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[54] **METHOD AND DEVICE FOR ARTERIAL BLOOD PRESSURE MEASUREMENT**

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[58] **Field of Search** ..... **600/481, 485, 600/486, 490, 493, 494, 495, 500, 504**

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[57] **ABSTRACT**

A method of measurement of arterial diastolic blood pressure includes generating first and second signals indicative, respectively, of cardiac induced pulsatile variations in tissue blood volume in a first region and a second region of the subject's body. These signals are then processed to derive values of a delay between pulses in the first signal and corresponding pulses in second signal. A baseline value of the delay is evaluated, preferably in the absence of externally applied pressure. A variable pressure is applied to a third region of the subject's body so as to affect blood flow through at least one artery in the third region, the variable pressure being varied as a function of time. The first, second and third regions of the subject's body are chosen such that the delay varies as a function of the variable pressure. The diastolic pressure is then identified as a value of the variable pressure corresponding to a predefined non-zero value of the delay measured relative to the baseline value.

**17 Claims, 17 Drawing Sheets**

