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(54) **APPARATUS AND METHODS TO IMPROVE SLEEP, REDUCE PAIN AND PROMOTE NATURAL HEALING**

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(52) **U.S. Cl.**
USPC **600/14; 600/27**

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See application file for complete search history.

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(57) **ABSTRACT**

This is a new invention, which is safer, simpler to use, less invasive into a user's daily routine and provides a lower cost solution to existing pulsed magnetic field and related vibrational electromagnetic therapy devices to improve sleep, encourage natural healing and reduce pain. This is accomplished through Multiple Simultaneous Extremely Low Frequency (MSELF) energy waves. The MSELF energy waves are derived from a quartz crystal with a fundamental frequency less than one-half of one percent from a natural Fibonacci Number. The apparatus utilizes firmware operating in a microcontroller emulating Circadian Rhythms. The microcontroller is also clocked by the Fibonacci Number Quartz Crystal. Additionally, the apparatus's unique application of an H-Bridge configuration power-driver with Pulse Width Modulation (PWM) capabilities supports a novel approach to supply two simultaneous therapeutic frequencies.

19 Claims, 28 Drawing Sheets

