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ABSTRACT

METHOD FOR MAINTAINING OSCILLATIONS OF A VIBRATING
DEVICE AND VIBRATING DEVICE IMPLEMENTING THE SAME

There is disclosed a method for maintaining the oscillations of a vibrating device and a vibrating device implementing this method. The vibrating device is intended to be fitted to a unit worn close to the body, such as a timepiece, including a case, a moving mass inside this case intended to transmit vibrations thereto, a coil (L) electromagnetically coupled to said moving mass in order to make it vibrate, and an excitation circuit for exciting said coil (L). According to the method disclosed, driving pulses (21, 22) of alternate polarity and determined duration (T_{pulse}) substantially coinciding with the extrema of the movement induced voltage (U_{ind} , V_{B12}) across the terminals (B1, B2) of said coil (L) are generated. Each driving pulse (21, 22) is generated at the end of a determined and non-variable time interval ($T_{\text{to-pulse}}$) considered from a mean level crossing (O) of said movement induced voltage (U_{ind} , V_{B12}), the time interval ($T_{\text{from-pulse}}$) taken by said movement induced voltage to reach said mean level crossing at the end of a driving pulse (21, 22) being determined by the instantaneous natural oscillation frequency of the vibrating device, such that an adaptation of the frequency at which said driving pulses (21, 22) are generated is carried out.

Figure 4B



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