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(54) **Title:** SENSOR, SYSTEM AND METHOD FOR NON-CONTACT SENSING OF A PHYSIOLOGICAL PARAMETER OF A BODY

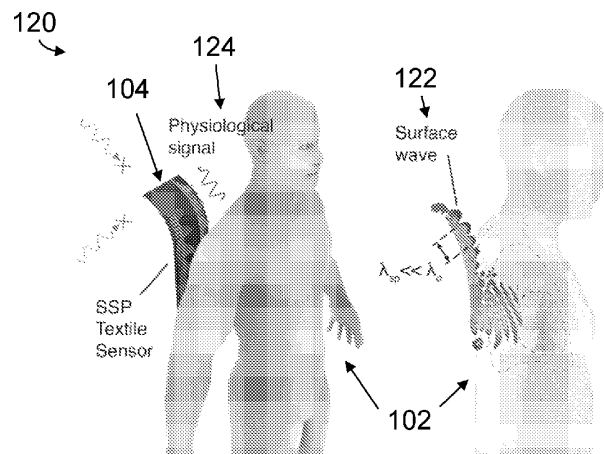


Figure 1B

(57) **Abstract:** A sensor 104 for non-contact sensing of a physiological parameter of a body 102 is described. In an embodiment, the sensor 104 comprises: a waveguide, the waveguide comprises a metamaterial and is configured to receive a transmitted signal and to propagate the transmitted signal in a spoof surface plasmon mode along the waveguide to produce an evanescent electromagnetic field and to provide a received signal, wherein the waveguide is placed at a predetermined distance away from the body 102 for non-contact sensing of a perturbation produced by a physiological motion of the body 102 using the evanescent electromagnetic field, the perturbation produces a phase shift between the transmitted signal and the received signal for use in determining the physiological parameter of the body 102. A system 100 and a method 200 for non-contact sensing of a physiological parameter of a body 102 are also described.

[Continued on next page]

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