

Title (en)

Ultrasonic transducer and skin care device with same

Title (de)

Ultraschallwandler und Hautpflegegerät damit

Title (fr)

Transducteur ultrasonique et dispositif de soin dermatologique en étant équipé

Publication

EP 1943998 B1 20120222 (EN)

Application

EP 08000074 A 20080103

Priority

JP 2007006173 A 20070115

Abstract (en)

[origin: EP1943998A1] An ultrasonic transducer and a skin care device are provided. The ultrasonic transducer comprises an ultrasonic vibrator (4) and a horn (5). The ultrasonic vibrator is stuck on a join surface (9) of the horn with adhesive. The horn further comprises a stopper for restricting adhesive flash caused by adhesive intervened between the join surface and the ultrasonic vibrator. The stopper comprises a concave groove (12) formed around the join surface along the outline of the ultrasonic vibrator. Alternatively, the stopper is formed of a projection wall (15) formed around the join surface along the outline of the ultrasonic vibrator.

IPC 8 full level

A61H 23/02 (2006.01); **B06B 1/06** (2006.01); **H10N 30/87** (2023.01)

CPC (source: EP KR)

A61H 23/0245 (2013.01 - EP KR); **B06B 3/00** (2013.01 - EP); **A61H 2023/002** (2013.01 - KR); **A61H 2201/1207** (2013.01 - KR); **A61H 2205/022** (2013.01 - KR)

Citation (examination)

- JP 2006181292 A 20060713 - MATSUSHITA ELECTRIC WORKS LTD
- WO 2004110558 A1 20041223 - MATSUSHITA ELECTRIC WORKS LTD [JP], et al

Cited by

CN109316328A; US11864782B2

Designated contracting state (EPC)

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

DOCDB simple family (publication)

EP 1943998 A1 20080716; **EP 1943998 B1 20120222**; **EP 1943998 B8 20120509**; AT E546123 T1 20120315; CN 101224165 A 20080723; CN 101224165 B 20110803; HK 1120398 A1 20090403; JP 2008168270 A 20080724; JP 4317569 B2 20090819; KR 100978328 B1 20100826; KR 20080067307 A 20080718; RU 2008101563 A 20090720; RU 2379125 C2 20100120

DOCDB simple family (application)

EP 08000074 A 20080103; AT 08000074 T 20080103; CN 200810002978 A 20080115; HK 08113395 A 20081209; JP 2007006173 A 20070115; KR 20080004264 A 20080115; RU 2008101563 A 20080114