

Title (en)  
Ultrasonic transducer.

Title (de)  
Ultraschall-Wandler.

Title (fr)  
Transducteur ultrasonore.

Publication  
**EP 0142178 B2 19940112**

Application  
**EP 84201200 A 19840820**

Priority  
FR 8313986 A 19830831

Abstract (en)  
[origin: US4771205A] An ultrasound transducer, comprising a substrate (10) which forms a backing medium, a layer of piezoelectric material (20), and one or more matching layers (30, 40) whose acoustic impedance has a value between that of the piezoelectric material and that of a foremost, propagation medium (50). The matching layer (layers) is (are) provided exclusively between the piezoelectric material (20) and the foremost, propagation medium (50). The acoustic impedance of the backing medium (10) is sufficiently high with respect to the acoustic impedance of the piezoelectric material for the backing medium to be considered to be rigid, the thickness of the layer of piezoelectric material (20) being equal to one quarter of the wavelength associated with the resonant frequency of the transducer.

IPC 1-7  
**G10K 11/02**

IPC 8 full level  
**H04R 17/00** (2006.01); **G10K 11/02** (2006.01); **H04R 1/22** (2006.01)

CPC (source: EP US)  
**G10K 11/02** (2013.01 - EP US)

Cited by  
EP0142318A3; EP0369127A3; EP0212695A1; US4712037A; EP0404154A3; US5212671A; EP2819418A1; EP2775730A1; WO2014135826A1; EP2775731A1; WO2014135827A1; EP1003185B2

Designated contracting state (EPC)  
DE FR GB SE

DOCDB simple family (publication)  
**US 4771205 A 19880913**; CA 1260603 A 19890926; DE 3480968 D1 19900208; EP 0142178 A1 19850522; EP 0142178 B1 19900103; EP 0142178 B2 19940112; FR 2551611 A1 19850308; FR 2551611 B1 19861024; IL 72791 A0 19841130; IL 72791 A 19880831; JP H0640676 B2 19940525; JP S6084099 A 19850513

DOCDB simple family (application)  
**US 64416184 A 19840824**; CA 462119 A 19840830; DE 3480968 T 19840820; EP 84201200 A 19840820; FR 8313986 A 19830831; IL 7279184 A 19840828; JP 18251984 A 19840831