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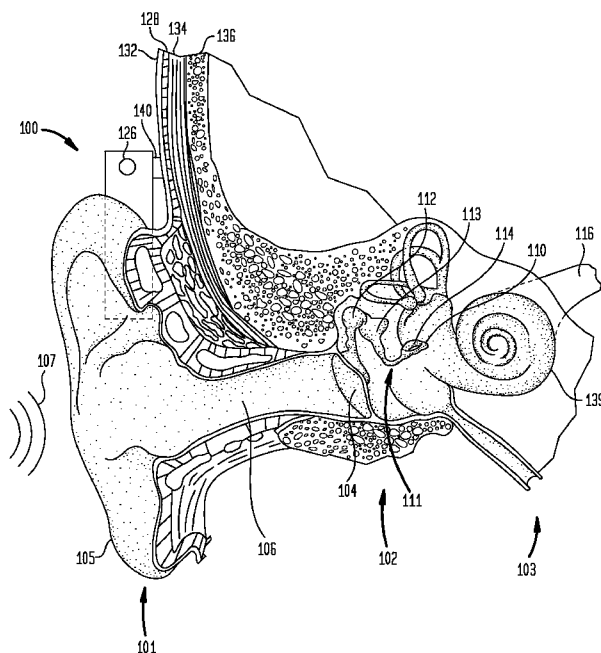
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(54) Title: BONE CONDUCTION DEVICE INCLUDING A BALANCED ELECTROMAGNETIC ACTUATOR HAVING RADIAL AND AXIAL AIR GAPS

FIG. 1



(57) Abstract: A bone conduction device configured to couple to an abutment of an anchor system anchored to a recipient's skull. The bone conduction device includes a vibrating electromagnetic actuator configured to vibrate in response to sound signals received by the bone conduction device, and a coupling apparatus configured to attach the bone conduction device to the abutment so as to impart to the recipient's skull vibrations generated by the vibrating electromagnetic actuator. The vibrating electromagnetic actuator includes a bobbin assembly and a counterweight assembly. Two axial air gaps are located between the bobbin assembly and the counterweight assembly and two radial air gaps are located between the bobbin assembly and the counterweight assembly. No substantial amount of the dynamic magnetic flux passes through the radial air gaps.



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## INTERNATIONAL SEARCH REPORT

International application No.  
**PCT/IB2012/051189****A. CLASSIFICATION OF SUBJECT MATTER****H04R 1/00(2006.01)i, H04R 25/00(2006.01)i, A61F 2/18(2006.01)i**

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)

H04R 1/00; H04R 25/00; H02K 7/06; H04R 1/28

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

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) &amp; Keywords: bone conduction, hearing, magnetic flux, air gap, radial

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2006-0045298 A1 (PATRIK WESTERKULL) 02 March 2006 See abstract, paragraphs [0027]-[0029], claims 1, 13 and figures 1-5.	1-40
A	US 7319771 B2 (KRISTIAN ASNES) 15 January 2008 See abstract, column 3, lines 54-56, 60-61, claim 1 and figures 1-3.	1-40
A	US 2004-0057588 A1 (KRISTIAN ASNES) 25 March 2004 See abstract, paragraphs [0023], [0026], [0027], claim 1 and figures 1, 4.	1-40

 Further documents are listed in the continuation of Box C. See patent family annex.

\* Special categories of cited documents:

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"&amp;" document member of the same patent family

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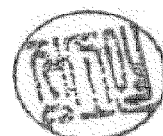
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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

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**PCT/IB2012/051189**

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