

(43) International Publication Date
29 December 2010 (29.12.2010)(10) International Publication Number
WO 2010/150125 A2(51) International Patent Classification:
A61C 1/14 (2006.01)(21) International Application Number:
PCT/IB2010/052584(22) International Filing Date:
10 June 2010 (10.06.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/219,812 24 June 2009 (24.06.2009) US
12/545,883 24 August 2009 (24.08.2009) US(71) Applicant (for all designated States except US): **RE-
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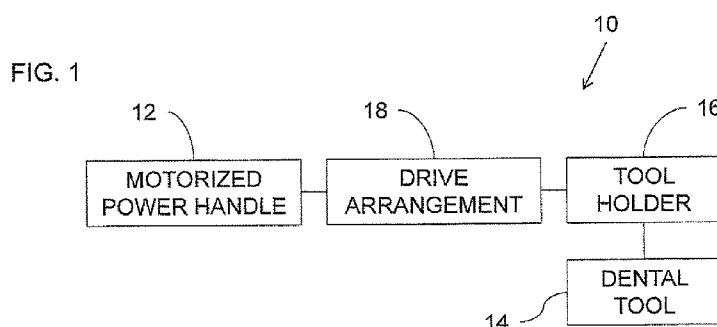
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(IL).(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,
CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO,
DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,
ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI,
NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD,
SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR,
TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG,
ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ,
TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU,
LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK,
SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished
upon receipt of that report (Rule 48.2(g))

(54) Title: DENTAL TOOL DISPLACEMENT APPARATUS AND METHOD WITH SLOW ROTATIONAL MOTION



(57) Abstract: A dental tool displacement apparatus for use with a motorized power handle to displace a dental tool includes a tool holder having a receptacle for receiving the dental tool, and a drive arrangement. The drive arrangement defines a transmission from the motorized power handle to the tool holder such that the tool holder undergoes reciprocating motion parallel to the tool axis at a first frequency of oscillations per minute and rotates about the tool axis at a second frequency of rotations per minute. In some cases, the two types of motion are generated by an eccentric drive pin engaging an annular slot which has gear teeth along one side, thereby generating an angular rotation step of the tool holder during each reciprocating stroke. In some cases, the first frequency is at least one order of magnitude greater than the second frequency.