

Title (en)

SOILITON TRAVELING WAVE AIR MATTRESSES

Title (de)

SOLITON-LUFTMATRATZEN MIT WANDERWELLEN

Title (fr)

MATELAS PNEUMATIQUES À ONDES À PROPAGATION DE SOLITONS

Publication

EP 3104746 A4 20171025 (EN)

Application

EP 15749666 A 20150210

Priority

- US 201414179791 A 20140213
- US 201462038946 P 20140819
- US 2015015269 W 20150210

Abstract (en)

[origin: WO2015123221A1] A soliton air mattress includes an array of air bladder cells that are individually inflatable to quiescent pressure levels which provide comfortable support for a human body, and a soliton wave generator including an air pressure-pulse generator controlled by a wave sequence generator for introducing into ordered sequences of air bladder cells a wave-like time sequence of air pressure pulses which vary quiescent pressure levels in the cells, the pressure wave resulting in a soliton traveling wave of body support force reduction which traverses surfaces of the air bladder cells, thus reducing normal forces exerted on a body and minimizing the occurrence rate of shear forces exerted on the body, thereby inhibiting formation of bedsores. The soliton wave patterns may optionally simulate water waves and/or rocking motions of a boat to produce relaxing effects.

IPC 8 full level

A47C 7/02 (2006.01)

CPC (source: EP)

A47C 27/10 (2013.01); **A61G 7/05776** (2013.01); **A61G 2203/32** (2013.01); **A61G 2203/34** (2013.01)

Citation (search report)

- [A] US 5584085 A 19961217 - BANKO WILLIAM [US]
- [A] US 2004261182 A1 20041230 - BIGGIE LYDIA B [US], et al
- See references of WO 2015123221A1

Designated contracting state (EPC)

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DOCDB simple family (publication)

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