(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
9 October 2014 (09.10.2014)

WIPO | PCT

(10) International Publication Number
WO 2014/165341 A1

(51) International Patent Classification:
A61B 5/05 (2006.01) *A61B 5/0205* (2006.01)
A61B 5/11 (2006.01)

(21) International Application Number:
PCT/US2014/031544

(22) International Filing Date:
24 March 2014 (24.03.2014)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
13/854,280 1 April 2013 (01.04.2013) US

(71) Applicant: **MEDICAL DESIGN SOLUTIONS, INC.** [US/US]; 1525 McCarthy Blvd., Suite 1089, Milpitas, CA 95035 (US).

(72) Inventor: **STONE, Robert, T.**; 869 Cumberland Drive, Sunnyvale, CA 94087 (US).

(74) Agent: **FRANCIS, Ralph, C.**; Francis Law Group, 512 Westline Drive, Suite 301, Alameda, CA 94501 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR MONITORING PHYSIOLOGICAL CHARACTERISTICS

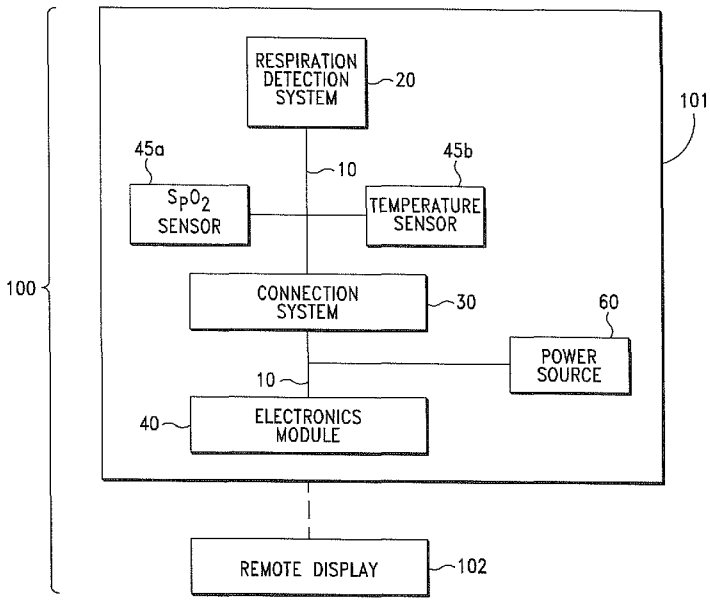


FIG. 1

(57) Abstract: A wearable physiological monitoring system comprising a garment that is configured to cover at least the chest region and the upper back of a wearer, a stretchable circumferential band that is attachable to the garment, the stretchable band including a respiration detection system that is configured to detect axial chest wall displacements of the wearer and integral signal transmission conductors, an electronics module that is releasably attachable to said garment and programmed to control the respiration detection system, process signals therefrom, and wirelessly transmit the processed signals, and a self-aligning magnetic connection system that is configured to removeablv couple the electronics module lo said band and. thereby, the signal transmission conductors.

WO 2014/165341 A1

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*