and means so that said arm frame may be detachably set back from the normally used position onto said wheel chair side frame in such a way that the front or forward member of the arm frame is placed in position behind the line which joins the points of intersection of the outer circumference of the the fore part of the drive wheels and the plane of the wheel chair seat in which position the arm rest does not obstruct the front portion of the side of the wheel chair seat.

4. A conventional wheel chair of the type having a drive wheel rotatably mounted on the rear leg of each side frame thereof and having a removable arm frame which is detachably fitted onto each side frame thereof in which position it functions as an arm support and means so that said arm frame may be detachably positioned on said wheel chair side frame in a retracted position in which position the portion of the wheel chair seat beside the drive wheel which is unobstructed thereby is left free for unobstructed sliding entry and exit therefrom by the wheel chair user.

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