

- [54] **CALIBRATED ARTERIAL PRESSURE MEASUREMENT DEVICE**
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[57] **ABSTRACT**

An apparatus and method are disclosed for measuring and recording the arterial blood pressure waveform or a portion thereof in a patient by detecting the momentary increases in pressure in an occlusive cuff caused by the passage of blood through an artery beneath the cuff. The magnitudes and times at which the momentary pressure increases occur and disappear with respect to the R-wave in an electrocardiograph signal are recorded as the pneumatic pressure applied to the cuff is gradually increased or decreased. The sampled times and magnitudes are processed to accurately reproduce the arterial blood pressure waveform of the patient. The apparatus includes an improved pressure cuff having a separate occlusive bladder and a sensing bladder to increase the accuracy of the pressure measurements.

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**21 Claims, 22 Drawing Figures**

