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EUROPEAN PATENT APPLICATION

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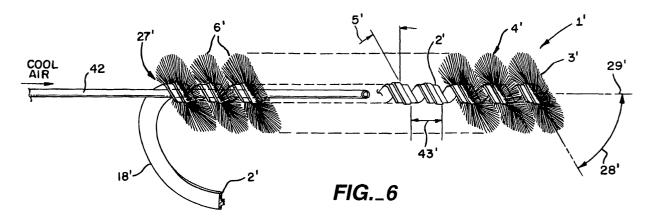
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(54) Cleaning device and method of construction

(57) A cleaning device 1 and method for making which is constructed from a thermoplastic material 2 to which a plurality of fibers 3 are fused and protrude therefrom, and formed into a curvilinear configuration such as a helix-like, or U-shape-like configuration. The method includes the steps of heating the base 2 until it is

softened and bent to a U-shape like configuration and then cooling the base member 2, or helically winding the base 2 onto a rotating mandrel 11; stopping the mandrel 11 and severing an end of the base member 2; and cooling the base member 2 so that it retains its U-shape or helical configuration.





EUROPEAN SEARCH REPORT

Application Number EP 01 30 0883

Category	Citation of document with in of relevant pass	dication, where appropriate, ages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.7)	
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	Place of search	Date of completion of the search		Examiner	
	MUNICH	30 July 2004	Car	dan, C	
X : par Y : par doc	ATEGORY OF CITED DOCUMENTS ilcularly relevant if taken alone ilcularly relevant if combined with anoth ument of the same category inological background	L : document cited to	cument, but public en the application or other reasons	ished on, or	



EUROPEAN SEARCH REPORT

Application Number EP 01 30 0883

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X:par Y:par doc A:tec O:noi	CATEGORY OF CITED DOCUMENTS ticularly relevant if taken alone ticularly relevant if combined with another unment of the same category hnological background newritten disclosure armediate document	T: theory of E: earlier p: after the D: documer L: documer		lying the i but publication reasons	Invention shed on, or

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Application Number

EP 01 30 0883

CLAIMS INCURRING FEES
The present European patent application comprised at the time of filing more than ten claims.
Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.
LACK OF UNITY OF INVENTION
The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:
see sheet B
All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
2-10,12-24
None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



LACK OF UNITY OF INVENTION SHEET B

Application Number

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1,8,11,26-28

Claims 1, 8, 11, 27 to 28 relate to a cleaning device characterized in that the base member is memory resetting (from one configuration to a second)

2. Claims: 2-10, 12-24

Claims 2 to 10 and 12 to 24 relate to a brush which has a base member made of an helix-like configuration.

3. Claim: 25

Claim 25 discloses a cleaning device with an angular displaced holder and bristles attached thereto.

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 01 30 0883

This annex lists the patent family members relating to the patent documents cited in the above–mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

30-07-2004

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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