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(54) Title: DEVICE, METHOD AND MANUFACTURING METHOD FOR ELECTRONIC STRAIN SENSOR

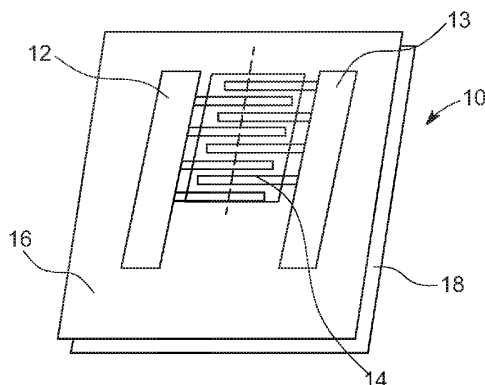


FIG. 2A(i)

(57) Abstract: The present disclosure generally relates to an electronic strain sensor, a system incorporating the sensor, and a method of manufacturing the sensor. The present disclosure also relates to methods of measuring one or more physiological parameters of a living subject, or methods of diagnosing a sleep-related disorder of a living subject, the methods comprising sensing a signal produced by the living subject with the electronic strain sensor or system. The strain sensor comprises: an electrode layer printed on a substrate, a sensing layer printed on a portion of the electrode layer, and an encapsulation layer encapsulating the electrode and sensing layers. The electrode layer exhibits a sheet resistance less than that of the sensing layer, and the sensing layer is in direct contact with the electrode layer. The sensor's electrical resistance can be increased through forming microscopic cracks in the sensing layer in response to forces applied to the sensor.

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