

**PATENT COOPERATION TREATY**

**TRANSLATION**

From the  
INTERNATIONAL SEARCHING AUTHORITY

**PCT**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year)	<b>03.10.2017</b>
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Applicant's or agent's file reference <b>PC-23949</b>
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<b>FOR FURTHER ACTION</b> See paragraph 2 below
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International application No. <b>PCT/JP2017/030141</b>	International filing date (day/month/year) <b>23.08.2017</b>	Priority date (day/month/year) <b>29.08.2016</b>
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International Patent Classification (IPC) or both national classification and IPC <b>A46B9/04 (2006.01) i</b>
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Applicant <b>LION CORPORATION</b>
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1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/JP	Date of completion of this opinion	Authorized officer
Facsimile No.		Telephone No.

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Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:
  - the international application in the language in which it was filed
  - a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2.  This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43bis.1(a))
3.  With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing:
  - a.  forming part of the international application as filed:
    - in the form of an Annex C/ST.25 text file.
    - on paper or in the form of an image file.
  - b.  furnished together with the international application under PCT Rule 13ter.1(a) for the purposes of international search only in the form of an Annex C/ST.25 text file.
  - c.  furnished subsequent to the international filing date for the purposes of international search only:
    - in the form of an Annex C/ST.25 text file (Rule 13ter.1(a)).
    - on paper or in the form of an image file (Rule 13ter.1(b) and Administrative Instructions, Section 713).
4.  In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that forming part of the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

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<b>Box No. V</b>	<b>Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</b>								
1.	Statement								
	Novelty (N)	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Claims</td> <td style="border-bottom: 1px solid black;">2-7</td> <td style="width: 10%; text-align: right;">YES</td> </tr> <tr> <td>Claims</td> <td style="border-bottom: 1px solid black;">1</td> <td style="text-align: right;">NO</td> </tr> </table>	Claims	2-7	YES	Claims	1	NO	
Claims	2-7	YES							
Claims	1	NO							
	Inventive step (IS)	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Claims</td> <td style="border-bottom: 1px solid black;"></td> <td style="width: 10%; text-align: right;">YES</td> </tr> <tr> <td>Claims</td> <td style="border-bottom: 1px solid black;">1-7</td> <td style="text-align: right;">NO</td> </tr> </table>	Claims		YES	Claims	1-7	NO	
Claims		YES							
Claims	1-7	NO							
	Industrial applicability (IA)	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Claims</td> <td style="border-bottom: 1px solid black;">1-7</td> <td style="width: 10%; text-align: right;">YES</td> </tr> <tr> <td>Claims</td> <td style="border-bottom: 1px solid black;"></td> <td style="text-align: right;">NO</td> </tr> </table>	Claims	1-7	YES	Claims		NO	
Claims	1-7	YES							
Claims		NO							
2. Citations and explanations:									
<p>Document 1: JP 2002-503971 A (SMITHKLINE BEECHAM CONSUMER HEALTHCARE GMBH) 05 February 2002, pp. 10-13, fig. 1-5 &amp; US 6066282 A, columns 4-8, fig. 1-5 &amp; GB 9513883 A &amp; WO 1997/002770 A1 &amp; EP 837640 A1 &amp; DE 69621616 T2</p> <p>Document 2: JP 39-17185 Y1 (GOMEI KAISHA IWASAKI KOGYO) 19 June 1964, p. 1, fig. 1 (Family: none)</p> <p>Document 3: Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 188468/1980 (Laid-open No. 111524/1982) (TOKYO SHIBAURA ELECTRIC CO., LTD.) 09 July 1982, description, p. 4, fig. 4 (Family: none)</p> <p>Document 4: WO 2016/035678 A1 (LION CORP.) 10 March 2016, paragraphs [0028]-[0051], [0082], fig. 1-14 &amp; KR 10-2017-0051379 A &amp; CN 106659289 A</p> <p style="text-align: center; margin-top: 20px;">The invention as in claim 1 lacks novelty. Document 1 cited in the ISR discloses a method for manufacturing a</p>									

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**Box No. V** Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

toothbrush having: a head part (upper part of a head part 1) having a bristle-implanted surface (brush bristle-implanted surface 2) on the tip side; a handle part (lower part of a handle 7) including a grip part, the handle part being disposed farther towards the rear than the head part; and a neck part (lower part of the head part 1 and upper part of the handle 7) that is disposed between the bristle-implanted surface and the handle part, and that is deformed by external force exerted upon the head part, wherein the manufacturing method for a toothbrush includes a step for molding the toothbrush using a resin material filled via a gate part disposed at a predetermined position, and a step for filling the resin material via the gate part disposed farther towards the tip side than the grip part.

The invention as in claim 2 does not involve an inventive step in light of document 1 and document 2 cited in the ISR. Document 2 describes a manufacturing method for a toothbrush, wherein a gate part is disposed in a head part.

A person skilled in the art could easily conceive of adopting the invention described in document 2 as the position of the gate part of the invention described in document 1.

The invention as in claim 3 does not involve an inventive step in light of documents 1-3 cited in the ISR. Document 3 describes disposing a gate part in a concave portion as an injection molding means for a member to be coated.

A person skilled in the art could have easily

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conceived of adopting the invention described in document 2 as the position of the gate part of the invention described in document 1 and adopting the invention described in document 3 as the shape of the gate.

The invention as in claims 4-5 and 7 does not involve an inventive step in light of documents 1-3 and document 4 cited in the ISR. Document 4 describes a manufacturing method for a toothbrush, wherein a gate part of an amorphous hard resin material is coated with a soft resin material, and an amorphous hard resin material head part is coated with a soft resin material.

A person skilled in the art could have easily conceived of adopting the invention described in document 2 as the position of the gate part of the invention described in document 1 and adopt the invention described in document 3 as the shape of the gate.

The invention as in claim 6 does not involve an inventive step in light of document 1 and document 4 cited in the ISR. Document 1 describes a feature of including a step for molding a first portion including a connection part disposed in the head part and the neck part by filling the resin material, and a step for molding a second portion including the handle part connected to the first portion with the connection part by filling the resin material using the molded first portion. Document 4 indicates that the gate part in the first portion including the connection part disposed farther towards the rear than the neck part is disposed in the connection part with the handle part.

A person skilled in the art could have easily

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conceived of adopting the invention described in document 4 as the length of the first portion and the position of the gate part of the invention described in document 1.