

Title (en)

Micro-pump or micro-discharge device.

Title (de)

Mikropumpe oder Mikrodurchflussmenge.

Title (fr)

Micro-pompe ou dispositif à microdébit.

Publication

EP 0424087 A1 19910424 (EN)

Application

EP 90311316 A 19901016

Priority

- JP 26950189 A 19891017
- JP 26950289 A 19891017
- JP 26950389 A 19891017
- JP 26950489 A 19891017
- JP 26950589 A 19891017
- JP 26950689 A 19891017
- JP 26950789 A 19891017

Abstract (en)

A micro-pump or micro-discharge device comprising piezo-electric means (201) which form part of wall means (201-203) of a liquid reservoir (211), the piezo-electric means (201) being deformable by voltage signals in first and second directions so as respectively to draw liquid into and expel it from the liquid reservoir (211).

IPC 1-7

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IPC 8 full level

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CPC (source: EP KR US)

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F04B 53/1047 (2013.01 - EP US); **F05B 2210/11** (2013.01 - KR); **F05B 2260/60** (2013.01 - KR); **Y10S 417/00** (2013.01 - KR)

Citation (search report)

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- [X] PATENT ABSTRACTS OF JAPAN vol. 011, no. 392 (M-653) 22 December 1987, & JP-A-62 159778 (FUJI ELECTRIC CO LTD) 15 July 1987,
- [X] SENSOR AND ACTUATORS. vol. 15, no. 2, 15 October 1988, LAUSANNE CH pages 153 - 167; VAN LINTEL: "A PIEZOELECTRIC MICROPUMP BASED ON MICROMACHINING OF SILICON"

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WO9508711A1; US8607450B2; WO2009087025A1; US6666658B2; US8746130B2; WO2011107162A1; US9410641B2

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