

Title (en)  
BRUSH, AND DEVICE AND METHOD FOR TRANSPLANTING HAIR WITH THE BRUSH

Title (de)  
BÜRSTE UND VORRICHTUNG UND VERFAHREN ZUM EINSETZEN VON BORSTEN IN DIE BÜRSTE

Title (fr)  
BROSSE, ET DISPOSITIF ET PROCEDE D'IMPLANTATION DE SOIES DANS UNE BROSSE

Publication  
**EP 1188395 A4 20030102 (EN)**

Application  
**EP 00925656 A 20000512**

Priority  

- JP 0003073 W 20000512
- JP 13479799 A 19990514
- JP 2000047553 A 20000224

Abstract (en)  
[origin: EP1188395A1] A brush of the anchor type capable of varying an anchor driven angle as desired, to thereby realize bristle setting at an increased packing density and in any desired pattern. Anchor driven angles ( $\theta$ ) at which at least two anchors (95) are driven into bristle set holes (4) of a head (2) of the brush are set to be different from each other. A bristle setting apparatus for realizing such a brush includes a bristle setting mechanism (82) using the anchor, an X-Y-Z table mechanism (11) arranged opposite to the bristle setting mechanism, and a brush rotating mechanism (12) rotatably arranged on the table mechanism. The brush rotating mechanism (12) is constituted of a brush holder (16) arranged so as to be rotatable in both normal and reverse directions and constructed so as to clampedly hold the head (2) of a toothbrush handle (1) at a predetermined position, a servomotor (17) for rotating the brush holder in both normal and reverse directions, gears (20, 21), and a drive belt (22). Control of movement and rotation of the X-Y-Z table mechanism (11) and brush holder (16) permits a rotational inclination angle of the toothbrush handle (1) held on the brush holder (16) to be varied as desired. <IMAGE>

IPC 1-7  
**A46D 3/06**; **A46B 3/16**; **A46D 3/04**

IPC 8 full level  
**A46D 3/06** (2006.01); **A46B 3/16** (2006.01); **A46D 3/04** (2006.01)

CPC (source: EP)  
**A46B 3/16** (2013.01); **A46D 3/042** (2013.01); **A46B 2200/1066** (2013.01)

Citation (search report)  

- [A] DE 4224903 A1 19940203 - SCHIFFER FA M & C [DE]
- See references of WO 0069310A1

Cited by  
DE10261503B4; BE1018463A3; CN104510158A; WO2005032302A1; TWI836125B

Designated contracting state (EPC)  
BE DE GB

DOCDB simple family (publication)  
**EP 1188395 A1 20020320**; **EP 1188395 A4 20030102**; **EP 1188395 B1 20031008**; DE 60005825 D1 20031113; DE 60005825 T2 20040729; JP 2001029137 A 20010206; JP 3916832 B2 20070523; TW 427891 B 20010401; WO 0069310 A1 20001123

DOCDB simple family (application)  
**EP 00925656 A 20000512**; DE 60005825 T 20000512; JP 0003073 W 20000512; JP 2000047553 A 20000224; TW 89109092 A 20000512