

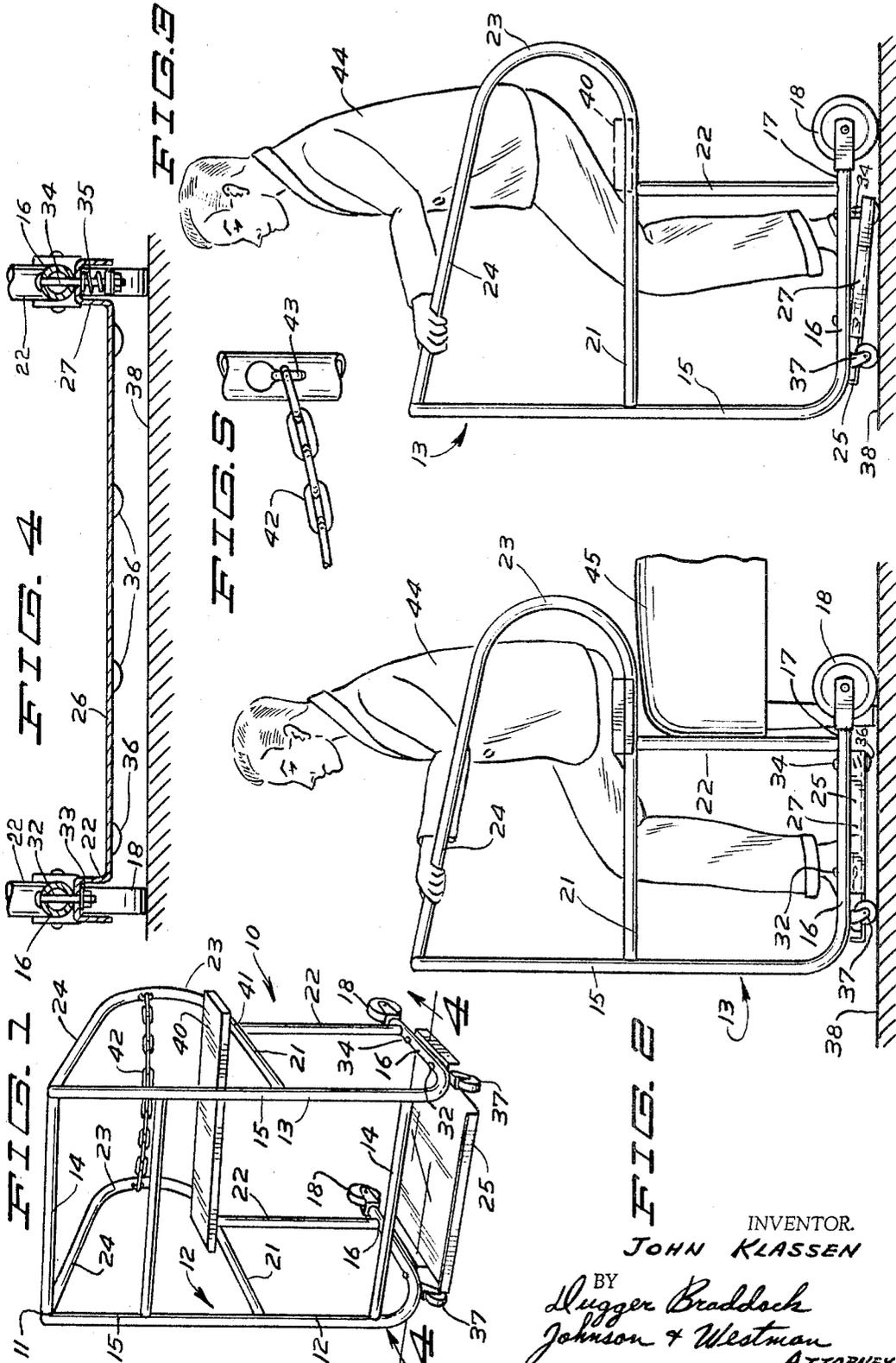
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CARRIER FOR INVALIDS

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**CARRIER FOR INVALIDS**

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This invention has relation to a carrier for invalids and more particularly to a device for supporting an invalid for movement to and from his bed, chair, toilet stool or the like. A carrier made according to the present invention is constructed in such a manner that one attendant can assist the invalid into or out of the carrier, and so that the invalid cannot leave the carrier or move the carrier when he is seated therein.

A feature of the carrier is a removable seat rest and a construction which allows the seat rest supports to be moved back over the structure on which an invalid is seated prior to being picked up by the carrier or on which the invalid is to be seated after being discharged from the carrier. Side retaining bars providing hand holds restrain the body of the invalid, and a foot platform is situated beneath the invalid's feet. With or without the help of the attendant, the invalid shifts at least a portion of his weight to his feet and his body is raised to make room for the seat rest which is slid into position immediately above the portion of the object upon which he was seated. The weight of his feet depress the foot platform and cause it to rest on the floor thus effectively breaking the device against movement in any direction while this transfer of the invalid is taking place. When the seat rest is properly in position, the invalid's weight is placed upon it, and his feet are slid forward on the pivoted foot platform to permit the platform to move to clearing relationship with respect to the floor. A back restraining strap may be fastened between the retaining side arms in position to support and retain the invalid's back during movement.

With the patient thus positioned within the device, he cannot move except if he is moved by an attendant and cannot fall out.

It is an object of the invention to provide a carrier for invalids into which an invalid can be placed and from which an invalid can be removed with the help of a single attendant and without the necessity that this attendant have strength enough to lift anything approaching the total weight of an invalid.

In the drawings,

FIG. 1 is a perspective view of the carrier for invalids made according to the present invention;

FIG. 2 is a side elevational view of this carrier showing an invalid positioned therein and showing the device of the invention positioned with respect to a bed as for removing the invalid from the bed or depositing him on it;

FIG. 3 is a side elevational view of the invention as seen in FIG. 2 but with the invalid in position so that a seat rest can be inserted into the carrier;

FIG. 4 is an enlarged vertical sectional view taken on the line 4-4 in FIG. 1; and

FIG. 5 is a fragmentary rear elevational view of a portion of the device showing one means of fastening a back support and restraining member thereon.

Referring now to the drawings and numerals of reference thereon, an invalid carrier illustrated generally at 10 comprises a frame 11 made of suitable tubular material, as shown, or other suitable material.

The frame 11 includes a first side frame assembly 12 and a second side frame assembly 13 which are identically constructed. The side frame assemblies 12 and 13 are joined together at the forward edge of the frame 11 with suitable cross members 14. The cross members are welded to the side frame assemblies.

The side frame assemblies 12 and 13 each comprise upright vertical members 15 which are bent to form a lower horizontal member 16 that has a rearwardly extending portion 17 on which a wheel 18 is rotatably mounted. Also, the side frame assemblies include an intermediate horizontal member 21 which extends rearwardly at slightly above normal chair and bed height and is supported with respect to the lower horizontal member 16 by a short vertical strut 22. The intermediate horizontal member extends rearwardly from the strut 22, as shown, and is bent in a curved portion 23. The member then extends forwardly back toward the upright member 15 at an upwardly inclined angle. This forms an upwardly inclined top hand rail 24. The forward edge of the hand rail 24 is fastened to the top of the upright member 15 of its respective side frame assembly.

There are no cross members between the struts 22 of the two side frame assemblies nor are there any cross members adjacent the rear of the carrier except for a platform 25 which is fastened between the lower horizontal members 16, 16 of the side frame assemblies 12 and 13, respectively. The foot platform 25 is formed as shown in FIG. 4. It has a flat portion 26 extending between the cross members 16, 16 and a separate channel-shaped section 27 at opposite sides of the flat portion 26. The channel-shaped sections 27 are fastened to the underside of the horizontal members 16, 16. The forward portions of the channel-shaped members 27 are fastened with bolts and nuts 32. A small resilient washer 33 is placed between the nut for the bolt and the attaching surface of channel 27. This will allow the platform 25 to pivot slightly about the forward bolts 32.

The rear portions of the channel members 27 are attached with bolts and nuts 34 to the lower horizontal members 16. Each of the bolts has a compression coil spring 35 positioned between the nut for the bolt and the fastening surface of channel 27. The springs 35 will compress to allow the channels 27 and consequently the rear portions of the foot platform 25 to be moved downwardly about the pivots on bolts 32 when weight is applied to the rear portions of the foot platforms.

A plurality of small rubber stops 36 are fastened to the flat section 26 of the foot platform 25 adjacent the rear-most edge thereof and on the bottom side thereof. The rubber stops are of a size and position so that when the rear portions of the foot plate are pushed downwardly by a patient as shown in FIG. 3, the rubber stops will contact the floor 38 and prevent the carrier from rolling.

The forward portions of the lower horizontal members 16 are supported on suitable casters 37. It should be also noted that the flat portion 26 of the foot platform 25 is cut away to provide clearance for the casters 37 and the platform extends between the horizontal members in fore and aft direction for a substantial distance.

A removable seat support assembly 40 is supported on the intermediate horizontal members 21 and can be positioned thereon with suitable bracket 41. The brackets 41, as shown, are positioned on the outside of each of the intermediate horizontal members 21 and prevent the seat from sliding off the side frame members. The seat can be slid forwardly and rearwardly, however.

Also, a safety chain back support 42 is provided at the rear end portions 23 of the side frame members. The safety chain 42 will fit into provided key-shaped slots 43 in each of the side frame members and will extend across the back to prevent people from falling out of the carrier. The chain can also be used as a back support. The chain 42 can be covered with a suitable hose or other resilient material to prevent injury to the patient, if desired.

The invalid carrier, as presented, has its greatest utility in permitting and helping an attendant move an invalid

from one location to another without having to lift the full weight of the invalid. This is especially important if the invalid is receiving home care and the attendant is small while the invalid is heavy. For example, in many cases, a wife would care for an invalid husband in a home and a carrier constructed in this manner will permit her to move her husband from place to place without obtaining outside assistance.

For example, if an invalid 44 is in a bed 45 and wishes to be moved to a chair in another room, the carrier is moved into place alongside the bed 45 so that the rear wheels 18 and the rear portions 17 of lower horizontal members 16 extend underneath the bed as shown in FIG. 2. The invalid will previously have been seated at the edge of the bed 45 with his legs hanging over the side of the bed. The carrier seat 40 will be removed and the carrier will be placed so that the side frames 12 and 13 are on opposite sides of the invalid. Note that the space between the rear portions of the carrier side frames 12 and 13 is clear and unobstructed from the seat rearwardly. The foot platform is the only obstruction at all between the frame assembly behind the cross pieces 14. The invalid will then place his feet on the rear portions of foot platform 25 and with his hands will grasp the upper hand rails 24. The invalid will then raise himself on his feet to position as shown in FIG. 3. This can be done with the aid of an attendant if necessary, but most invalids have some strength in their arms and can lift a part of their own weight. Once the invalid is in position, as shown in FIG. 3, the rear portions of the platform 25 are against the floor 38 and will hold the carrier perfectly steady while the seat 40 is slid into place as shown in dotted lines in FIG. 3. The invalid will then lower himself by sliding his hands along the inclined hand rail 24 until he is seated on the seat 40, as shown in FIG. 2. A safety chain can then be put into place and the patient's feet slid forwardly on the platform to position as shown in FIG. 2. Then the platform will pivot about the bolts 32 under the urging of springs 35 to a horizontal position, and the rubber stops 36 will be released from the floor.

The invalid can then be wheeled to the desired location, for example, adjacent a chair. The wheels of the carrier can either be underneath the chair, or if the chair is narrow, the side frames 12 and 13 will be positioned on opposite sides of the chair. As shown, the seat 40 is slightly higher than chair height and the invalid will be placed in position above the chair while still on the carrier.

The invalid 44 will then again grasp the hand rails 24 as shown in FIG. 2, raise himself to position as shown in FIG. 3, the attendant will slip the seat 40 out of place, and the invalid can lower himself gently down onto the chair (or the attendant can assist). The carrier can then be rolled away until the invalid is to be moved again.

It is immediately apparent that the carrier has great utility in moving an invalid from place to place within a home, for example, from chair to bed, from bed to chair or to the toilet. The carrier can also be used as a station from which the invalid can sit and do work in different locations in the house, for example, straighten dresser drawers or other small tasks.

It is to be noted that the rear wheels 18, 18 are placed well behind the main portions of the carrier so that there is no danger of tipping rearwardly and that the caster wheels will prevent forward tipping of the unit. The unit is wide for stability and also to enable it to fit over most chairs and toilet stools. The platform 25 is purposely designed to be large to prevent the unit from being used as a walker. Anytime the patient's feet are placed at the back portions of the platform 25 it will tend to pivot the platform downwardly until the stops 36 engage the floor to prevent movement of the carrier. This will aid the in-

valid in holding the carrier securely if he is using the carrier while performing menial tasks. Also, the placing of the feet at the first portions of the foot platform 25 will exert a force tending to pivot the rear portions upwardly to aid the springs 35 in returning it to its normal position.

The safety chain 42 can be removed entirely to get it out of the way when putting a person into the carrier or removing the person from the carrier. This prevents the chain from being entangled in the person's clothing.

What is claimed is:

1. A carrier for invalids comprising a pair of spaced apart side frame assemblies joined together at the forward portions thereof with cross pieces, the rear portions between said side frame assemblies being clear and unobstructed, wheel means on said frame assemblies for supporting said carrier for movement over a supporting surface, said side frame assemblies each including a substantially horizontal member spaced above the floor at substantially chair height, and a removable seat positioned on and extending between said intermediate horizontal members adjacent the rear portions of said side frame assemblies, a foot platform extending between said side frame assemblies adjacent the floor, said foot platform being positioned forwardly from the seat and mounted for limited pivot movement at the front portions thereof, and bias means urging the rear portions of the foot platform upwardly, said platform being stopped from going upwardly beyond a substantially horizontal position, and rubber stop means attached to said foot platform adjacent the rear portions thereof, said foot platform being pivotable against the action of said bias means to position wherein the rubber stop means engage the supporting surface on which the carrier is resting.

2. A carrier for invalids comprising a pair of spaced apart side frame assemblies, a plurality of cross members joining the side frame portions thereof, the side frames each comprising a front vertical member, a lower horizontal member, an intermediate horizontal member, a top hand rail member, means to join said lower, intermediate, and top members together so that the members comprising each side frame assembly all lie in a common plane, wheel means on said lower horizontal members for supporting said carrier for movement over a supporting surface, a removable seat positioned on and extending between said intermediate horizontal members of each side frame adjacent the rear portions thereof, a foot platform extending between said lower horizontal members, said foot platform being mounted for limited pivotal movement about an axis adjacent the forward edge thereof and resilient means urging said platform to a substantially horizontal position, the rear portion of said platform being pivotable to position engaging the supporting surface against the action of said bias means.

3. The combination as specified in claim 2 and a plurality of rubber stops fixed to said foot platform adjacent the rear edge thereof and extending downwardly therefrom.

#### References Cited by the Examiner

##### UNITED STATES PATENTS

D. 183,908	11/1958	Bauer	297—5 X
505,993	10/1893	Seebick	188—8 X
1,361,102	12/1920	Scott	297—5 X
1,972,557	9/1934	Greene	297—5
2,433,969	1/1948	Wood	297—6
2,759,525	8/1956	Ries	297—6
3,047,884	8/1962	Grondona	297—5 X

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