

### AMENDMENTS TO THE CLAIMS

A complete listing of all claims is presented below with insertions underlined (e.g., insertion), and deletions struck through or in double brackets (e.g., ~~deletion~~ or [[deletion]]).

1. **(Cancelled)**
2. **(Cancelled)**
3. **(New)** A physiological monitoring device comprising:
  - a plurality of light-emitting diodes configured to emit light in a first shape;
  - a material configured to be positioned between the plurality of light-emitting diodes and tissue on a wrist of a user when the physiological monitoring device is in use, the material configured to change the first shape into a second shape by which the light emitted from one or more of the plurality of light-emitting diodes is projected towards the tissue;
  - a plurality of photodiodes configured to detect at least a portion of the light after the at least the portion of the light passes through the tissue, the plurality of photodiodes further configured to output at least one signal responsive to the detected light;
  - a surface comprising a dark-colored coating, the surface configured to be positioned between the plurality of photodiodes and the tissue when the physiological monitoring device is in use, wherein an opening defined in the dark-colored coating is configured to allow at least a portion of light reflected from the tissue to pass through the surface;
  - a light block configured to prevent at least a portion of the light emitted from the plurality of light-emitting diodes from reaching the plurality of photodiodes without first reaching the tissue; and
  - a processor configured to receive and process the at least one outputted signal and determine a physiological parameter of the user responsive to the at least one signal.
4. **(New)** The physiological monitoring device of Claim 3, wherein at least one of the plurality of light-emitting diodes is configured to emit light of a first wavelength and at least one of the plurality of light-emitting diodes is configured to emit light of a second wavelength, the second wavelength being different than the first wavelength.
5. **(New)** The physiological monitoring device of Claim 3, further comprising a display configured to present visual feedback responsive to the determined physiological parameter.

6. **(New)** The physiological monitoring device of Claim 5, wherein the display is a touch-screen display.

7. **(New)** The physiological monitoring device of Claim 3, wherein the plurality of light-emitting diodes and the plurality of photodiodes are arranged in a reflectance measurement configuration.

8. **(New)** The physiological monitoring device of Claim 3, wherein the plurality of photodiodes are arranged in an array having a spatial configuration corresponding to a shape of a portion of the tissue bounded by the light block.

9. **(New)** The physiological monitoring device of Claim 3, wherein the light block comprises an at least partially circular shape, and wherein the plurality of light-emitting diodes are positioned outside the light block and the plurality of photodiodes are positioned inside the light block.

10. **(New)** The physiological monitoring device of Claim 3, wherein the physiological parameter comprises pulse rate.

11. **(New)** The physiological monitoring device of Claim 3, wherein the physiological parameter comprises oxygen saturation.

12. **(New)** The physiological monitoring device of Claim 3, wherein the material comprises glass.

13. **(New)** The physiological monitoring device of Claim 3, wherein the material comprises plastic.

14. **(New)** The physiological monitoring device of Claim 3, wherein the second shape comprises a circular geometry.

15. **(New)** The physiological monitoring device of Claim 3, wherein the opening defined in the dark-colored coating comprises a width and a length, and wherein the width is larger than the length.

16. **(New)** The physiological monitoring device of Claim 3, wherein the dark-colored coating comprises black.

17. **(New)** A physiological monitoring device comprising:

a plurality of light-emitting diodes configured to emit light proximate a wrist of a user;

**Application No.:** 16/835772  
**Filing Date:** March 31, 2020

a light diffusing material configured to be positioned between the plurality of light-emitting diodes and a tissue measurement site on the wrist of the user when the physiological monitoring device is in use;

a light block having a circular shape;

a plurality of photodiodes configured to detect at least a portion of the light emitted from the plurality of light-emitting diodes after the light passes through the light diffusing material and a portion of the tissue measurement site encircled by the light block, wherein the plurality of photodiodes are arranged in an array having a spatial configuration corresponding to a shape of the portion of the tissue measurement site encircled by the light block, wherein the plurality of photodiodes are further configured to output at least one signal responsive to the detected light, and wherein the plurality of light-emitting diodes and the plurality of photodiodes are arranged in a reflectance measurement configuration;

wherein the light block is configured to optically isolate the plurality of light-emitting diodes from the plurality of photodiodes by preventing at least a portion of light emitted from the plurality of light-emitting diodes from reaching the plurality of photodiodes without first reaching the portion of the tissue measurement site;

a processor configured to receive and process the at least one outputted signal and determine a physiological parameter of the user responsive to the at least one outputted signal; and

wherein the physiological monitoring device is configured to transmit physiological parameter data to a separate processor.

18. **(New)** The physiological monitoring device of Claim 17, wherein the plurality of light-emitting diodes are positioned outside the light block and the plurality of photodiodes are positioned inside the light block.

19. **(New)** The physiological monitoring device of Claim 17, wherein the physiological parameter comprises pulse rate.

20. **(New)** The physiological monitoring device of Claim 17, wherein the physiological parameter comprises oxygen saturation.

**Application No.:** 16/835772  
**Filing Date:** March 31, 2020

21. (New) The physiological monitoring device of Claim 17, wherein the plurality of light-emitting diodes are configured to emit light in a first shape, and wherein the light diffusing material is configured to change the first shape into a second shape by which the light emitted from one or more of the plurality of light-emitting diodes is projected towards the tissue measurement site.

22. (New) A system configured to measure one or more physiological parameters of a user, the system comprising:

a physiological monitoring device comprising:

a plurality of light-emitting diodes configured to emit light in a first shape;

a material configured to be positioned between the plurality of light-emitting diodes and tissue of the user when the physiological monitoring device is in use, the material configured to change the first shape into a second shape by which the light emitted from one or more of the plurality of light-emitting diodes is projected towards the tissue;

a plurality of photodiodes configured to detect at least a portion of the light after the at least the portion of the light passes through the tissue, the plurality of photodiodes further configured to output at least one signal responsive to the detected light;

a surface comprising a dark-colored coating, the surface configured to be positioned between the plurality of photodiodes and the tissue when the physiological monitoring device is in use, wherein an opening defined in the dark-colored coating is configured to allow at least a portion of light reflected from the tissue to pass through the surface;

a light block configured to prevent at least a portion of light from the plurality of light-emitting diodes from reaching the plurality of photodiodes without first reaching the tissue; and

a processor configured to receive and process the outputted at least one signal and determine a physiological parameter of the user responsive to the outputted at least one signal; and

a processing device configured to wirelessly receive physiological parameter data from the physiological monitoring device, wherein the processing device comprises a user interface, a

**Application No.:** 16/835772  
**Filing Date:** March 31, 2020

storage device, and a network interface configured to wirelessly communicate with the physiological monitoring device, and wherein the user interface includes a touch-screen display configured to present visual feedback responsive to the physiological parameter data.

23. **(New)** The system of Claim 22, wherein the system is configured to determine a state of wellness of the user based on the determined physiological parameter.

24. **(New)** The system of Claim 22, wherein the system is configured to determine a trend of wellness of the user based on the determined physiological parameter.

25. **(New)** The system of Claim 22, wherein the visual feedback presented by the touch-screen display is responsive to at least one of a pulse rate and an oxygen saturation of the user.

26. **(New)** The system of Claim 22, wherein the material comprises at least one of glass and plastic.

27. **(New)** The system of Claim 22, wherein the second shape comprises a width and a length, and wherein the width is different from the length.

28. **(New)** The system of Claim 22, wherein the plurality of photodiodes are arranged in an array having a spatial configuration corresponding to a shape of a portion of the tissue encircled by the light block.

29. **(New)** The system of Claim 22, wherein at least one of the plurality of light-emitting diodes is configured to emit light of a first wavelength and at least one of the plurality of light-emitting diodes is configured to emit light of a second wavelength, the second wavelength being different than the first wavelength.