

Title (en)
Ultrasonic hair treatment device

Title (de)
Ultraschall-Haarbehandlungsgerät

Title (fr)
Dispositif de traitement de cheveux à ultrasons

Publication
EP 1728450 A3 20071226 (EN)

Application
EP 06010710 A 20060524

Priority
JP 2005161981 A 20050601

Abstract (en)
[origin: EP1728450A2] An ultrasonic hair treatment device (D) is provided to apply ultrasonic vibrations to a user's hair for enhancing the penetration of a hair treatment composition into the hair. An ultrasonic vibration element is held on a support (10) to which a clamp member is pivotally connected, so as to give the ultrasonic vibration to the hair clamped between the support (10) and the clamp member (30). The ultrasonic vibration element (20) is configured to have a rectangular vibration face and to have a plurality of resonant points (24) arranged in a lattice pattern on the rectangular vibration face (22). Thus, the ultrasonic vibrations of maximum amplitude developed at the plural resonance points (24) can be applied to the hair over the entire rectangular vibration face (22), thereby applying the uniform ultrasonic vibration effect to the hairs for expediting the penetration of a hair treatment composition into the hairs.

IPC 8 full level
A45D 2/00 (2006.01); **H10N 30/20** (2023.01)

CPC (source: EP KR US)
A45D 1/00 (2013.01 - KR); **A45D 2/00** (2013.01 - EP US); **A45D 2/001** (2013.01 - EP KR US); **A45D 1/00** (2013.01 - EP US);
A45D 2200/207 (2013.01 - EP KR US)

Citation (search report)
• [XA] US 5875789 A 19990302 - SHIGIHARA TAKANORI [JP]
• [XDA] JP 2001037526 A 20010213 - HONDA ELECTRONIC

Cited by
EP2095737A1; EP1992245A3; EP2183992A4; RU2657167C1; GB2461055A; GB2468176A; FR3119739A1; WO2009107034A1;
WO2017140757A1; WO2017017236A1; WO2017080891A1; WO2022175018A1; EP3328235B1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK YU

DOCDB simple family (publication)
EP 1728450 A2 20061206; EP 1728450 A3 20071226; CN 100571568 C 20091223; CN 1871971 A 20061206; CN 200987445 Y 20071212;
JP 2006334110 A 20061214; KR 100737373 B1 20070709; KR 20060125589 A 20061206; RU 2006118927 A 20071220;
RU 2328956 C2 20080720; US 2006272665 A1 20061207

DOCDB simple family (application)
EP 06010710 A 20060524; CN 200610087692 A 20060531; CN 200620116447 U 20060531; JP 2005161981 A 20050601;
KR 20060049439 A 20060601; RU 2006118927 A 20060531; US 44118206 A 20060526