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(51) International classification	:A61H1/02, A63B24/00, G16H20/30, A61B5/389, G06N3/0442, A61F7/00, A61B5/1455	(71)Name of Applicant : 1)Chitkara University Address of Applicant :Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Rajpura Punjab India
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(57) Abstract :

A rehabilitation and physiotherapy support system, comprising of a rectangular structural frame 101 to support a patient in lying, sitting, and standing postures, an optical laser sensor to analyse body dimensions of the patient and automatically adjust height and alignment of the support links 102, a plurality of coil spring suspension elements 103 to absorb mechanical shocks and jerks during physiotherapy movements, enabling safe posture transitions of the patient, a muscle activity inspection unit 108 to detect muscle activation and contraction intensity during therapy, a plurality of multi-hinge C-shaped members 111 to grip and stabilise body parts of the patient during physiotherapy exercises, a plurality of Peltier elements 107 to selectively provide heating or cooling to specific body regions based on the sensed data via the sensor array, and a plurality of electroactive polymer pockets 112 to vary stiffness in response to blood circulation requirements.

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