

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
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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
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CPC (source: EP)
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