Powered Leg Orthosis for Gait Rehabilitation of Motor-Impaired Patients

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Technology description

Every year more than 750,000 Americans have a new or recurrent stroke and 4 million Americans are living with the effects of stroke. This invention is a powered leg orthosis for use in gait rehabilitation of patients with walking disabilities. The powered orthosis is designed to be secured to the leg of the patient to provide a controlled guiding motion. It incorporates controllers that can apply suitable forces on the leg to help it move on a desired trajectory. The interaction forces between the subject and the orthosis are designed to be ‘assist-as-needed’ for safe and effective gait training.

Advantages

Provides controlled repetitive training at a reasonable cost
Provides an accurate quantitative way to measure motor recovery
Rehabilitation of motor-impaired patients and physical therapy for stroke victims in order to improve walking function.

Institution

University of Delaware

联系我们

叶先生

电 话：021-65679356

手 机：13414935137

邮 箱：yeyingsheng@zf-ym.com