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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
26 June 2003 (26.06.2003)

PCT

(10) International Publication Number
WO 03/051179 A2

(51) International Patent Classification[7]: A61B

(21) International Application Number: PCT/US02/40151

(22) International Filing Date:
13 December 2002 (13.12.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/340,271	18 December 2001 (18.12.2001)	US
10/083,088	26 February 2002 (26.02.2002)	US
10/319,281	12 December 2002 (12.12.2002)	US

(71) Applicant: TINNITUS CONTROL INC. [US/US]; 170 E. 77th St., New York City, NY 10021 (US).

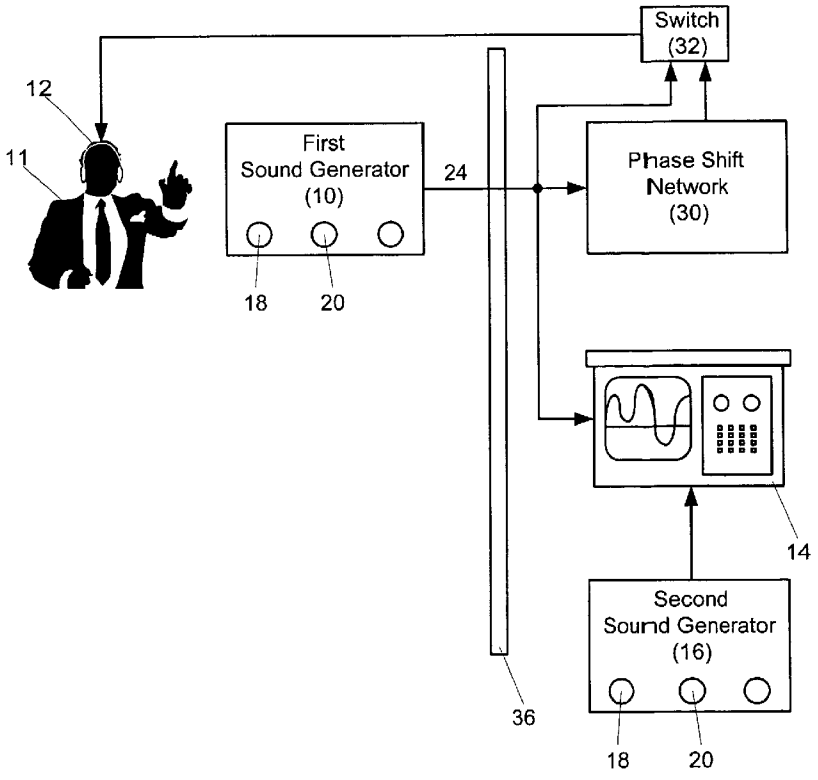
(74) Agent: NICHOLS, Steven, L.; River Park Corporate Center One, 10653 S. River Front Pkwy,, Suite 150, South Jordan, UT 84095 (US).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR TREATMENT OF MONO-FREQUENCY TINNITUS



(57) Abstract: Reciprocal noise cancellation of a patient's mono-frequency tinnitus tone is achieved utilizing an externally generated tone which is subjectively defined by a mono-frequency tinnitus patient to match his/her tinnitus tone in frequency and amplitude. An externally generated sound wave, selectively designated by subjective observations of a patient to match the patient's tinnitus tone is first applied to the tinnitus patient via earphones or a speaker system and then the same externally generated sound wave is sequentially phase shifted through a plurality of angularly shifted sequence steps to shift or slide the external sound wave through at least a 180 degree phase shift of the generated signal as it is applied to the patient to achieve a series of reductions of the patient's tinnitus tone and in one of such shifted steps a reciprocal, canceling relationship with the patient's tinnitus tone. The tinnitus treatment sequence of an externally generated sound wave and then the phase shifted externally generated tone achieve cancellation of the tinnitus tone of the patient as the sequential steps of the generated tone in effect slide across the tinnitus sound wave resulting in cancellation of the tinnitus tone. By replaying the sequential phase shifted segments of the patient treatment process a patient may utilize the previously recorded sequences in a patient self-treatment process.

WO 03/051179 A2

Published:
— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.