Title (en)

At least partially implantable hearing system

Title (de)

Mindestens teilweise implantierbares Hörsystem

Title (fr)

Système auditif au moins partiellement implantable

Publication

EP 1179969 B1 20110615 (DE)

Application

EP 01118052 A 20010725

Priority

DE 10039401 A 20000811

Abstract (en)

[origin: EP1179969A2] The system has a switchable coupling arrangement that EPcouples a passive coupling element from a transducer output when the driving electronics is inactive so that the mechanical output impedance of the transducer has essentially no effect on the natural resonance of the bone chain in the middle ear and hence the natural residual hearing capacity for sound in air is substantially maintained. The system has at least one sound detection sensor for picking up sound signals and converting them to electrical form, an electronic signal processing unit, a power stage and at least one active electromechanical element (12,13) of an electromechanical transducer (10) for stimulating a small middle ear bone via a passive coupling element (21). A switchable coupling arrangement (22) decouples the passive element from the transducer output when the driving electronics is inactive so that the mechanical output impedance of the transducer has essentially no effect on the natural resonance of the bone chain in the middle ear and hence the natural residual hearing capacity of for sound in air is substantially maintained. Independent claims are also included for the following: an arrangement for implementing the method.

IPC 8 full level

H04R 25/00 (2006.01); H04R 17/00 (2006.01)

CPC (source: EP US)

H04R 25/606 (2013.01 - EP US); **H04R 25/75** (2013.01 - EP US); H04R 17/00 (2013.01 - EP US); H04R 2225/67 (2013.01 - EP US)

Cited by

CN103686499A; US10022534B2; WO2008049933A3; WO2010046481A1; WO2010151765A1; WO2010151768A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

EP 1179969 A2 20020213; **EP 1179969 A3 20100407**; **EP 1179969 B1 20110615**; AT E513423 T1 20110715; AU 5797101 A 20020214; AU 778293 B2 20041125; DE 10039401 A1 20020228; DE 10039401 C2 20020613; DK 1179969 T3 20110919; US 2002019668 A1 20020214; US 6592512 B2 20030715

DOCDB simple family (application)

EP 01118052 A 20010725; AT 01118052 T 20010725; AU 5797101 A 20010810; DE 10039401 A 20000811; DK 01118052 T 20010725; US 92750401 A 20010813