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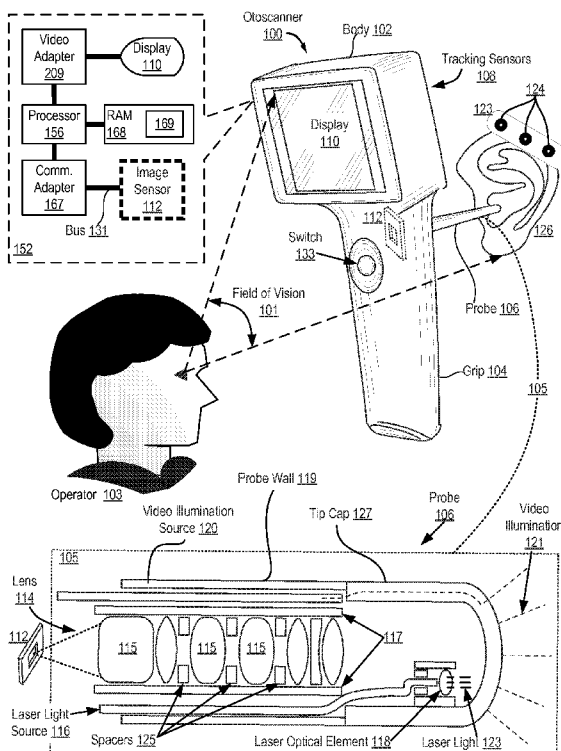
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[Continued on next page]

(54) Title: OTOSCANNER WITH PRESSURE SENSOR FOR COMPLIANCE MEASUREMENT



(57) Abstract: An otoscanner including an otoscanner body, the body comprising a hand grip, the body having mounted upon it an ear probe, a tracking illumination emitter, a plurality of tracking illumination sensors, and a display screen, the otoscanner body having mounted within it an image sensor; the ear probe comprising a wide-angle lens optically coupled to the image sensor, laser light source, a laser optical element, and a source of non-laser video illumination; the plurality of tracking illumination sensors disposed upon the otoscanner body so as to sense reflections of tracking illumination emitted from the tracking illumination emitter and reflected from tracking targets installed at positions that are fixed relative to the scanned ear; the image sensor coupled for data communications to a data processor, with the data processor configured so that it functions by constructing a 3D image of the interior of the scanned ear.

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RW, 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.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A51B 5/00; A61F 11/00 (2013.01)

USPC - 600/184, 300, 559; 606/108

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC(8) - A51B 5/00; A61F 11/00; A61B 12/27; G01B 11/24 (2013.01)

USPC - 600/103, 184, 300, 559; 606/108; 181/130; 356/601

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); DialogPRO; Google; Google Scholar; Elsevier; Medline/PubMed; Ear and Hearing: auditory, canal, ear, force, illuminat*, laser, light, otoscan*, otoscop*, pressure, probe, scan

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6319199 B1 (SHEEHAN, DM et al.) November 20, 2001; figures 3, 4; column 4, lines 40-47; column 5, lines 12-24; column 6, lines 1-21, 47-55	1-6, 8-20
Y	US 2003/0164952 A1 (DEICHMANN, N et al.) September 4, 2003; figures 1, 2, 11, 12; paragraphs [0010], [0028]-[0030], [0055], [0057], [0060], [0093], [0101]-[0103]	1-6, 8-20
Y	US 5658235 A (PRIEST, RA et al.) August 19, 1997; figure 2; column 4, lines 42-45; column 5, lines 4-14	1-6, 8-20
Y	US 2003/0139658 A1 (COLLIER, N et al.) July 24 2003; paragraphs [0010]-[0013], [0046]	1-6, 8-20
Y	US 2010/0191144 A1 (ZOTH, P et al.) July 29, 2010; figure 4; paragraphs [0021]-[0023], [0028], [0051], [0052]	1-6, 8-20
Y	US 2001/0051766 A1 (GAZDZINSKI, RF) December 13, 2001; paragraph [0047]	5
Y	US 2007/0035707 A1 (MARGULIS, ND et al.) February 15, 2007; paragraphs [0037]-[0044], [0048]	9
Y	US 2004/0107080 A1 (DEICHMANN, N et al.) June 3, 2004; paragraph [0383]	19
A	US 2009/0018465 A1 (HESSEL, H et al.) January 15, 2009; paragraphs [0001], [0031]-[0039], [0066]-[0080]	1-20
A	US 5044373 A (NORTHEVED, A et al.) September 3, 1991; column 1, lines 6-8; column 4, lines 27-51	1-20

Further documents are listed in the continuation of Box C.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"O" document referring to an oral disclosure, use, exhibition or other means	
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2006/0133634 A1 (BERG, C) June 22, 2006; paragraphs [0001], [0008], [0030]	1-20
A	US 6383133 B1 (JONES, DT) May 7, 2002; column 2, lines 26-51	1-20