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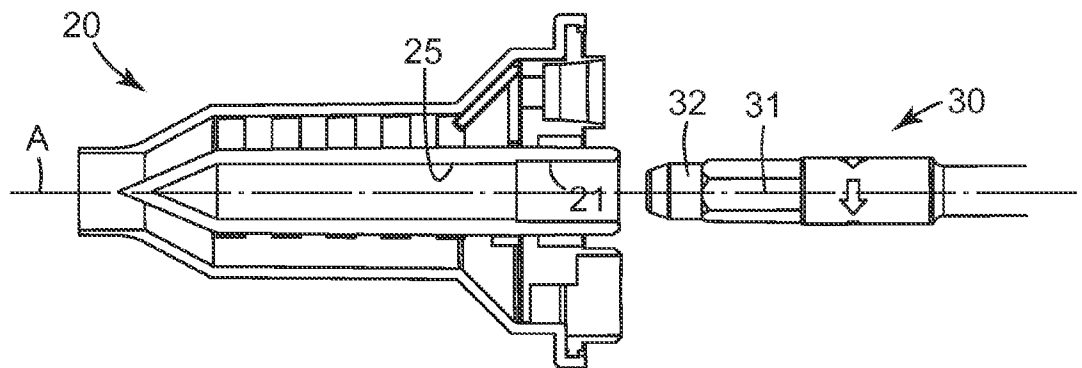
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- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MIXING DEVICE AND DRIVE FOR THE MIXING DEVICE



(57) Abstract: A device (1) for mixing and dispensing dental materials is provided, comprising a drive shaft (30) for driving a mixer (20). The mixer is placeable on the drive shaft in a first and a second position, wherein in the first position a guiding section (32) of the drive shaft is mated with an engagement section (21) of the mixer, but an engagement section (31) of the drive shaft is not engaged with the engagement section of the mixer, and in the second position the engagement section of the drive shaft is also engaged with the engagement section of the mixer.

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INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER

INV. A61C9/00 A61C5/06 F16D1/10

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 F16D

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	US 4 212 546 A (PORTEOUS, DON D) 15 July 1980 (1980-07-15) figure 6	1-34
X	DE 32 33 366 A1 (SCHNEIDER, HANS KLAUS) 22 September 1983 (1983-09-22) figure 1	1-34
A	EP 1 602 342 A (3M ESPE AG) 7 December 2005 (2005-12-07) the whole document	1-34
A	US 2003/123323 A1 (BUBLEWITZ ALEXANDER ET AL) 3 July 2003 (2003-07-03) the whole document	1-34

 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)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *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.
- *G* document member of the same patent family

Date of the actual completion of the international search

17 September 2007

Date of mailing of the international search report

12/10/2007

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FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: -

Claims 1-34 are so unclear (Article 6 PCT) that a complete search was not possible. The subject-matter of these claims has therefore only been searched incompletely. The following clarity defects arise:

Claim 1 attempts to define its subject-matter in terms of the result to be achieved without defining the essential technical features necessary for enabling the person skilled in the art to obtain the aimed result. The guiding and engagement sections of the drive shaft and the mixer are only defined by their function without defining their physical appearance. In this case such a formulation is not allowable because it appears possible to define the subject-matter in more concrete terms, i.e. in terms of how the corresponding guiding and engagement sections are designed.

Moreover, it is not clear whether the mixer mentioned in claim 1 is a feature of the claimed device. On the one hand, claim 1 is formulated as if the device only comprised a drive shaft and no mixer, cf. "comprising a drive shaft for driving a mixer". On the other hand, the device is specified as being suitable "for mixing and dispensing dental impression material". A device not comprising a mixer, however, cannot perform such a mixing task.

Claim 21 specifies that the guiding section of the mixer is intended for mating with an engagement section of the drive shaft. When considering figures 3a-3c this is apparently wrong as the guiding section of the mixer should be intended for mating with a guiding section of the drive shaft.

Furthermore, the guiding and the engagement section of the drive shaft are only defined by their function without defining any features relating to their physical appearance.

Due to its reference to claims 1-20, also independent claim 32 is unclear.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

INTERNATIONAL SEARCH REPORT

International application No.
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Box 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.:
because they relate to subject matter not required to be searched by this Authority, namely:

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:
see FURTHER INFORMATION sheet PCT/ISA/210

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 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:

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

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.
- No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2007/063526

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