

Title (en)

DYNAMIC MATTRESS SUPPORT AND METHOD OF OPERATION

Title (de)

DYNAMISCHE MATRATZENSTÜTZE UND GEBRAUCHSVERFAHREN

Title (fr)

SUPPORT DE MATELAS DYNAMIQUE ET SON PROCEDE DE FONCTIONNEMENT

Publication

**EP 1006844 A2 20000614 (EN)**

Application

**EP 97913734 A 19971017**

Priority

- US 9719135 W 19971017
- US 73499596 A 19961022

Abstract (en)

[origin: WO9817150A2] An infant environmental transition system provides an infant with controlled simulated movements encountered by an infant in an intrauterine environment. The system includes a suspension system having a plurality of flexures coupled between a base plate and a moving mattress platform. A cam shaft assembly includes a groove that engages a linear follower connected to the moving bed platform so that the follower moves along the groove while the cam shaft assembly rotates to move the linear follower, and thereby reciprocate the moving mattress platform in a longitudinal direction. Alternatively, a rotating crank assembly translates crank rotation to reciprocating movement of the mattress platform, a detented rocker arm promotes safe, override protection of actuator producing rocking movement. The cam shaft assembly also includes an eccentric cam coupled to a rocker that is coupled to one of the flexures to angularly displace the moving mattress platform support on the flexures, and thereby provide the composite reciprocating and rotational movements of the moving mattress platform that simulate the intrauterine environment. Pulses of variable width control operating speed of a drive motor, and proximity sensor associated with driver cam shaft provide operational feedback for speed regulation and safe shutdown under excessive loading or other adverse operating conditions. Pulse width modulation techniques generates sounds and operate visual indicators on control panel.

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**A47D 9/02**

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**A47C 17/04** (2006.01); **A47C 23/00** (2006.01); **A47D 9/02** (2006.01)

CPC (source: EP KR US)

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