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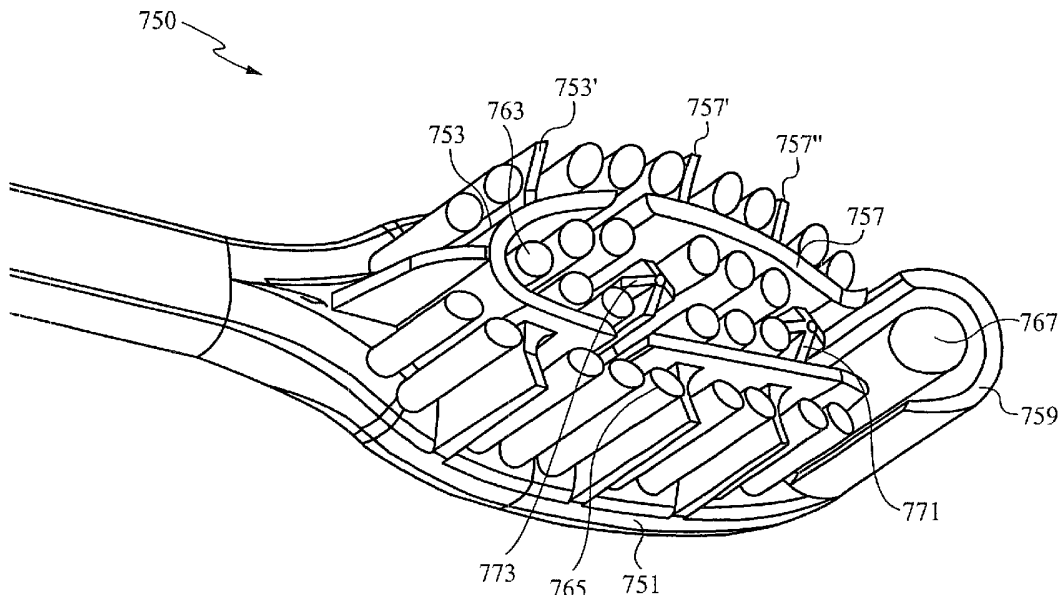
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[Continued on next page]

(54) Title: MULTI-DIRECTIONAL WIPING ELEMENTS AND DEVICE USING THE SAME



(57) Abstract: Multi-directional wiping elements are disclosed. The wiping elements comprise intersecting squeegee segments (103, 105) that provide top wiping squeegee edges (107, 109, 113) and side wiping squeegee edges (109, 117, 199). Devices utilizing the multi-directional wiping elements of the present invention can include bristles (511, 511', 511'') that are configured to simultaneously wipe a working surface with the wiping elements (503, 505, 507, 507', 509). In accordance with the embodiments of the invention, the multi-directional wiping elements are utilized in a toothbrush cleaning head (500, 600) that is configured to be operated manually or, alternatively, is motorized and is configured to rotate, oscillate, vibrate and/or move according to a combination thereof.

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 US CL : 15/4, 22.1, 97.1, 110, 167.1, 245

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,446,295 A (CALABRESE) 10 September 2002, see entire document.	25
X	US 1,833,555 A (BELL et al) 24 November 1931, see entire document.	1,5-12,14,17,18,20,22
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Y		2,3,4,13,15,16,19,21,2 3-30
Y	US 4,827,551 A (MASER et al) 09 May 1989, see entire document.	2,3,4,13,15,16,19,21,2 3-30

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:	"T"
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"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

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# INTERNATIONAL SEARCH REPORT

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## Box III TEXT OF THE ABSTRACT (Continuation of Item 5 of the first sheet)

### NEW ABSTRACT

Multi-directional wiping elements are disclosed. The wiping elements comprise intersecting squeegee segments (103, 105) that provide top wiping squeegee edges (107, 109, 113) and side wiping squeegee edges (109', 117, 199). Devices utilizing the multi-directional wiping elements of the present invention can include bristles (511, 511', 511") that are configured to simultaneously wipe a working surface with the wiping elements (503, 505, 507, 507', 509). In accordance with the embodiments of the invention, the multi-directional wiping elements are utilized in a toothbrush cleaning head (500, 600) that is configured to be operated manually or, alternatively, is motorized and is configured to rotate, oscillate, vibrate and/or move according to a combination thereof.