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(21) International Application Number: PCT/US98/12965 (22) International Filing Date: 24 June 1998 (24.06.98) (30) Priority Data: 08/881,740 24 June 1997 (24.06.97) US (71) Applicant: COLGATE-PALMOLIVE COMPANY [US/US]; 300 Park Avenue, New York, NY 10022 (US). (72) Inventors: HOHLBEIN, Douglas, J.; 45 Diverty Road, West Trenton, NJ 08628 (US). MINTEL, Thomas, Edward; 439 Central Avenue, Rahway, NJ 07065 (US). (74) Agent: ANCEL, Richard, J.; Colgate-Palmolive Company, 909 River Road, Piscataway, NJ 08855-1343 (US).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>

(54) Title: TOOTHBRUSH HAVING HEAD WITH PEEL-RESISTANT JOINT**(57) Abstract**

A toothbrush having a bristle-bearing head divided into at least two sections (14, 16) is disclosed. The free end section (16), when unstressed, is normally biased to assume an angle of about 15° with respect to the other, to thereby define an articulated head. The two sections of the head have facing ends joined by a thin bridge (30) or hinge section integral with the two head sections, the bridge or hinge forming a groove between adjacent head sections. The upper surface of the bridge section is substantially flush with the upper surface of the head (opposite to the bristle-bearing surface). The space between the two facing ends is filled with a soft elastomer of about 5 to about 30, preferably about 13 to about 30 Shore A hardness. This hinge construction defines an articulated head of limited flex motion, wherein, when utilized by the average adult brusher, who applies an average brushing force of 0.5 pounds, flexes to a substantially flattened position. According to a second aspect of the invention, each end of the groove terminates in a flange at its extreme outer edge, and the groove, including the flange (32), is filled with an elastomer, which, due to the presence of the flange, is resistant to peel stresses caused by flexing of the hinge or joint.

