

28/10/04

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

CORRECTED VERSION

(19) World Intellectual Property
Organization
International Bureau



162162

(43) International Publication Date
4 December 2003 (04.12.2003)

PCT

(10) International Publication Number
WO 2003/099155 A1

(51) International Patent Classification⁷: **A61C 7/08**

(21) International Application Number:
PCT/US2003/016725

(22) International Filing Date: 28 May 2003 (28.05.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/383,908 28 May 2002 (28.05.2002) US

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(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,

CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(48) Date of publication of this corrected version:

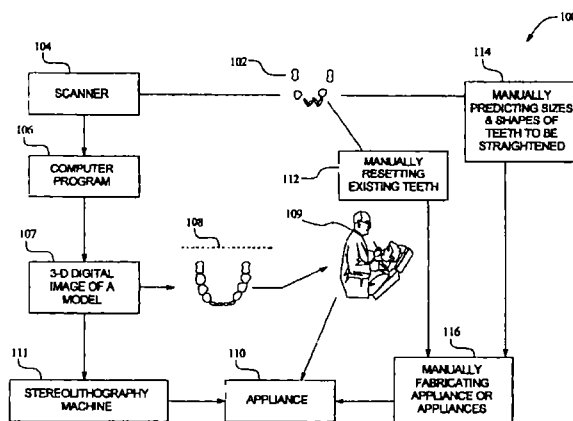
1 April 2004

(15) Information about Correction:

see PCT Gazette No. 14/2004 of 1 April 2004, Section II

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ORTHODONTIC APPLIANCE BASED ON PREDICTED SIZES AND SHAPES OF UNERRUPED TEETH, SYSTEM AND METHOD



(57) Abstract: An orthodontic appliance (110,400), a system (100) and a method are provided for automatic tooth straightening. The appliance (110,400) may be fabricated manually or by stereolithography using a computer program (106) that formulates a three-dimensional digital model (107). The appliance (110,400) or series of appliances (110,400) may be made to fit a particular patient wherein a portion of the appliance (110,400) may be attached to fully erupted teeth (306) that are substantially straight. The appliance (110,400) may fit onto the teeth (306) that do not require straightening using a section (402) made from a relatively stiff material so that the appliance (110,400) remains in the mouth in a relative constant position. The erupted teeth (302) that require straightening may be straightened with an area (404) of the appliance (110,400) formed of a softer, more resilient material so that fewer appliances may be required than if a stiffer material were used. The unerupted teeth (304) may be guided into the mouth by another portion (406) of the appliance (110,400) that is performed with predicted sizes and shapes of teeth determined from anatomical standards. The appliance (110,400) may be formed of a hard stiffer inner shell (502) overlaid by a soft outer layer (501).

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