

Sue can lift her basket of washing.



Sue has MS, frequently uses crutches to assist with walking. She cannot bend down in comfort due to a titanium box surgically implanted in her side. She finds it particularly difficult to do tasks such as safely removing hot food from her low level oven, lifting her loaded washing basket from floor level to her kitchen work top and carrying recycling material from her kitchen to the wheelie bin outside her front door.

A compact electrically powered “fork lift truck” was built which moves on two fixed wheels and two castors. It comprises a chassis supporting two vertical bars which guide a moving carriage. The carriage is moved up and down by an electric motor driving a vertical lead screw and pulley block.

Nylon cords run over the pulleys and are attached at one end to the carriage and at the other to a spring loaded overload beam. The pulley arrangement gives carriage travel that is twice that of the pulley block and so provides a good vertical lifting range. Too much load trips a micro switch, which cuts power to the motor. A second micro switch cuts power when the carriage reaches its lowest position. Power comes from a 12 volt battery with a built in fully automatic charger. Up and down movement is controlled by a toggle switch. Two “fork prongs” are provided which can be inserted into any two of six possible positions in the carriage, depending on the type of load.

