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**(54) Title (EN):** SYSTEMS AND METHODS FOR CONTROLLING BREATHING

**(54) Title (FR):** SYSTÈMES ET PROCÉDÉS DE CONTRÔLE DE LA RESPIRATION

**(57) Abstract:**

**(EN):** This document describes methods and devices for using electrical stimulation to control physiological functions such as breathing of patients suffering from respiratory impairment. For example, this document describes methods and devices for generating effective breaths and airway protection by determining times and depths of breaths in accordance with physiological demand, and coordinating respiratory muscle stimulation with the breaths to control breathing.

**(FR):** La présente invention concerne des procédés et des dispositifs permettant d'utiliser une stimulation électrique pour contrôler des fonctions physiologiques telles que la respiration de patients souffrant d'une insuffisance respiratoire. Par exemple, l'invention concerne des procédés et des dispositifs permettant de générer des respirations efficaces et une protection des voies respiratoires en déterminant des temps et des volumes de respirations conformément à la demande physiologique, et en coordonnant la stimulation des muscles respiratoires avec les respirations pour contrôler la respiration.

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European Patent Office (EPO) : 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

African Intellectual Property Organization (OAPI) : BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG

African Regional Intellectual Property Organization (ARIPO) : BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW

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**Declarations:**

Declaration made as applicant's entitlement, as at the international filing date, to apply for and be granted a patent (Rules 4.17(ii) and 51bis.1(a)(ii)), in a case where the declaration under Rule 4.17(iv) is not appropriate

Declaration made as applicant's entitlement, as at the international filing date, to claim the priority of the earlier application, where the applicant is not the applicant who filed the earlier application or where the applicant's name has changed since the filing of the earlier application (Rules 4.17(iii) and 51bis.1(a)(iii))