

Title (en)
PIEZOELECTRIC ELECTRO-MOTIONAL DEVICES

Title (de)
PIEZOELEKTRISCHE ELEKTROBEWEGLICHE BAUELEMENTE

Title (fr)
DISPOSITIFS PIEZO-ELECTRIQUES ELECTROMOTEURS

Publication
EP 1097484 A1 20010509 (EN)

Application
EP 98937730 A 19980608

Priority
IB 9801321 W 19980608

Abstract (en)
[origin: WO9965088A1] The present invention is directed to electro-motional devices, especially piezoelectric pumps (50). More specifically, the present invention is directed to the method of fabrication of piezoelectric bender-elements; specifically, using multilayers of piezoelectric material by bonding the layers in a press and heating the layers to form a bender element with a mechanical bias or curve. A piezoelectric unit cell (40) of the present invention is fabricated using two mechanically biased bender-elements, each mechanically and electrically biased in opposite direction. Any number of piezoelectric unit cells of the present invention may be employed in making an electromotional device. A drive circuit of the present invention provides the electrical source to sequentially in an alternating mode activate the unit cells.

IPC 1-7
H01L 41/08

IPC 8 full level
F04B 43/04 (2006.01); **H10N 30/20** (2023.01)

CPC (source: EP US)
F04B 43/046 (2013.01 - EP US); **F04B 43/14** (2013.01 - EP US); **H10N 30/08** (2023.02 - EP); **H10N 30/204** (2023.02 - EP);
H10N 30/802 (2023.02 - EP)

Cited by
CN106762566A

Designated contracting state (EPC)
CH DE FR GB IT LI SE

DOCDB simple family (publication)
WO 9965088 A1 19991216; AU 8642998 A 19991230; EP 1097484 A1 20010509; EP 1097484 A4 20041201; JP 2002518620 A 20020625

DOCDB simple family (application)
IB 9801321 W 19980608; AU 8642998 A 19980608; EP 98937730 A 19980608; JP 2000554007 A 19980608