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(54) Title: PATCH-BASED PHYSIOLOGICAL SENSOR

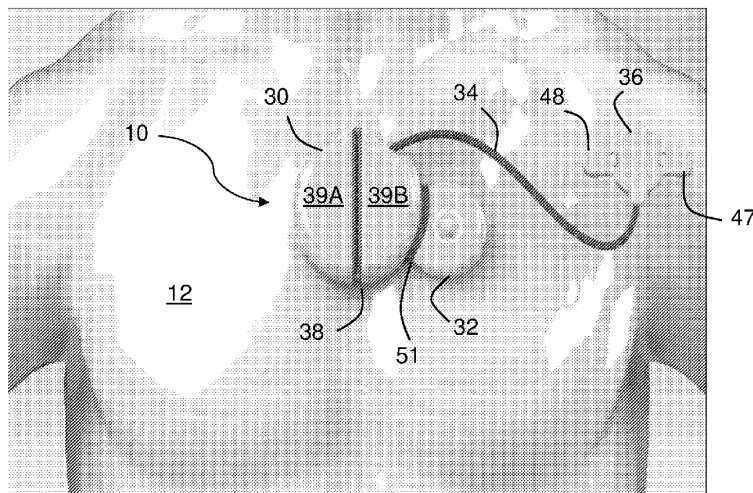


Fig. 1

(57) **Abstract:** The invention provides a body-worn patch sensor for simultaneously measuring a blood pressure (BP), pulse oximetry (SpO₂), and other vital signs and hemodynamic parameters from a patient. The patch sensor features a sensing portion having a flexible housing that is worn entirely on the patient's chest and encloses a battery, wireless transmitter, and all the sensor's sensing and electronic components. It measures electrocardiogram (ECG), impedance plethysmogram (IPG), photoplethysmogram (PPG), and phonocardiogram (PCG) waveforms, and collectively processes these to determine the vital signs and hemodynamic parameters. The sensor that measures PPG waveforms also includes a heating element to increase perfusion of tissue on the chest.

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