

Title (en)

Multiple micro-blade hair removal devices and methods for manufacturing

Title (de)

Mit mehreren Mikroklingen versehenen Haarentfernungsgeräte und Verfahren zur dessen Herstellung

Title (fr)

Dispositifs d'enlèvement de cheveux avec plusieurs microlames et procédés pour leur fabrication

Publication

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Application

EP 01306454 A 20010727

Priority

US 62619300 A 20000728

Abstract (en)

Hair removal devices comprising a plurality of micro-blades and methods for their fabrication, include, for example, microelectronic manufacturing techniques. Preferred "blades" have at least one edge with a radius of curvature not greater than about 1000 angstroms, preferably not greater than about 500 angstroms. Alternative embodiments of the present invention comprise a relatively high number of abrasion elements for hair removal. In addition to blades and/or abrasion elements, shaving devices of this invention can comprise skin flow control elements which control the flow of hair across the shaving device and thereby control the angle at which the blade edges or abrasion elements contact the hair. Another aspect of the present invention comprises blades having cutting depth which are much smaller than previously known shaving devices. For example, the cutting depth of one or more blades is not greater than about 75 microns, or is even less. Shaving devices are formed on rigid or flexible substrates using one or more of the following techniques: photolithography, wet chemical etching, dry etching, or material deposition techniques. <IMAGE>

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CPC (source: EP)

A45D 26/0004 (2013.01); **B26B 21/222** (2013.01); **B26B 21/54** (2013.01)

Citation (applicant)

- US 5205040 A 19930427 - WERNER ERIC J [US]
- US 5088195 A 19920218 - LAZARSHIK DANIEL B [US], et al

Cited by

WO2006045460A1; WO2004071722A1; WO2004073449A1; WO2004054402A1; WO2004076134A3

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