May 15, 1945. M. M. FARMER 2,375,907

INVALID TRANSFER DEVICE

Filed Nov. 26, 1942 3 Sheets-Sheet 1

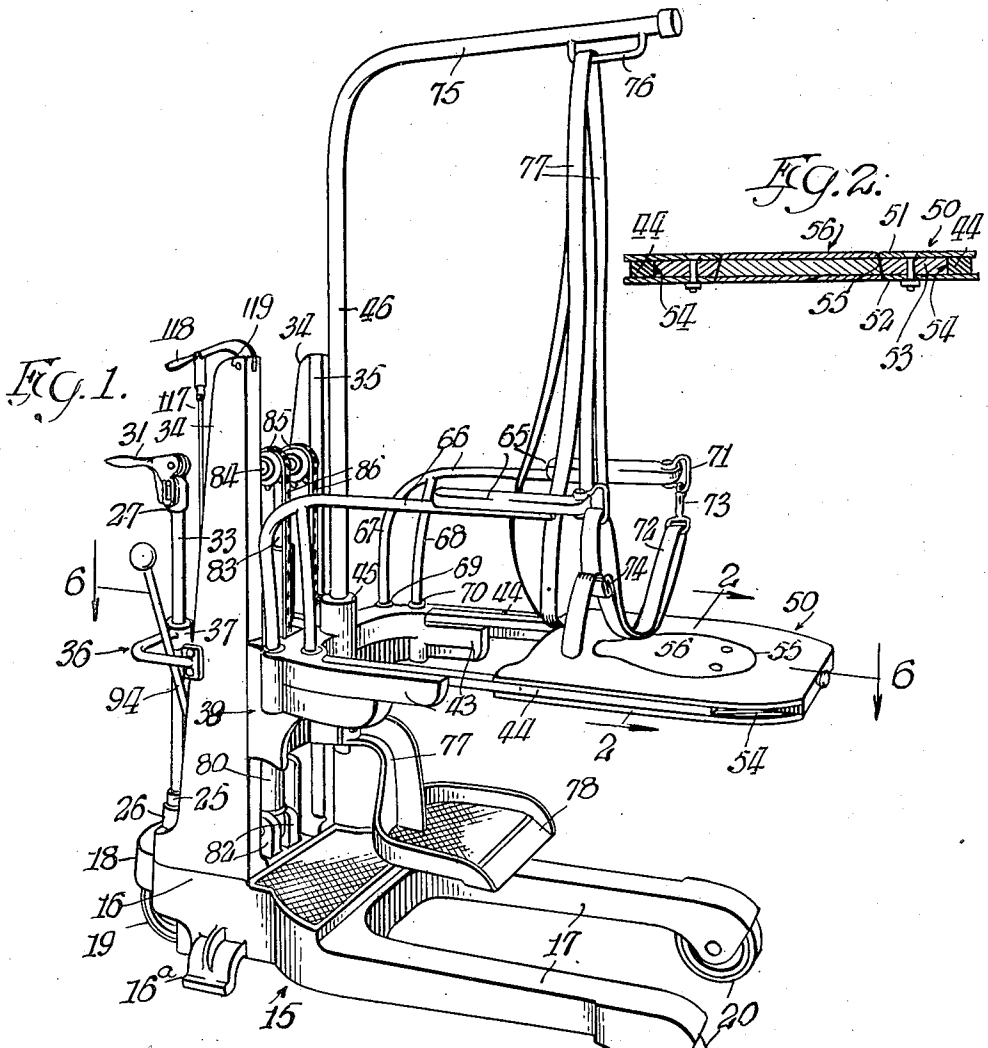

FIG. 1.

FIG. 2.

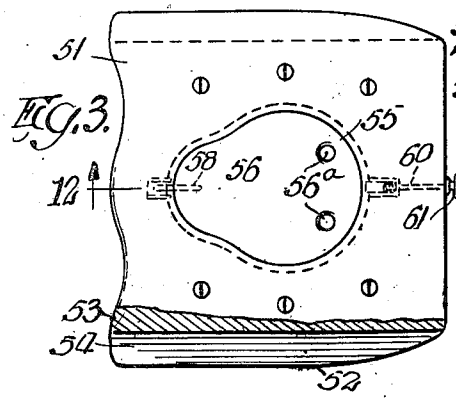

FIG. 3.

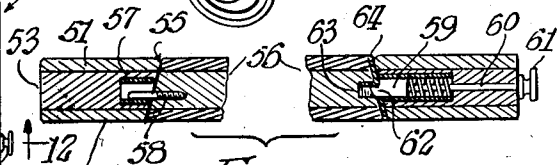

FIG. 12.

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FIG. 6.

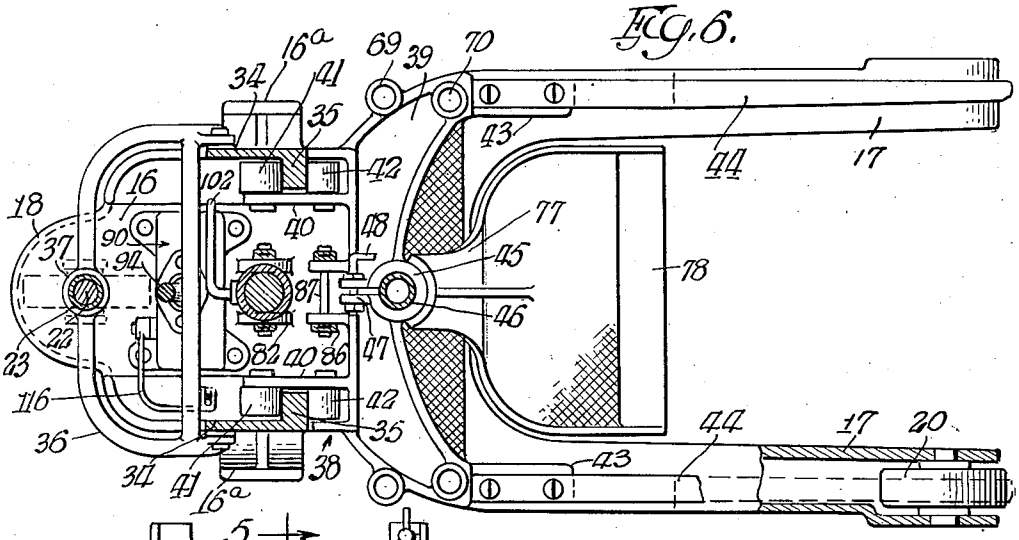


FIG. 4.

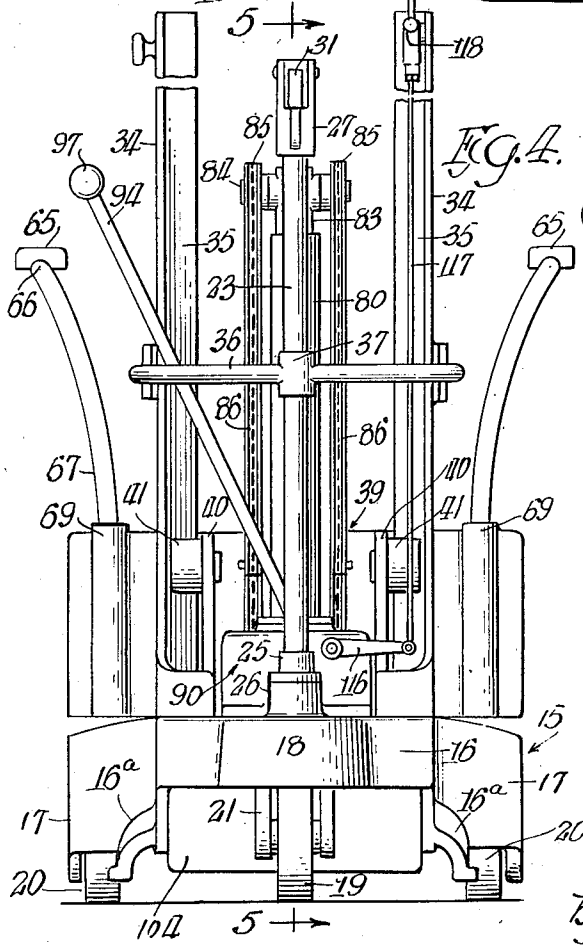


FIG. 7.

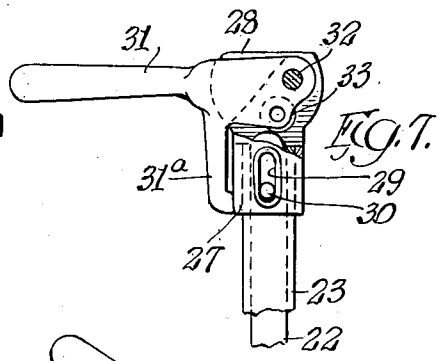
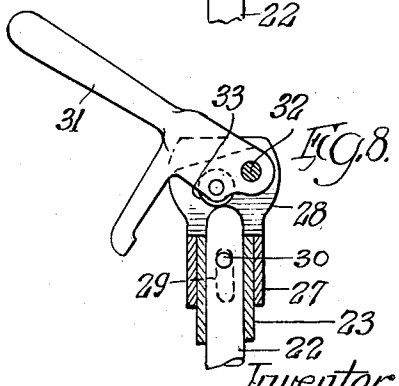


FIG. 8.



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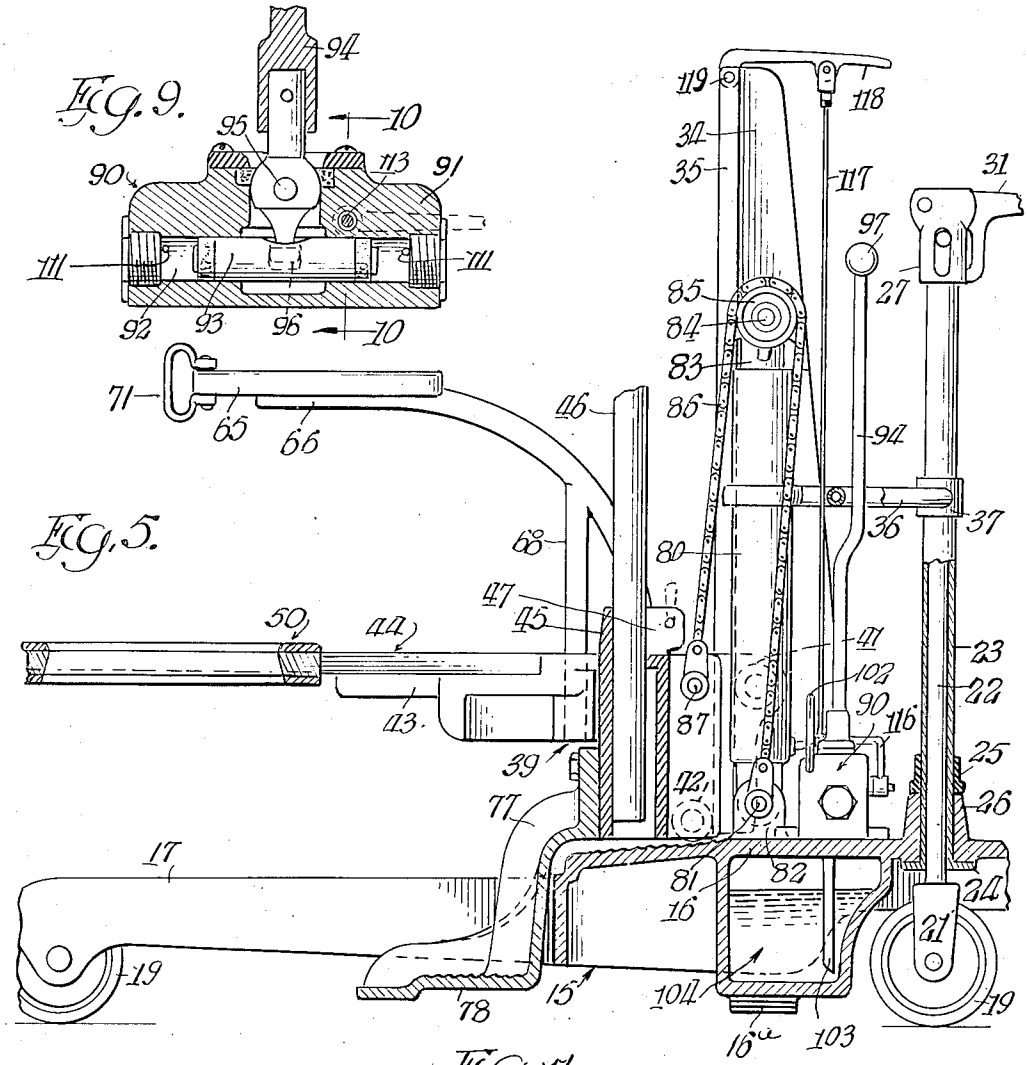

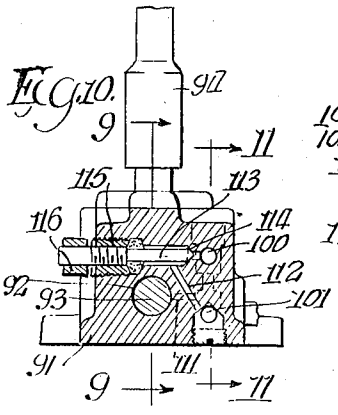

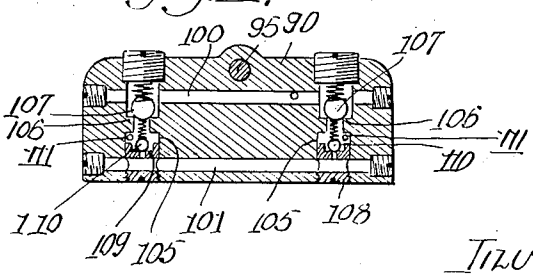

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Patented May 15, 1945 2,375,907

UNITED STATES PATENT OFFICE

2,375,907

INVALID TRANSFER DEVICE

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Application November 26, 1942, Serial No. 467,070

15 Claims. (Cl. 5—86)

This invention relates to improvements in invalid transfer devices and it consists of the matters hereinafter described and more particularly pointed out in the appended claims.

One of the objects of the present invention is to provide a device whereby a nurse or other sickroom attendant may readily transfer an invalid from a bed to a chair or the like and return the invalid to the bed when so desired.

Another object of the invention is to provide a device of this kind, which while normally mobile so that it may be moved about as necessary, may be quickly rendered immobile when such a condition is so desired.

Again, it is an object of the invention to provide a device of this kind which may be used by an invalid when seated thereon, to assist himself in rising to a standing position.

Furthermore, it is an object of the invention to provide a device which is usable in and about sickrooms of a hospital, sanitarium or in the home for many different purposes.

Also, it is an object of the invention to provide a device of this kind which may be used to carry a stretcher case when the same is necessary.

The above mentioned objects of the invention, as well as others, together with the advantages thereof will more fully appear as the specification proceeds.

In the drawings:

Fig. 1 is a perspective view of an invalid transfer device embodying the preferred form of the invention.

Fig. 2 is a tranfsverse vertical sectional view through a part of the device, as taken on the line 2—2 of Fig. 1 and on a somewhat enlarged scale.

Fig. 3 is a top plan view of a seat-like support or member embodied in the device.

Fig. 4 is a view in front elevation of the device.

Fig. 5 is a longitudinal vertical sectional view through the device as taken on the line 5—5 of Fig. 4.

Fig. 6 is a horizontal sectional view through the device as taken on the line 6—6 of Fig. 1 and with the seat member of Fig. 3, removed from the device.

Fig. 7 is a vertical detail sectional view through a part of the mechanism of the device for quickly changing the same from a mobile to an immobile condition and back to a mobile condition, said figure showing said parts of the mechanism in that position providing the mobile condition for the device.

Fig. 8 is a view of the parts shown in Fig. 7 when said parts are in the position providing the immobile condition for the device.

Fig. 9 is a longitudinal vertical sectional view on a somewhat enlarged scale, through a hydraulic jack or pump mechanism embodied in the device, the plane of the section being indicated by the line 9—9 of Fig. 10.

Fig. 10 is a transverse vertical sectional view through the jack mechanism of Fig. 9 as taken on the line 10—10 thereof.

Fig. 11 is another longitudinal vertcal sectional view through the hydraulic jack mechanism of Fig. 9 as taken on the line 11—11 of Fig. 10.

Fig. 12 is a longitudinal vertical sectional view on an enlarged scale through the seat of the device as shown in Fig. 3 as taken on the line 12—12 thereof and on a scale enlarged over said Fig. 3.

In general the device embodies therein a relatively heavy horizontally disposed base having a front end platform and a pair of laterally spaced, rearwardly extending legs. A wheel is journalled in the rear end of each leg and at the front of the platform is a third wheel that is journalled in the bottom end of a vertically extending stem that bears in a guide tube. The three wheels mentioned provide mobility for the device whereby it may be moved about when necessary. At each side of the platform is a foot which when the front end of the device is lowered, as will later appear, engages the floor and renders the device immobile, as is desired when the device is positioned in operative relation with respect to a bed or the like upon which an invalid may be disposed.

Rising from the front end of the platform is a pair of laterally spaced upright standards, each having a guide rail on its inner face. These rails are opertaively engaged by a carriage in such a manner that the carriage is capable of a guided movement upwardly and downwardly upon said rails. In the present instance an hydraulic jack mechanism, that is manually operable, is disposed on the platform and is operatively connected to the carriage so as to impart movement thereto upwardly and permit movement downwardly upon said rails to dispose and then to hold the carriage at the desired elevation.

The carriage, which extends rearwardly from the standards so as to overhang a part of the platform of the base, includes laterally spaced horizontal arms, each carrying a rearwardly extending horizontal rail, said rails overhanging the legs of the base. These rails are adapted to de-

tachably receive the laterally spaced parts of an invalid supporting seat-like member.

The arms of the carriage are adapted to supportingly receive arm rests which are so disposed as to be used by an invalid engaged or seated upon the seat member when it is supported on the rails before mentioned. The arm rests are so formed at the rear ends as to receive certain straps which may be used as a back rest by the invalid seated on the seat member when it is so supported on the rails as previously mentioned.

The arm rests mentioned are removable from the carriage so that they will not be in the way of either leg of the invalid, should either leg be so injured as to require horizontal support on the associated arm of the carriage.

Rising from the carriage just to the rear of the standards and between parts of the arm rests is a vertically adjustable and removable mast, the upper end of which is bent to provide a rearwardly extending arm. Straps depend from the rear end of said arm and into such a position as to be conveniently grasped by the invalid when engaged upon the seat member and whereby the invalid may assist himself in rising from a sitting to a standing position.

The central bottom portion of the carriage has attached thereto a foot rest which is so disposed that the seated invalid may engage his feet thereon.

When the patient is seated in the device, the device is rendered mobile and may be rolled about with ease by a nurse or attendant to any place desired.

Referring now in detail to that embodiment of the invention illustrated in the drawings, 15 indicates the horizontally disposed base of the device which includes a front end portion or platform 16 and laterally spaced legs 17—17 extending rearwardly therefrom. At the central front end part of the platform is a downwardly opening housing 18 for a wheel 19, as will later appear. Journalled in the rear end of each leg 17 is a wheel 20. At each side of the platform 16 is a foot 16*a*. The front wheel 19 is journalled in the bifurcated lower end 21 of an upright stem 22 disposed in a tube 23. The bottom end of this tube carries a radial flange 24 for engagement with the underside of the top wall of the housing 18 and fixed to said tube is a collar 25 that engages upon the top end of a boss 26 rising from said top wall of the housing.

The upper end of said tube extends into a collar 27 having laterally spaced ears 28 at its top end. The collar 27 and associated top end part of the tube 23 have longitudinal slots 29 in opposite sides thereof and the ends of a cross pin 30 in the top end of the stem 22 extend into said slots. Thus the stem 22 is capable of a limited vertical movement with respect to said collar and tube but may turn therewith.

A lever 31 has one end disposed between the ears 28 of the collar and is pivotally connected thereto as at 32. Said end of the lever has a roller 33 (see Figs. 7 and 8) journalled therein and so disposed with respect to the pivotal connection 32 that when said lever is in the position shown in Fig. 7, wherein it is stopped by the engagement of a finger 31*a* with said collar, said roller engages the top end of the stem 22 to one side of its axis. This holds the stem 22 depressed relatively to the collar 27 so that the front end of the base is held at that elevation wherein the feet 16*a* clear the surface upon which the wheels 19 and 20 are engaged. Thus, the device as a whole may be moved about upon its three wheels. In this condition the device is mobile. By swinging the lever 31 laterally in in either direction, the stem 22 is turned so that the wheel 19 enables a steering of the device as a whole. When the lever 31 is swung into the position shown in Fig. 8 wherein the roller 33 is disposed to the other side of the axis of the stem 22, this permits of a relative longitudinal movement between the stem and tube so that the front end of the platform is lowered into that position wherein the feet 16*a* engage the surface upon which the wheels are engaged so as to prevent movement of the device from one place to another. Thus the device is rendered immobile and the change from the mobile to the immobile condition of the device is controlled merely by swinging the lever 31 upwardly or downwardly about its axis 32.

Rising from the front end portion of the platform 16 is a pair of laterally spaced upright standards 34—34 each provided along its rear margin and upon the inner surface thereof with a vertically disposed guide rail 35. Projecting forwardly from about the mid portion of said standards is a yoke 36 which includes a sleeve 37, that surrounds a part of the tube 23 to there give it support.

A carriage 38 (see Fig. 1) is mounted on the standards 34 for a guided movement upwardly and downwardly on the rails 35—35. This carriage includes a body portion 39 which is disposed to the rear of the standards and said body portion carries forwardly extending flange-like parts 40, one disposed near each rail 35. Each flange-like part has upper and lower rollers 41 and 42 journalled therein and said rollers have rolling engagement with the front and rear faces of the associated rail 35. At each side of the body portion 39 is a rearwardly extending arm 43 to which is fixed a rearwardly extending horizontally disposed rail 44 and these rails overhang or are disposed above the legs 17 of the base.

At the central part of the body 39 is a vertically disposed split sleeve 45 in which a mast 46 is disposed and which will be again referred to. This split sleeve includes spaced ears 47 with which a hand bolt 48 (see Fig. 6) is associated and whereby the ears 47 may be drawn toward each other and cause the sleeve to clamp the mast in the desired position. By loosening the hand bolt 48, the sleeve releases its clamping action on the mast so that it may be turned in either direction or adjusted upwardly or downwardly and even removed therefrom when not desired.

The laterally spaced rails 44 removably receive a seat member 50 preferably made of wood and comprising top and bottom layers 51—52 and a filler 53 (see Fig. 12). The lateral margin of the top layers extends beyond the side edges of the filler so as to provide grooves 54 (see Figs. 1 and 2) to engage the rails 44—44. Thus the seat member may be removed from the rails by sliding it off the free rear ends thereof and may be applied to said rails by sliding it on said rails from said free ends thereof. In the central longitudinal part of the seat member is an opening 55 having the general contour of the opening in a toilet seat and this opening tapers upwardly from the bottom of the seat. When the member 50 is to be used as a seat and not for toilet purposes, the opening 55 therein may be closed by a cover 56 which may be removed from and applied to the seat from below. This cover

has an edge contour fitting the opening 55 and it is provided toward the front end with a pair of finger holes 56a (see Fig. 3) whereby it may be more conveniently handled.

So that the cover may be locked in place in the seat opening 55 simply by the act of applying said cover to the seat from below, I provide at the front end of the seat opening a sleeved recess 57 adapted to receive the projecting end of a pin 58 fixed in the front end of the cover. This pin is of a diameter smaller than the recess so that it may be easily inserted into said recess from below. In the rear end of the seat member is located a spring pressed plunger 59 which includes a stem 60 that carries a knob 61 normally engaged with the rear end of the seat. The plunger has a tapered catch 62 (see Fig. 12) at its front end adapted to snap into a recess 63 in the rear end of the cover. As the cover 56 is also made of the same layered wood construction as the seat, it is provided at its rear end with a metal striker plate 64.

To insert the cover in place it is first disposed under the seat and the pin 58 at the front end of the cover is then inserted into the sleeved recess 57. Due to the differences in diameters between th pin and recess, a fulcrum point is formed, about which the rear end of the cover may be swung upwardly. In this movement of said end of the cover, the striker plate 64 engages the catch 62 of the plunger and pushes it out of the way so that the cover can fit into the opening. At this time the recess 63 lines up with the plunger and the catch 62 thereof immediately snaps into the recess. Due to the taper of the opening 55 and the edge of the cover, when the cover is being placed in said opening, it is guided into place therein and when so in place cannot rock out of position due to the holding action of the pin 58 and plunger 59. To remove the cover from the opening, the knob 61 is pulled outwardly. This releases the plunger catch from the recess so that the rear end of the cover drops downwardly, after which it may be withdrawn as is obvious.

Associated with the seat is a pair of arm rests 65—65 so disposed as to be convenient for use by the occupant of the seat. Each arm rest is carried by the rear end of a horizontal support 66, the front end of which has a plurality of substantially vertical front and rear legs 67—68 respectively. The bottom end of said legs frictionally fit in recesses 69 and 70 (see Fig. 6) provided therefor in the body of the carriage substantially in line with the rails 44 so that the supports 66 overhang said rails. By reason of the frictional fit of the legs 67—68 in the recesses 69 and 70, the arm rest supports 66 may be removed merely by lifting them upwardly. To replace them, said legs are merely reinserted in said recesses.

The rear ends of the arm rests normally overhang the lateral margin of the seat 50 and is there provided each with a pivoted clevis 71. One end of a looped strap 72 is passed through one of said devices and carries a snap hook 73 which may be detachably engaged with the other clevis. This strap, which includes a buckle 74 whereby its length may be adjusted, is primarily intended for use as a back rest for the occupant of the seat member. When a patient is about to occupy the seat, the snap hook 73 is first removed from its clevis and after the occupant is seated, the loop strap is passed around the back and the snap hook then reengaged with its clevis. By shortening or lengthening the strap, the back rest effect therefor may be adjusted to suit the occupant.

The top end of the mast is bent to form a horizontal arm 75 that normally extends rearwardly to overhang the seat member. On the underside of its free end is provided a loop 76 from which depends a plurality of straps that extend into a position to be conveniently grasped by the occupant of the seat.

The rear part of the central body portion 39 of the carriage has an upper end of a depending bracket arm 77 fixed thereto and the bottom end of said arm carries a step 78. This step is so positioned that the occupant of the seat may rest his feet thereon. In this respect it is pointed out that by moving the seat 50 forwardly or rearwardly on the rails 44, the occupant may be moved into that position making the foot rest most convenient for use. At this time should the occupant desire to rise to a standing position, he may assist himself by means of the straps 77. In case the occupant has a leg injury requiring that the leg be held in a horizontal position, one or the other of the arm rest supports 66 may be removed, so that the injured leg may rest on the proper arm 43.

The carriage 38 and the parts carried thereby may be raised or lowered to that elevation necessary in removing a patient from a bed and placing him on a chair or toilet. Preferably to raise and lower the carriage, hydraulic means are employed and such means are as follows:

80 is a hydraulic cylinder which is pivotally mounted at its bottom end upon a cross pin 81 journalled in a pair of upright ears 82 rising from the platform 16 between the standards 34—34.

A piston or plunger 83 slides in the upper end of the cylinder and at the top end of said piston is a cross shaft 84, upon the ends of which sprockets 85—85 are journalled. A sprocket chain 86 is trained about each sprocket and one end of each chain is fixed to the associated end of the pin 81 while the other end of each chain is connected to a cross pin 87 (see Fig. 5) carried by the front central portion of the carriage. When hydraulic fluid under pressure enters the bottom end of the cylinder 80, the piston 83 is projected upwardly and this movement of the piston, through the sprocket wheels 85 and chains 86 will raise the carriage upwardly of the standards. When the hydraulic fluid is permitted to escape from the bottom end of the cylinder, the carriage will descend.

For providing the hydraulic fluid under pressure and for controlling the passage thereto to and from the cylinder 80, a hydraulic jack or pump 90 is disposed on the platform 16 forwardly of the cylinder.

This jack or pump embodies a cylinder block 91 (see Figs. 9–10 and 11) having a longitudinal bore 92 therein which is closed at its ends. A duplex plunger or piston 93 slides in said bore and it is reciprocated back and forth by a lever 94. Said lever is formed with a spherical enlargement toward its bottom end journalled for a rocking movement on a pin 95 fixed in the block 91. The bottom end of said lever below said enlargement carries a head 96 that engages in a recess in the central part of the plunger as best shown in Fig. 9. The upper end of the lever projects through and above the yoke 36 where it is provided with a handle 97. By rocking the lever 94 back and forth laterally of the platform, the plunger 93 is reciprocated back and forth in the bore 92 of the block 91.

The block is further provided with longitudinally extending upper and lower passageways 100 and 101 respectively, as shown in Fig. 11. The upper one constitutes the high pressure passageway and the lower one constitutes the low pressure passageway. One end of the high pressure passageway is connected by a tubing 102 (see Fig. 6) with the bottom end of the cylinder 80 and whereby hydraulic fluid may pass from the jack or pump to the cylinder. The lower pressure passageway 101 is connected by a depending tube 103 with a hydraulic fluid reservoir 104 located under the platform 16, as best appears in Fig. 5.

In the block 91 is a pair of vertical passages 105—105 which connect the high and low pressure passageways. In each passage 105 is provided an upper valve seat 106 with which a spring pressed ball valve 107 is normally engaged. In the bottom end of each passage 105 is a plug 108 formed to provide a lower valve seat 109 upon which a spring pressed ball valve 110 is normally engaged. A port 111 leads from each end of the bore 92 into an associated passage 106 at a point between the ball valves 107 and 110 therein. In the movement of the operating lever 94, the plunger is reciprocated to produce a suction at one end of the bore 92 and a pressure at the other end of the bore. Under the suction, hydraulic fluid is drawn from the reservoir 104 up through the tube 103 into the low pressure passageway 101 and up through the passage 105 to lift the ball valves 110 and 107 from their seats after which the fluid enters the suction side of the bore 92. As to the high pressure side of the jack, the fluid in advance of the plunger first closes the associated ball valves 107 and 110 against return of the fluid to the low pressure passageway 101 so that the fluid on said high pressure side passes out through the tube 102 into the bottom end of the cylinder 80.

In the back and forth rocking movement of the lever 94, it is apparent that the piston 83 is caused to ascend in the cylinder 80 and when rocking movement of the lever is discontinued, the carriage 38 will remain in that position into which it has been elevated. To lower the carriage again, high pressure fluid from the cylinder is by-passed back through the jack into the reservoir and the means therefor is as follows:

In Fig. 10 a by-pass port 112 is shown as connecting the passages 100 and 101 respectively. A valve stem 113 controls the passage of fluid through the port and its inner end is normally engaged on a seat 114 forming a part of this port. The outer end of said stem has a threaded engagement in a packing compression sleeve 115 and its extremity carries a normally horizontal arm 116 (see Fig. 4), the free end of which extends toward the adjacent standard 34. This end of said arm is connected to the bottom end of an upright link 117 and the upper end of this link is connected to the mid portion of a lever 118 that is pivoted at 119 to said adjacent standard. This lever, as best shown in Fig. 4, is disposed to overhang the path of travel of the roller 41 associated with said standard.

After the carriage has been elevated to the desired position and it is desired then to lower the same, the operator lifts upwardly on the outer end of the lever 118. This rocks the arm 116 and causes the stem 115 to turn in its sleeve. This will cause the inner end of said stem to leave its seat 114 so that fluid may flow from the high pressure passageway 100 through said port 112 into the low pressure passageway 101 and through the tube 103 back into the reservoir 104. When the carriage reaches the desired lowered position, the lever 118 is swung downwardly and this through the link 117 and arm 116 will cause the valve stem 115 to again engage tis seat 114 and thus close off the port 112.

It is to be noticed from Fig. 4 that the handle 118 stands in the plane of the path of travel of one of the rollers 41. In the upward movement of the carriage 39 in the actuation of the pump or jack 90, as said carriage reaches the top of its movement said roller will engage said lever 118 and swing it upwardly about its pin 119 and this will cause the valve stem 115 to move away from its seat and again open the port 112 whereby hydraulic fluid again is by-passed back to the reservoir. This provides a safety feature for the device so that even if the operator in a moment of thoughtlessness actuates the lever 94 beyond that amount providing the last predetermined high elevated position for the carriage, the carriage stops in its movement. Therefore, no parts of the device can be broken or damaged by an over-operation of said lever.

The operation of the device is substantially as follows: Assume a patient to be lying on his back in a hospital bed and that it is desired to move the patient say to a toilet or to a wheel or other chair. The attendant turns the patient on his side and the seat member 50 is then placed on the bed adjacent one side thereof with the grooves 54 facing in such direction that they may be engaged by the rails 44 when the device as a whole is moved into position with respect to the side of the bed. Before moving the device as a whole into position, the patient is turned back so that his sit bones are disposed on the seat member 50 at which time the patient can be swung around and up into a sitting position so that the legs hang downwardly over said side of the bed. After releasing the snap hook 73 from its clevis, the device is moved toward said side of the bed with the rails 44 straddling the patient's legs, it being assumed that said rails are disposed in the horizontal plane of and line up with the grooves 54 in the seat on the bed. The device is then moved further inward toward the bed, so that the rails 44 enter the seat grooves 54 for the support of the seat and this will bring the foot rest 78 within convenient reach of the patient's feet.

The snap hook 73 is then passed behind the patient's back and reattached to its arm rest clevis so that the strap 72 now acts as a back rest and at this time the patient may engage or lean his forearms on the arm rests. If desired the patient may hold onto the depending assist straps 77. After the patient has thus been positioned, the lever 94 is rocked laterally back and forth and this causes the plunger 83 to elevate the carriage into a position freeing or clearing the seat from supporting engagement with the bed. The device as a whole, with the patient seated thereon, may be moved on its wheels to a chair, toilet or the like. If the patient is to use the toilet, the seat is positioned above the toilet seat and the cover 56 is removed from below the seat member 50 as before mentioned. The carriage is then lowered until the seat member 50 rests on the top of the toilet seat.

If the patient is to be placed in a wheel or other chair, the carriage is lowered until the seat member 50 engages upon the seat of the

chair, whereupon the transfer device may be backed away from the chair leaving the seat member in position thereon. It is contemplated that a number of seat members **50** will be provided for each device.

The device may also be used to move a stretcher borne patient from one place to another, by supporting the stretcher upon the rails **44—44** or even upon the seat member **50** when the latter is engaged with or upon said rails.

When it is desired to render the device immobile, it is only necessary to actuate the lever **31** in the proper direction and this will lower the front end of the base so that the feet **16a** will engage the surface of the floor upon which the device is being used.

While in describing my invention I have referred in detail to the form arrangement and construction of the parts involved, the same is to be considered only in the illustrative sense so that I do not wish to be limited thereto except as may be specifically set forth in the appended claims.

I claim as my invention:

1. A device of the kind described and embodying therein a base, upright means mounted on the base, a carriage having a vertical guided movement upon and including laterally spaced elongated parts projecting in a generally horizontal direction from said upright means, means for imparting a vertical movement to said carriage upon said upright means, and a seat member arranged between and having portions at its sides for removable engagement with said elongated projecting parts of the carriage in such a manner that the seat member may be moved longitudinally of said parts into different positions toward and away from said upright means.

2. A device of the kind described and embodying therein a base, upright means mounted on the base, a carriage having a vertical guided movement upon and including parts projecting in a generally horizontal direction from said upright means, means for imparting a vertical movement to said carriage upon said upright means, a seat member adapted to be removably engaged by the projecting parts of said carriage in such a manner that the seat member may be moved in a predetermined plane toward and away from said upright means, and means providing a foot rest below said seat member and supported by the carriage between said seat member and said upright means.

3. A device of the kind described and embodying therein a base, upright means mounted on the base, a carriage having a vertical guided movement upon and including laterally spaced rails projecting in a generally horizontal direction from said upright means, means for imparting a vertical movement to said carriage upon said upright means, a seat member, laterally spaced parts on said seat member adapted for sliding engagement with said rails and whereby said seat member may be moved thereon toward and away from said upright means, and means associated with each rail and including an upright portion detachably engaged with said carriage and a horizontal portion disposed above the associated rail and providing laterally spaced arm rests for the occupant of the seat member when the latter is engaged with said projecting parts of the carriage.

4. A device of the kind described and embodying therein a base, upright means mounted on the base, a carriage having a vertical guided movement upon and including parts projecting in a generally horizontal direction from said upright means, means for imparting a vertical movement to said carriage upon said upright means, a seat member adapted to be removably engaged by the projecting parts of said carriage in such a manner that the seat member may be moved in a predetermined plane toward and away from said upright means, means on the carriage providing laterally spaced arm rests for the occupant of the seat member when the latter is engaged with said projecting part of the carriage, and means carried by said arm rests and adapted to provide a back rest for the occupant of said seat member.

5. A device of the kind described and embodying therein a base, upright means mounted on the base, a carriage having a vertical guided movement upon and including parts projecting in a generally horizontal direction from said upright means, means for imparting a vertical movement to said carriage upon said upright means, a seat member adapted to be removably engaged by the projecting parts of said carriage in such a manner that the seat member may be moved in a predetermined plane toward and away from said upright means, means rising from said carriage and having an upper end portion overhanging said seat member when the latter is operatively engaged on said projecting parts of the carriage, and means depending from said upper end portion of said last mentioned means into a position adapted to be grasped by the occupant of the seat member for assistance in rising from the seat to a standing position.

6. A device of the kind described and embodying therein a base, upright means mounted on one part of the base, a carriage mounted for a vertical guided movement on said upright means, laterally spaced members fixed at one end to said carriage and extending in a generally horizontal direction therefrom and overhanging another part of said base, a seat member, means at the sides of the seat member for sliding guided engagement with said laterally spaced members and cooperating therewith to provide leg space between said seat member and said carriage for the occupant of the seat member when facing said upright means and means for imparting a vertical movement to said carriage upon said upright means.

7. A device of the kind described and embodying therein a substantially horizontal base, upright means mounted on the base, a carriage having a vertical guided movement upon said upright means and including laterally spaced, substantially horizontal rails arranged to overhang a part of said base, means for imparting a vertical movement to said carriage upon said upright means, a seat member having grooves in its sides complemental to said rails whereby said seat member may be removably engaged with said rails for support thereby and when so engaged may be moved on said rails toward and away from said upright means.

8. A device of the kind described and embodying therein a substantially horizontal base, upright means mounted on the base, a carriage having a vertical guided movement upon said upright means and including laterally spaced horizontal rails arranged to overhang a part of said base, means for imparting a vertical movement to said carriage upon said upright means, a seat member, interengageable parts on said seat member and said rails respectively

whereby said seat member may be removably engaged with said rails for support thereby and when so engaged may be moved thereon toward and away from said upright means, and means providing a foot rest below said seat member and supported by said carriage between said seat member and said upright means.

9. A device of the kind described and embodying therein a substantially horizontal base, upright means mounted on the base, a carriage having a vertical guided movement upon and projecting from a part of said upright means to overhang a part of said base, means for imparting a vertical movement to said carriage upon said upright means, a seat member, interengageable parts on said seat member and on that part of the carriage that overhangs said part of the base and whereby said seat member may be removably engaged with said carriage for support thereby and when so engaged may be moved thereon toward and away from said upright means, and members detachably connected at one end only to the carriage and providing laterally spaced arm rests for the occupant of the seat member when the latter is operatively engaged with and supported by the carriage, the other end of said members being formed to have a backrest detachably connected thereto.

10. A device of the kind described and embodying therein a base, upright means mounted on the base, a carriage including parts having a vertical guided movement upon and projecting from a part of said upright means in a generally horizontal direction, means for imparting a vertical movement to said carriage upon said upright means, a seat member, interengageable parts on said seat member and on that part of the carriage that projects in a generally horizontal direction and whereby said seat member may be removably engaged with said carriage for support thereby and when so engaged may be moved thereon toward and away from said upright means, laterally spaced members one at each side of the carriage and disposed above said projecting parts of the carriage, means providing a detachable connection between one end of said laterally spaced members and associated carriage parts and whereby said members may be applied to and removed from said carriage parts, the outer ends of the said laterally spaced members providing arm rests.

11. A device of the kind described and embodying therein a base, upright means mounted on the base, a carriage and including parts having a vertical guided movement upon and projecting from a part of said upright means in a generally horizontal direction, means for imparting a vertical movement to said carriage upon said upright means, a seat member, interengageable parts on said seat member and on that part of the carriage that projects in said generally horizontal direction and whereby said seat member may be removably engaged with said carriage for support thereby and when so engaged may be moved thereon toward and away from said upright means, laterally spaced members one at each side of the carriage and disposed above said projecting parts of said carriage, means providing a detachable connection between one end of said laterally spaced members and associated carriage parts and whereby said members may be applied to and removed from said carriage parts, the outer ends of said laterally spaced members providing arm rests, and means connected to one of said laterally spaced members and adapted to be detachably connected to the other one thereof and providing a back rest for the occupant of the seat member.

12. A device of the kind described and embodying therein a base, wheels at one end of said base, a wheel disposed at the other end of the base, and whereby said base is mobile upon a floor surface, upright means mounted on the base, a carriage having a vertical guided movement upon and including parts projecting in a generally horizontal direction, means for imparting a vertical movement to said carriage upon said upright means, a seat member detachably connected with said parts of said carriage, an upright stem journalled in said other end of the base and carrying at its bottom end said last mentioned wheel, means in which said stem is disposed and means carried by said last mentioned means and adapted for operation to raise or lower said stem, said stem when raised in said means permitting fixed parts of said base to engage said floor surface so that the base is rendered substantially immobile.

13. A device of the kind described and embodying therein a base, upright means mounted on the base, a carriage having vertically guided movement upon said upright means, laterally spaced rearwardly extending rails carried by said carriage and projecting in a substantially horizontal direction, and a seat member having means for detachable sliding guided engagement with said rails and whereby said seat may be removed from and applied to said rails from the free end thereof.

14. A device of the kind described and embodying therein a base, upright means mounted on the base, a carriage having vertically guided movement upon said upright means, laterally spaced rearwardly extending rails carried by said carriage and projecting in a substantially horizontal direction, and a seat member having grooves in its side edges for engagement with said rails and whereby the seat member may be removed from and applied to said rails from the free end thereof.

15. A device of the kind described and embodying therein a base, upright means mounted on the base, a carriage having a vertical guided movement on said upright means, means projecting in a generally horizontal direction from the carriage for supporting a seat, members each including a plurality of substantially upright portions having detachable engagement with parts of said carriage and each further including a substantially horizontal portion, the horizontal portions of said members forming laterally spaced arm rests for the occupant of the seat.

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