

Stretcher cum Wheelchair for Patients

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Abstract: This paper describe a novel innovation stretcher cum wheel chair for patients. Various mobility aids are useful for patient to transfer from one place to other place at hospital and other place. During the medical treatment Doctors are recommended patient for mobility in wheel chair. But, it is very difficult to transfer patient from bed to chair and vice versa. This innovation is specially design for patient to transfer from bed to wheel chair and vice versa. This Enovation help attainder or nurse to transfer patient from bed to chair very easily, because chair become a stretcher and it is adjustable to height of a bed.

Keywords: *Economical chair, stretcher cum wheel chair, Chair for the physically handicapped*

I. INTRODUCTION

A stretcher is a moving bed with wheels, designed to transfer patient who can't walk or stand with the help of others assistance. In accident cases and the people who are in critical stages are transfer in stretcher from one place to other place. It is simple in design with metal bed at top for lay the patient, supported by metal frame with swivel caster wheels.



Fig. 1. Stretcher

When the patient is required to transfer from bed to wheel chair from one place to hospital or any other place it becomes very difficult by nursing staff as well as patient also. Due to the transferring from bed to wheel chair or vice versa, stresses are developed in the body of patient and as well as nursing staff.

Fig. 2 shows difficulty to transfer patient form bed to wheel chair.



Fig. 2. Step to Transfer Patient Bed to Chair

The above problems which are generated at the timing of patient transferring from bed to wheel chair can be eliminated by developing new design of stretcher cum wheelchair.



Fig. 3. Isometric View of Developed Stretcher

II. OBJECTIVE OF PROJECT

Developed stretcher cum wheel chair is capable to transfer patient easily from bed to stretcher and vice versa by attendant or nurse. Mobility in both positions as on wheel chair as well as stretcher is possible very easily.

III. CONSTRUCTION OF DEVELOPED STRETCHER

In Our developed stretcher we have use screw jack mechanism to adjust height of stretcher base as per desire height, mechanism able to adjust height about 10 inches parallel to bed.



Fig. 4. Before Rise up of Screw Jack

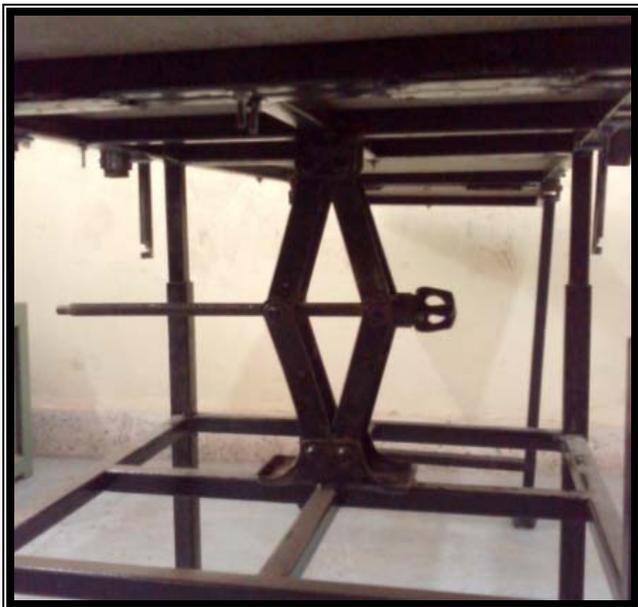


Fig. 5. After Rise up of Screw Jack

Back rest is designed such way that it can be turn from vertical position to horizontal position and vice versa very easily operate by attendant or nursing staff.



Fig. 6. Vertical Position of Back Rest



Fig. 7. Horizontal Position of Back Rest

Leg rest is designed such way that it can be turn from vertical to horizontal position and vice versa very easily operate by attendant or nursing staff.



Fig. 8. Vertical Position of Leg Rest



Fig. 9. Horizontal Position of Leg Rest

Linkage mechanism is arranged to convert stretcher to wheel chair and vice versa very easily and also support the stretcher during the transfer patient from one place to another place. Wheels are attached at legs of stretcher to easily movement of stretcher.

IV. UNIQUE FEATURE OF YOUR INNOVATION

1. Easily operatable by attendant or nurse.
2. Comfortable to patient.
3. Mobility in both position as on wheel chair as well as stretcher

V. CONCLUSION

Developed stretcher is very useful and very ease to transfer patient from bed to stretcher and vice versa also stretcher can convert into a wheel chair by attendant or nurse easily. Mobility is possible in both positions on chair as well as stretcher.



Fig. 10. Isometric View of Stretcher Cum Wheel Chair

FUTURE SCOPE

A pneumatic or hydraulic system may be arranged instead of mechanical linkage to convert wheel chair to stretcher and vice versa very easily, conveniently and fast by attendant or nursing staff.

REFERENCES

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