Technology Licensing Office and Life Sciences Incubator
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Powered Orthotic Device for Hand Extension

Application

The present invention is an automated, therapeutic device that heats and extends fingers that are curled due to hypertonia from cerebral palsy, stroke, multiple sclerosis, spasticity or other cause

Key Benefits

- Orthotic that provides active and passive stretching
- Applies heat in combination with stretching
- Magnetic attachment reduces risk of injury
- Much lighter weight than other automated stretching devices
- Economical

Market Summary

Hypertonia is a muscular condition that causes affected muscles to become tense. This tension causes pain and often renders the muscles ineffective for normal use. There are many causes of hypertonicity, including cerebral palsy, stroke, multiple sclerosis, and other neurodegenerative conditions. Current therapies for hypertonicity of the hand include physical therapy and the use of splints to force the patient's hand into a static, stretched position. These splints may lead to joint deformation, muscular atrophy and pressure sores while doing little to improve the patient's mobility.

Technical Summary

The present invention is an automated, therapeutic device for heating and extending a patient's curled fingers. The device uses the heat to activate the device, which is manufactured with materials that have shape memory and superelastic characteristics. In addition to acting as an activator of the stretching motion, the heat is beneficial to the patient during the stretching process. The active stretching is far more beneficial to the patient than splints that merely force and hold the curled fingers into a static position.

Developmental Stage

Prototype built and tested

Patent Information

App Type	Country	Serial No.	Patent No.	File Date	Issue Date
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