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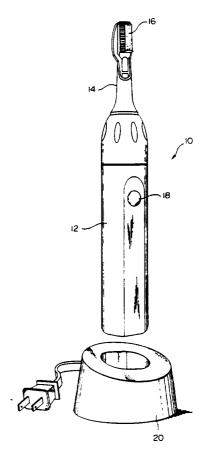
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(54) Title: PACING TOOTHBRUSH

(57) Abstract

A vibrating toothbrush (10) which includes a handle member (12), an elongated arm (14) which has a brushhead (16) at the distal end thereof, and a drive assembly for moving the brushhead (16) at a selected velocity. Responsive to an on/off switch (18) on the toothbrush (10) is an on/off variable, which enables a master clock to produce a drive signal the on/off variable being reset by a 120-second timer (40). A quadtimer variable, when in the enabled state, is responsive to the on/off switch (18) to produce an audible signal and a difference in brush velocity at 30-second intervals within the 120second period.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER IPC(6): A61C 17/34; A46B 13/02 US CL: 15/22.1; 433/216 According to International Patent Classification (IPC) or to both national classification and IPC						
B. FIELDS SEARCHED						
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields	searched					
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C. DOCUMENTS CONSIDERED TO BE RELEVANT						
Category* Citation of document, with indication, where appropriate, of the relevant passages Relevant	to claim No.					
DE, A, 2,918,806 (SCHELLER) 13 November 1980, see 1-10 entire document.						
Y GB, A, 2,097,663 (SCHELLER ET AL.) 10 November 1982, 1-10 see abstract.						
Y DE, A, 3,309,687 (HORCH) 20 September 1984, see 1-10 abstract.						
US, A, 4,788,734 (BAUER) 06 December 1988, see entire document.						
A EP, A, 435,329 A2 (STAAR) 03 July 1991, see entire 1-10 document.						
GB, A, 2,252,234 (BAKER) 05 August 1992, see entire 1-10 document.						
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\	US, A, 5,189,751 (GIULANI ET AL.) 02 March 1993, see entire document.	1-10
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