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- (71) Applicant (for all designated States except US): **TARIL-
IAN LASER TECHNOLOGIES, LIMITED** [GB/GB];
26 Valley View, Barnet Hertfordshire EN5 2NY (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **BORGOS, John,**
A. [US/US]; 425 Dudley Avenue, Shoreview, MN 55126
(US). **BORGOS, Thomas, A.** [US/US]; 674 Lois Lane,
Lino Lakes, MN 55014 (US). **PONGRATZ, Troy**
[US/US]; 3204 32nd Avenue South, Minneapolis, MN
55406 (US).
- (74) Agents: **SHIPSIDES, Geoffrey, P.** et al.; Fish & Richard-
son P.C., P.O. Box 1022, Minneapolis, MN 55440-1022
(US).

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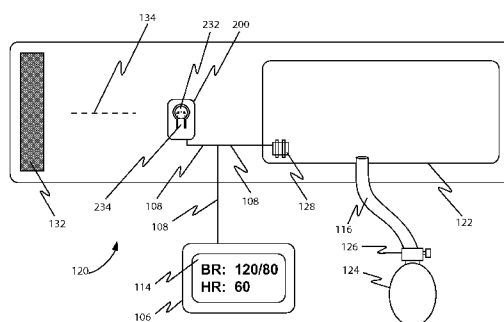


Fig 4

(57) Abstract: A vital sign measurement device includes a sensor fixation device, a sensor frame held by the sensor fixation device, an optical sensing system 104 held by the sensor frame, and an output unit. The sensor fixation device is adapted to be placed against an anatomical location of a subject, within which is an artery. The optical sensing system 104 includes an optical waveguide, an optical source device to supply optical energy to the optical waveguide, and an optical detector to detect an amount of optical energy exiting the optical waveguide. The optical sensing system 104 senses an arterial pulse from the compression or flexing of at least a portion of the optical waveguide, which results in a reduction of the amount of light exiting the optical waveguide. The output unit generates a measure of the vital sign based at least in part on a received signal from the optical detector.

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