Title (en)

Sound converter for installation in an ear

Title (de)

Schallwandler zum Einsetzen in ein Ohr

Title (fr)

Transducteur acoustique pour l'insertion dans une oreille

Publication

EP 2362686 B1 20160803 (DE)

Application

EP 11001587 A 20110225

Priority

DE 102010009453 A 20100226

Abstract (en)

[origin: EP2362686A2] The converter has a membrane structure comprising a piezo layer with a piezoelectric material arranged on a carrier layer i.e. silicon layer, so that vibrations of the membrane structure are generated by applying voltage to the piezo layer. The structure is divided into segments (9a, 9b) in a surface of the structure by cutting lines (7) so that a membrane is mechanically coupled to the cutting lines that cut through all layers of the structure. One of the cutting lines structures the structure into a spiral segment that runs around a middle point of the structure. An independent claim is also included for a method for manufacturing a sound converter.

IPC 8 full level

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

CPC (source: EP US)

H04R 17/00 (2013.01 - EP US); **H04R 17/005** (2013.01 - US); **H04R 25/606** (2013.01 - EP US); **H04R 31/003** (2013.01 - US); H04R 1/1016 (2013.01 - US); H04R 2460/13 (2013.01 - US); Y10T 29/42 (2015.01 - EP US)

Citation (examination)

- CH 494513 A 19700731 - PHILIPS NV [NL]
- WO 2007023164 A1 20070301 - 3WIN N V [BE], et al

Cited by

DE102013114771A1; DE102013114771B4; WO2015097056A1; CN102595276A; EP3201122A4; DE102019201273A1; US11350217B2; WO2018215669A3; US11924610B2; US10293377B2; US11825273B2; CN111034223A; JP2020522178A; EP4184947A1; EP4247005A3; US10219087B2; US10616699B2; WO2020249457A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

EP 2362686 A2 20110831; **EP 2362686 A3 20120104**; **EP 2362686 B1 20160803**; DE 102010009453 A1 20110901; DK 2362686 T3 20161205; US 10206045 B2 20190212; US 2012053393 A1 20120301; US 2017094417 A1 20170330; US 9497556 B2 20161115

DOCDB simple family (application)

EP 11001587 A 20110225; DE 102010009453 A 20100226; DK 11001587 T 20110225; US 201113034141 A 20110224; US 201615283782 A 20161003