

Title (en)

SOLITON TRAVELING WAVE AIR MATTRESS

Title (de)

SOLITON-LUFTMATRATZE MIT WANDERWELLEN

Title (fr)

MATELAS PNEUMATIQUE À ONDES À PROPAGATION DE SOLITONS

Publication

**EP 3104746 B1 20181219 (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

**A61G 7/05** (2006.01); **A47C 27/10** (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)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**WO 2015123221 A1 20150820**; CA 2939545 A1 20150820; CA 2939545 C 20181127; EP 3104746 A1 20161221; EP 3104746 A4 20171025; EP 3104746 B1 20181219; EP 3104746 B8 20190220

DOCDB simple family (application)

**US 2015015269 W 20150210**; CA 2939545 A 20150210; EP 15749666 A 20150210