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(57) Abstract :

The proposed invention is related to a Calf Stimulation And Foot-Drop Exercise Machine (100) which is a therapeutic device designed for ankle rehabilitation and calf muscle stimulation. The proposed invention features a base (101), hinge mechanism (102), low RPM high torque gear motor (107a), foot board (103), lever mechanism (104), motor mount (107), calf mount (105), remote (109), microcontroller (109a), ethernet cable (110) and triggers (108), and the machine provides controlled angular motion for targeted ankle exercises. The foot board mimics natural ankle motion, efficiently converting linear motion into periodic angular displacement. Its stability is ensured by the calf mount (105), enhancing safety during operation. Triggers (108) and remote (109) offer precise motion control, defining start and end points. The method involves positioning the device, attaching it to the patient's leg, and initiating controlled foot motion, stimulating ankle muscles and enhancing blood circulation and caters to the therapeutic needs of patients with paralysis, promoting recovery and reducing complications like Deep Vein Thrombosis.

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