Title: Lower Extremity Training Device

Invention: A resistance-training device with the purpose of strengthening the lower extremities, preventing muscle de-conditioning and overall weakness, and formation of blood clots. The device, which has a spring-loaded footpad to create resistance, is equipped with a sensor to record the amount of pressure applied and the number of depressions of the footpad in order to track the progress of an individual’s lower extremity strength.

Background: Surgical patients and members of the elderly population are at an increased risk for developing a blood clot in their lower extremities due to a lack of physical activity. This potentially fatal condition can be prevented with increased attention to the conditioning of leg muscles. The lackluster presence of devices tailored to this condition in the rehabilitation technology market could allow this training device to fulfill the demand for a non-invasive and minimally strenuous method of preventing fatal blood clots with a means of tracking strength progression.

Applications:
- Physical therapy (rehabilitative and/or conditioning)
- In-home use
- In patient hospitalized patient, rehabilitation hospitals, subacute care hospitals

Advantages:
- Measures and records the amount of pressure applied by the foot
- Tracks the progress of an individual’s leg muscle strength via footpad depressions
- Portable and minimally strenuous
- Aids in preventing clot formation
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