



(51) International Patent Classification:

A61B 1/00 (2006.01) A61B 1/05 (2006.01)
A61B 1/227 (2006.01)

(21) International Application Number:

PCT/EP2014/000294

(22) International Filing Date:

4 February 2014 (04.02.2014)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

13000552.3	4 February 2013 (04.02.2013)	EP
61/760,507	4 February 2013 (04.02.2013)	US
13000553.1	4 February 2013 (04.02.2013)	EP
61/760,511	4 February 2013 (04.02.2013)	US
13001748.6	5 April 2013 (05.04.2013)	EP
61/809,048	5 April 2013 (05.04.2013)	US

(71) Applicant: HELEN OF TROY LIMITED [BB/BB]; The Phoenix Centre, George Street, Belleville, St. Michael (BB).

(72) Inventors; and

(71) Applicants (for PE only): RUPPERSBERG, Peter [DE/CH]; Chemin du Signal 53, CH-1807 Blonay (CH). LEPPLE-WIENHUES, Albrecht [DE/FR]; 5 Rue de Be-sancon, F-25300 Pontarlier (FR).

(74) Agents: GRAF VON STOSCH, Andreas et al.; Graf von Stosch, Patentanwaltsgesellschaft mbH, Prinzregenten-strasse 22, 80538 München (DE).

(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.

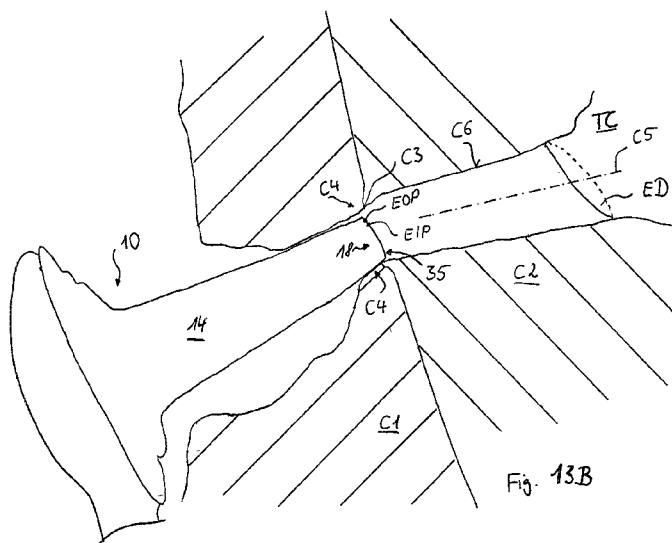
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, 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).

Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

[Continued on next page]

(54) Title: METHOD FOR IDENTIFYING OBJECTS IN A SUBJECT'S EAR



(57) Abstract: The present invention refers to a method of identifying objects in a subject's ear, comprising the following steps: introducing an optical electronic imaging unit and at least one light source into an ear canal of a subject's outer ear, wherein the electronic imaging unit exhibits at least one optical axis directed in a distal direction, especially directed at the eardrum of the subject's ear; using the electronic imaging unit (40) to capture at least one image; and determining color information or brightness and color information to identify objects shown in the at least one image by electronic means, in order to automatically identify the objects, especially the eardrum, wherein the electronic imaging unit comprises at least one color video camera, and wherein the method further comprises a step of determining the spectral composition of reflections of the eardrum, once the eardrum has been identified.



Published:

(88) Date of publication of the international search report:

27 November 2014

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