ABSTRACT: A patient moving device which includes an adjustable post having clamps for attachment to the head of a bed and carrying thereon a winch having a cable wound thereon. A harness is arranged for engagement in the armpits of the patient or is attached to an apron underlying the patient so that upon winding of the winch the cable pulls the harness and thus moves the patient upwardly in the bed.
PATIENT MOVING DEVICE FOR ATTACHMENT TO HOSPITAL BEDS

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to the handling and moving of patients who are unable to move themselves. When patients use the inclined head portion of a bed to raise the head and the upper torso to an uprightly inclined position, either to ease their breathing as required, or for their comfort during a convalescence period, there is a tendency for the patient to slide downwardly in the bed toward the foot so that assistance is required in returning the patient toward the head of the bed.

The present invention provides a mechanical device to permit one individual to easily and safely move the patient toward the head of the bed.

2. Description of the Prior Art

In moving patients upwardly in a bed toward the head prior to the present invention, at least two persons grasping the patient on opposite sides of the bed were required to provide sufficient strength to move the patient and even then it was awkward for the nurses to grasp the patient in such a way as to apply the maximum leverage and create a minimum of discomfort to the patient.

SUMMARY OF THE INVENTION

The present invention includes an adjustable post which is clamped to the head of the bed and extends upwardly above the head of the bed carrying a hand-operated winch thereon. A cable is wound on the winch and is adapted to be detachably connected to a harness which is in turn connected to devices for engaging under the armpits of the patient or an apron underlying the patient so that upon winding of the winch the patient is moved upwardly in the bed without undue strain on the individual operating the apparatus.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the invention with the harness carrying the armpit-engaging members;

FIG. 2 is a perspective view of the adjustable post and winch disconnected from the bed and shown partially broken away for convenience of illustration;

FIG. 3 is a vertical cross section through the post and winch showing the attachment of the clamps to the headboard;

FIG. 4 is a horizontal section taken along the line 4-4 of FIG. 3 looking in the direction of the arrows;

FIG. 5 is a transverse section taken along the line 5-5 of FIG. 3 looking in the direction of the arrows, shown partially broken away for convenience of illustration; and

FIG. 6 is a perspective view of a modified form of the invention shown partially broken away for convenience of illustration.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawings in detail wherein like reference characters appearing throughout the several figures, the reference numeral 10 indicates generally a patient moving device constructed in accordance with the invention.

The patient moving device 10 includes a generally rectangular tubular post 11 having a pair of elongated vertical slots 12, 13 formed in the front and rear walls respectively, adjacent the lower end of the post 11, as can be clearly seen in FIGS. 2 and 6. The generally rectangular tubular post 14 is telescopically mounted in the lower end of the post 11 and is adapted to be adjusted vertically with respect to the post 11 and clamped thereon by a bolt 15 and wing nut 16 which extends through the slots 12, 13 and through the post 14.

A winch generally indicated at 17 is provided with a socket member 18 which encompasses the post 11 and is adapted to slide vertically thereon being clamped in adjusted position by a wing head setscrew 19. The winch 17 has a generally rectangular backplate 20 rigidly secured to the socket 18 and having a pair of perpendicularly extending end walls 21, 22 integrally formed on opposite side edges of the backplate 20. A shaft 23 is journaled in the opposite sidewalls 21, 22 horizontal to the ground and a handrak 24 is secured to one end of the shaft 23 so that it may be rotated thereby. A circular rack 25 is secured to the shaft 23 and cooperates with a spring pressed pawl 26 to secure the shaft 23 against unwinding except when the spring pressed pawl 26 is hand manipulated to release it from the circular rack 25.

A cable 27 is wound on the shaft 23 and has a spring swivel hook 28 secured to the free end thereof. A pair of U bolts 29, 30 are secured to the backplate 20 on opposite sides thereof in spaced parallel relation to form a cable guide limiting the cable 27 to the central portion of the shaft 23.

The post 11 is positioned to the rear of and adjacent the headboard 31 of a bed generally indicated at 32 and a horizontally extending angle iron support 33 rigidly secured to the post 11 is engaged over the top edge of the headboard 31 with a resilient pad 34 engaging the surfaces of the bed to prevent scarring thereof. The angle iron member 33 is rigidly connected to the post 11 and a clamp plate 35 is arranged to cooperate therewith to engage the inner face of the headboard 31. A bolt 36 supports the clamp plate 35 and extends through the post 11 and is provided with a wing nut 37 to clamp the clamp plate 35 against the headboard 31. A resilient pad 38 is mounted on the clamp plate 35 for engagement with the head of the bed 31 to prevent scarring. A bolt 39 engages through the slots 12, 13 of the post 11 and has a wingnut 40 threaded thereon to secure the bolt 39 to the post 11. An inner clamp member 41 extends horizontally across the post 11 and has a pair of guide ears 42, 43 extending on opposite sides of the post 11 to maintain the clamp plate 41 in its horizontal alignment. The clamp plate 41 is mounted on the bolt 39 and has a resilient pad 44 on the face thereof toward the headboard 31. An adjustable clamp plate 45 is mounted on the bolt 39 and has a resilient pad 46 formed on the inner face thereof. The bolt 39 is adjusted until it is in contact with the bottom edge of the headboard 31 and then is tightened with the clamp plate 41 and the clamp plate 45 clamping the opposite faces of the lower edge thereof.

The post 14 is vertically adjusted for some bed headboards 31 which are longer from top to bottom and require an extension to position the lower clamp below the headboard 31. The post 14 has a plurality of horizontally extending holes 47 to permit the bolt 39 to be positioned so as to perform its function of clamping the lower edge of the headboard 31.

Referring now to FIG. 1, a T-bar 48 is releasably connected to the hook 28 centrally of the T-bar 48 and a strap 49 has one end rigidly connected to the T-bar 48. The opposite end of the strap 49 is provided with a snap hook 50 for engagement with an eye 51 adjacent each end of the T-bar 48. The straps 49 are each provided with a padded central portion 52 which can be engaged under the armpits of a patient 53 so that by cranking the winch 17 the patient 53 will be drawn upwardly in the bed 32 to the desired position.

A cap C is detachably secured to the upper end of the post 11 and is provided with an upstanding flatplate P which can carry a manufacturer's label, hospital department assignment indicia, or any other desired information.

In FIG. 6 a modified form of the invention is illustrated wherein a T-bar 48' is secured to the snap hook 28 intermediate the opposite ends of the T-bar 48' and has snap hooks 54 secured to the opposite ends thereof. A cloth apron 55 is provided with a tubular portion 56 at its upper corners corresponding rings 57 which are adapted to engage the hooks 54. The apron 55 extends downwardly under the body of the patient 53' and has a pair of straps 58, 59 extending from opposite side edges thereof adjacent the thighs of a patient. The straps 58, 59 are adapted to overlie each other and be adjustable connected by a plurality of snaps 60 secured thereto.

The apron 55 is strapped to the patient 53' by means of the straps 58, 59 whereupon the winch 17 is operated to draw the
apron 55 upwardly in the bed carrying the patient 53' therewith. The apron 55 can be placed under the patient 53' by standard methods of applying new sheets to a bed in hospital practice. While a handcrank 24 has been illustrated for operating the winch 17, a reversible electric motor could be substituted therefor when desired.

Having thus described the preferred embodiments of the invention, it should be understood that numerous structural modifications and adaptations may be resorted to without departing from the spirit of the invention.

I claim:

1. A patient moving device for attachment to hospital beds comprising:
   an upstanding post;
   means on said post for releasably clamping said post to the top and bottom edges, respectively, of the headboard of a bed, with a portion of said post extending above said upper edge of said headboard and centrally thereof, and means for adjustably extending the length of said post;

2. A device as claimed in claim 1 wherein the patient-engaging means includes a pair of padded straps connected to opposite ends of said T-connector for engaging the armpits of a patient.

3. A device as claimed in claim 1 wherein the patient-engaging means includes an apron detachably connected to said T-connector and having patient encompassing straps integrally formed on the lower side edges thereof.

a winch;
means mounting said winch on said post for vertical adjustable movement thereon to a selected adjusted position;
means releasably securing said winch in its said adjusted position;
a cable wound on said winch;
a T-connector connected and suspended on one end of said cable; and
patient-engaging means connected on said T-connector for moving the patient upwardly in the bed upon winding of said winch.