

ABSTRACT

SPRUNG BALANCE SPIRAL RESONATOR AND
METHOD FOR MANUFACTURING THE SAME

The spiral (10) includes turns of rectangular section ($h \times e$), whose pitch p and/or thickness e can vary from the inside curve (11) towards the outside curve (14), or whose winding can deviate from the line of a perfect spiral. The inside curve (11) can also be extended by a self-locking washer (17) for fixing the spiral on the balance
5 arbour with no play.

The spiral is manufactured by photolithography and galvanic growth, or by micro-machining an amorphous or crystalline material, such as a silicon wafer.

Figure 10