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(57) Abstract :

Embodiments provide device for assisting human walking having biarticular series elastic actuator connected to thigh brace. Biarticular series elastic actuator comprises biarticular motor for applying torque over limb part. The torque is applied through biarticular series springs connected to biarticular motor. Uniarticular series elastic actuator connected to shank plates comprising uniarticular motor connected to the shank plate at one end, configured for applying predetermined amount of torque over the limb part. The torque is applied through uniarticular series springs. Parallel springs connected in parallel to the uniarticular series elastic actuator are configured for exerting the torque to the limb part. Foot plates connected to each of the biarticular series actuator and the uniarticular series elastic actuator are provided for delivering torque to the limb part and thigh cuff is configured to be attached to residual limb. The device is also having socket for receiving the residual limb of the user. FIG. 1

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