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(54) Title: METHOD AND SYSTEM FOR IMPROVING DENTAL ESTHETIC INCLUDING A POLYMERIC SHELL REMOVABLY PLACEABLE OVER A PATIENT'S DENTITION

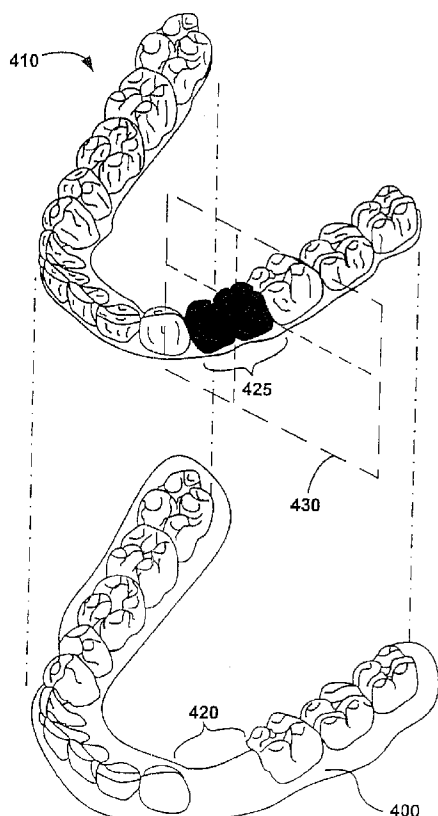


FIG. 4

(57) Abstract: A method and system for improving dental esthetics. Specifically, the method includes providing a polymeric shell dental appliance of a type that is removably placeable over a patient's dentition. The polymeric shell dental appliance comprises a concave trough which conforms to at least one tooth when placed over the patient's dentition. In addition, the method includes changing a visual appearance of a segment of the polymeric shell dental appliance. The visual appearance of the segment is changed by applying a thin film to a surface of the segment. In particular, the segment is disposed in a location corresponding to a portion of the patient's dentition that is to be esthetically improved.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
 INV. A61C7/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 A61C

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 practical, search terms used)
 EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01/80762 A (ALIGN TECHNOLOGY INC [US]; PHAN LOC X [US]; CHISHTI MUHAMMAD [US]; MIL) 1 November 2001 (2001-11-01)	1-9, 12-18
Y	page 9, line 9 - page 10, line 6	10, 11
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X	US 6 572 372 B1 (PHAN LOC X [US] ET AL) 3 June 2003 (2003-06-03) column 5, line 38 - column 6, line 2	1-9, 12-18
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Further documents are listed in the continuation of Box C.

See patent family annex.

- * Special categories of cited documents :
- *A* document defining the general state of the art which is not considered to be of particular relevance
 - *E* earlier document but published on or after the international filing date
 - *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
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 - *P* document published prior to the international filing date but later than the priority date claimed
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 - *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
 - *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
 - *Z* document member of the same patent family

Date of the actual completion of the international search 25 August 2008	Date of mailing of the international search report 16/09/2008
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Ardhuin, H�el�ene

INTERNATIONAL SEARCH REPORT

International application No

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/24100 A (ALIGN TECHNOLOGY INC [US]; KUO ERIC [US]; PHAN LOC X [US]) 28 March 2002 (2002-03-28) page 19, line 28 - page 21, line 16 -----	1-4, 7-9, 12, 15-18
X	US 2006/188848 A1 (TRICCA ROBERT E [US] ET AL) 24 August 2006 (2006-08-24) paragraphs [0022], [0037]; figure 4 -----	25-29
A	US 2006/188848 A1 (TRICCA ROBERT E [US] ET AL) 24 August 2006 (2006-08-24) paragraphs [0022], [0037]; figure 4 -----	1-18
A	WO 2006/062613 A (3M INNOVATIVE PROPERTIES CO [US]) 15 June 2006 (2006-06-15) page 3, lines 7-12 page 7, line 15 - page 8, line 13 -----	25-29
A	EP 1 163 918 A (VOCO GMBH [DE]) 19 December 2001 (2001-12-19) column 5, line 45 - column 6, line 47 -----	25-29
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2007/086430

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: **19-24**
because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy
2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. As all required additional search fees were timely paid by the applicant, this international search report covers allsearchable claims.
2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-18

A method for improving dental esthetics, comprising:
providing a polymeric shell dental appliance of a type that is removably placeable over a patient's dentition, said polymeric shell dental appliance comprising a concave trough which conforms to at least one tooth when placed over said patient's dentition; and
changing a visual appearance of a segment of said polymeric shell dental appliance by applying a thin film to a surface of said segment, wherein said segment is disposed in a location corresponding to a portion of said patient's dentition that is to be esthetically improved.

2. claims: 25-29

A method for packaging an apparatus used for improving dental esthetics, said method comprising:
providing a bio-compatible paint in a container, wherein said container is breakable to gain access to said bio-compatible paint, wherein said bio-compatible paint is applicable in a thin film to a surface of a segment of a dental appliance, wherein said segment is intended for cosmetic change;
providing an applicator brush for applying said bio-compatible paint to said surface of said segment; and
enclosing said container and said applicator brush in a sterile package.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/086430

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