

Title (en)

TOOTHBRUSH HAVING A CLOSED-LOOP ARRANGEMENT OF CLEANING ELEMENTS

Title (de)

ZAHNBÜRSTE MIT REINIGUNGSELEMENTEN, DEREN ANORDNUNG EINE GESCHLOSSENE SCHLEIFE BILDET

Title (fr)

BROSSE À DENT COMPRENANT DES ÉLÉMENTS DE NETTOYAGE DES DENTS DISPOSÉS EN BOUCLE FERMÉE

Publication

EP 3430942 A1 20190123 (EN)

Application

EP 18191588 A 20091218

Priority

- EP 18191588 A 20091218
- EP 16192176 A 20091218
- EP 09795872 A 20091218
- US 2009068647 W 20091218

Abstract (en)

A toothbrush having an arrangement of cleaning elements for improved oral care and dentifrice retention. In one aspect, the invention is a toothbrush comprising a first set of cleaning elements forming a loop that extends from the distal periphery of the head to the proximal periphery of the head. The loop has the shape of a racetrack and comprises a first par-elliptical wall of cleaning elements at the distal periphery of the head and a second par-elliptical wall of cleaning elements located at the proximal periphery of the head. The par elliptical walls are connected first and second arcuate rows of cleaning elements. In one embodiment, the first and second arcuate rows are symmetrically arranged about the longitudinal axis so that peripheral convex surfaces of the first and second arcuate rows face the longitudinal axis.

IPC 8 full level

A46B 9/04 (2006.01)

CPC (source: EP KR)

A46B 9/00 (2013.01 - KR); **A46B 9/005** (2013.01 - EP); **A46B 9/025** (2013.01 - EP); **A46B 9/028** (2013.01 - EP); **A46B 9/04** (2013.01 - EP KR); **A46B 2200/1066** (2013.01 - EP)

Citation (applicant)

US 7143462 B2 20061205 - HOHLBEIN DOUGLAS J [US]

Citation (search report)

- [E] WO 2011070549 A1 20110616 - BRAUN GMBH [DE], et al
- [A] US 2008086827 A1 20080417 - WAGUESPACK KENNETH [US], et al
- [A] EP 0449655 A1 19911002 - COLGATE PALMOLIVE CO [US]
- [A] WO 2004026162 A2 20040401 - COLGATE PALMOLIVE CO [US], et al
- [A] US 2005000048 A1 20050106 - HOHLBEIN DOUGLAS J [US]

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)

WO 2011084116 A1 20110714; AU 2009357643 A1 20120607; AU 2009357643 B2 20140227; BR 112012014742 A2 20160405; BR 112012014742 B1 20201013; CA 2781695 A1 20110714; CA 2781695 C 20160419; CA 2919870 A1 20110714; CA 2919870 C 20190917; CN 102933114 A 20130213; CN 102933114 B 20160525; EP 2512289 A1 20121024; EP 2512289 B1 20161116; EP 2512289 B8 20170111; EP 3172986 A1 20170531; EP 3172986 B1 20181024; EP 3430942 A1 20190123; EP 3430942 B1 20210623; KR 101441773 B1 20140917; KR 20120084344 A 20120727; MX 2012006220 A 20120703; MX 362091 B 20190107; RU 2012130387 A 20140127; RU 2533089 C2 20141120

DOCDB simple family (application)

US 2009068647 W 20091218; AU 2009357643 A 20091218; BR 112012014742 A 20091218; CA 2781695 A 20091218; CA 2919870 A 20091218; CN 200980163026 A 20091218; EP 09795872 A 20091218; EP 16192176 A 20091218; EP 18191588 A 20091218; KR 20127018896 A 20091218; MX 2012006220 A 20091218; RU 2012130387 A 20091218