

ABSTRACT

TIMEPIECE HAVING A MECHANICAL MOVEMENT ASSOCIATED
WITH AN ELECTRONIC REGULATOR

There is disclosed a wristwatch having a case containing a mechanical watch movement (10) driven by a spring barrel (14) and provided with a mechanical regulator with a balance and balance-spring, which is associated, via electromagnetic coupling, with an electronic regulator driven by a quartz resonator. The rim of the balance (13) is provided with a pair of permanent magnets (38, 39). The electronic regulator includes a fixed coil (12) arranged for cooperating with said magnets via electromagnetic coupling, a rectifier (58) provided with at least one capacitor, and a circuit (60) for enslaving the frequency of the mechanical regulator to the frequency of the oscillator by braking obtained by briefly short-circuiting the coil. In order to enable a common type of mechanical movement to be used, only the balance of which is altered, the electronic regulator is formed by a structural module (11) that is entirely separate from the mechanical watch movement (10). This module can be fixed to the movement plate, or, conversely, carried by the watchcase independently of said movement, in particular via a casing ring (26). Apart from the coil, all of the rest of the electronic module (11) is preferably located outside the mechanical movement.

Figure 4