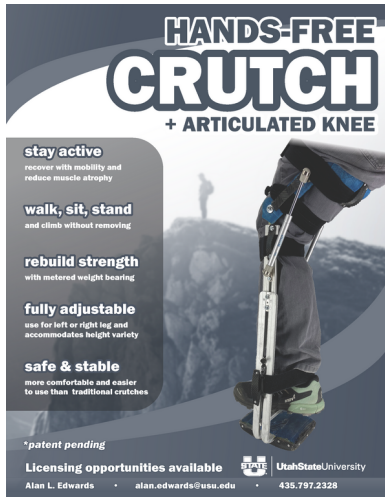


Hands-free crutch with articulated knee

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Hands-free Crutch with Articulated Knee

Products, Materials, and Services

Abstract

Traditional and hands-free crutches limit mobility, comfort, and weight-bearing transition due to restricted knee movement. This USU device shifts weight to the thigh, allowing knee bend and adjustable leg loading, enhancing comfort while sitting, enabling stair use, and quickening recovery while reducing muscle atrophy.

Problem

Traditional and hands-free crutches limit mobility, comfort, and weight-bearing transition due to restricted knee movement.

Solution

This USU device shifts weight to the thigh, allowing knee bend and adjustable leg loading.

Value Proposition

Enhances comfort, sitting, stair use, and recovery speed while reducing muscle atrophy.

Benefit

Traditional and hands-free crutches limit mobility and comfort by restricting knee movement, hindering stair use, sitting, and standing transitions. They also block gradual weight-bearing, complicating recovery and extended wear. The hands-free crutch shifts weight from the lower leg to the upper thigh, enabling natural knee movement. It allows adjustable weight-bearing on the injured leg, improving mobility, comfort, and recovery during lower limb rehabilitation.

An articulated knee boosts comfort, sitting ease, and mobility—enabling stair use and smooth sit-to-stand transitions. It supports gradual weight-bearing, reduces muscle atrophy, and shortens recovery time for improved rehab outcomes.

Market Application

This technology may be of interest to the following sectors: Medical Supply Wholesalers, Home Medical Equipment Rental Companies, Health Stores, Online Medical Supply Retailers, Pharmacies, and Orthopedic Product Manufacturers, among others.

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Intellectual Property

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