

Title (en)

Massaging device with multiple ultrasonic transducers

Title (de)

Massagevorrichtung mit mehreren Ultraschallwandlern

Title (fr)

Dispositif de massage avec de multiples transducteurs ultrasoniques

Publication

**EP 2647362 A1 20131009 (EN)**

Application

**EP 12250090 A 20120405**

Priority

EP 12250090 A 20120405

Abstract (en)

The present invention teaches an ultrasonic device for skin care massage, comprising one or more ultrasonic vibration transmission plates, each of which has a rear surface and a smooth surface for contacting the skin to be massaged; and at least two different ultrasonic vibration transducers coupled to the rear surface of each of the ultrasonic vibration plates. Each of the ultrasonic vibration transducers generates an ultrasonic wave with a unique frequency between 20kHz to 25MHz. Each of the ultrasonic vibration transducers has a bottom surface parallel to the smooth surface. A distance between the bottom surface of any of the ultrasonic vibration transducers to the smooth surface is approximately an integer times of the half wavelength of the ultrasonic wave generated by the ultrasonic vibration transducer.

IPC 8 full level

**A61H 23/02** (2006.01)

CPC (source: EP)

**A61H 23/0245** (2013.01)

Citation (applicant)

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- US 2006149169 A1 20060706 - NUNOMURA MAHITO [JP], et al
- JP 2007050204 A 20070301 - FUJIMORI MOTOYOSHI
- JP 2001314473 A 20011113 - HEIWA TOKEI MFG CO LTD
- US 2009318853 A1 20091224 - REED JUSTIN [US], et al
- S. H. DAYAN: "Ultrasound-assisted Facial Skin Rejuvenation", SKIN INC. MAGAZINE, 2001

Citation (search report)

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- [A] US 2005256431 A1 20051117 - MASUDA MASATOSHI [JP]
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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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

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