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(54) **Title:** BIOSPINE: A DIGITAL TWIN NEUROREHABILITATION SYSTEM

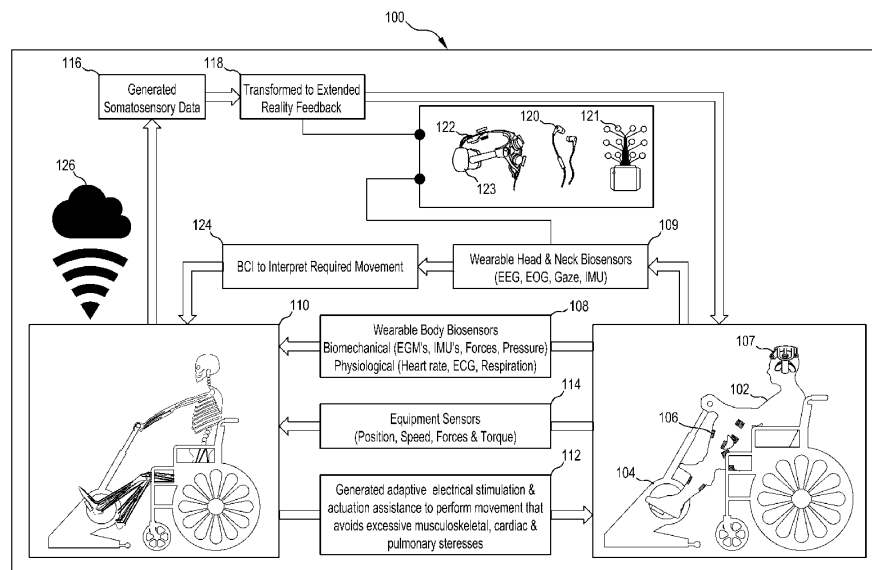


Figure 1

(57) **Abstract:** The present invention relates to a rehabilitation system for rehabilitating a person with a neurological condition, such as a spinal cord injury (SCI). The system includes exercise equipment for enabling the person to exercise. One or more sensors are provided for sensing information from the person during exercise. The system also includes a model of the exercising person configured to receive the sensed information from the sensors and generate electrical stimulation for the person. Advantageously, the personalized computer model may be used to generate suitable electrical stimulation for the person, and avoid excessive stresses on the person which can lead to the fracturing of bones.

[Continued on next page]

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