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Declarations under Rule 4.17:
— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

(54) Title: OCT-ENABLED INJECTION FOR VITREORETINAL SURGERY

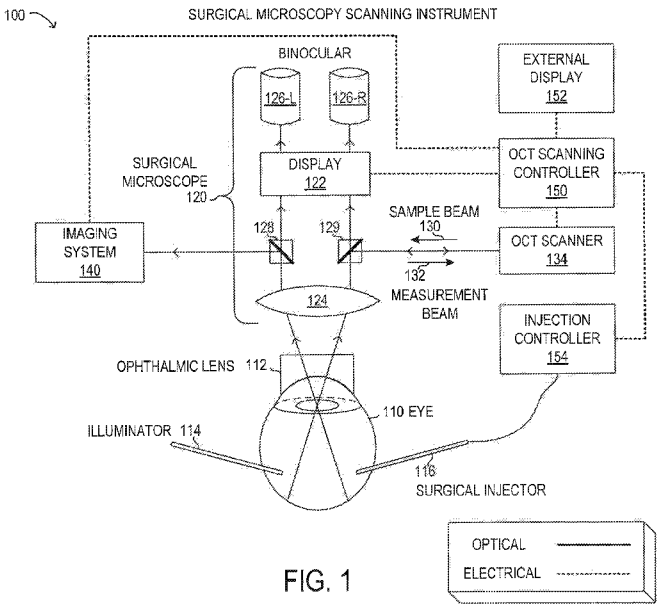


FIG. 1

(57) Abstract: OCT-enabled injection for vitreoretinal surgery may involve using an OCT image to detect when a surgical injector penetrates a desired tissue layer of the eye for receiving an injection. The injection may be triggered or automatically actuated based on the detection of the surgical injector from the OCT image.

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[Continued on next page]

Published:

— *with international search report (Art. 21(3))*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(88) Date of publication of the international search report:
01 August 2019 (01.08.2019)

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2018/057706

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61B3/10 A61B3/12 A61B3/13 A61F9/007
ADD.

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)
A61B

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 practicable, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KR 101 769 914 B1 (THE CATHOLIC UNIV OF KOREA INDUSTRY-ACADEMIC COOP FOUND [KR]) 21 August 2017 (2017-08-21) paragraphs [0028] - [0061]; figure 4	11-15
A	US 2014/221822 A1 (EHLERS JUSTIS P [US] ET AL) 7 August 2014 (2014-08-07) the whole document	11-15
A	US 9 649 021 B1 (NOVARTIS AG [CH]) 16 May 2017 (2017-05-16) the whole document	11-15
A	US 2017/135573 A1 (CHARLES STEVEN T [US]) 18 May 2017 (2017-05-18) the whole document	11-15

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[X] Further documents are listed in the continuation of Box C.

[X] 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 application or patent 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

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
21 June 2019	02/07/2019

Name and mailing address of the ISA/	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Smit, Jos

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INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2018/057706

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 9 560 959 B1 (HOPKINS MARK [US] ET AL) 7 February 2017 (2017-02-07) the whole document -----	11-15

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/IB2018/057706

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 101769914 B1	21-08-2017	KR 101769914 B1	21-08-2017
		US 2018220884 A1	09-08-2018
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		US 9560959 B1	07-02-2017
		WO 2017046663 A1	23-03-2017

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2018/057706

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. [X] Claims Nos.: 1-10
because they relate to subject matter not required to be searched by this Authority, namely:

see FURTHER INFORMATION sheet PCT/ISA/210

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:

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 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

Continuation of Box II.1

Claims Nos.: 1-10

Claims 1-10 relate to subject-matter considered by this Authority to be covered by the provisions of Rule 39.1(iv) / 67.1(iv) PCT - Method for treatment of the human or animal body by therapy. In particular, claims 1-10 relate to a method for injecting substances during ophthalmic surgery, comprising the step of causing an injection to be performed by a surgical injector, wherein the surgical injector injects a volume of a substance into a tissue layer.