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(72) Inventor; and

(71) Applicant (for all designated States except US):
FRANK, Joshua, B. [US/US]; 175 East 96th Street, PH-T, New York, NY 10128 (US).

(74) Agents: TUMA, Garry, J. et al.; BYRNE POH LLP, 11 Broadway, Suite 814, New York, NY 10004 (US).

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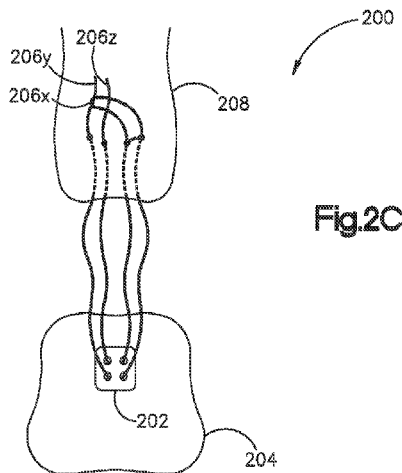
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Published:

- 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))

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(54) Title: SOFT TISSUE FIXATION USING A LOOPED SUTURE CONSTRUCT



(57) Abstract: A looped suture construct is formed by looping a suture on itself and slidably connecting the suture through an anchoring structure such that a looped end and a free end of the suture are on opposite sides of the slidable connection. The anchoring structure may be bone, a suture anchor, or another structure securely attached to bone. The looped end and the free end are passed through the soft tissue to be repaired. The free end is then passed through the looped end. Tension is applied to the free end to draw the soft tissue into contact with the desired bone, whereupon the free end is secured to maintain the tension. The looped suture end remains open and positioned on one side or surface of the soft tissue. Suture anchors of the invention are pre-loaded with at least one suture having a looped end and at least one free end.



INTERNATIONAL SEARCH REPORT

International application No PCT/US2011/029935

A. CLASSIFICATION OF SUBJECT MATTER INV. A61B17/04 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 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 2004/093031 A1 (BURKHART STEPHEN S [US] ET AL) 13 May 2004 (2004-05-13) figure 8 -----	23-27
X	US 2008/195205 A1 (SCHWARTZ HERBERT E [US]) 14 August 2008 (2008-08-14) figures 27-34,44,45 -----	23
X	US 2009/036905 A1 (SCHMIEDING REINHOLD [US]) 5 February 2009 (2009-02-05) paragraph [0024]; figures 5,6,17-24 -----	23-27
X	US 2009/318958 A1 (OCHIAI DEREK H [US]) 24 December 2009 (2009-12-24) figure 12 -----	23
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<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> 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. "&" document member of the same patent family	
Date of the actual completion of the international search	Date of mailing of the international search report	
28 September 2011	06/10/2011	
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Barton, Simon	

INTERNATIONAL SEARCH REPORT

International application No PCT/US2011/029935

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 2004/106950 A1 (GRAFTON R DONALD [US] ET AL) 3 June 2004 (2004-06-03) the whole document -----	23-27
X	US 2007/060922 A1 (DREYFUSS PETER J [US]) 15 March 2007 (2007-03-15) the whole document -----	23
X	US 2009/312776 A1 (KAISER RYAN A [US] ET AL) 17 December 2009 (2009-12-17) the whole document -----	23
X	US 5 814 069 A (SCHULZE DALE R [US] ET AL) 29 September 1998 (1998-09-29) the whole document -----	23

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2011/029935

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.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.: 1-22, 28-30
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 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.2

Claims Nos.: 1-22, 28-30

Claims 28-30 relate to subject matter in part defined by technical features as required by Article 6 PCT in combination with Rule 6 PCT, and in part defined by intended use of such subject matter, resulting in a lack of clarity of what technical features define the claimed subject matter and therefore a lack of the clarity required by Article 6 PCT. Furthermore these claims lack the full support in the description required by Article 6 PCT since no specific mention is made of any construct comprising non-living or artificial tissue, and all the description of the prior art and of the problems to be solved by the invention relate to living tissue. Claims 1-22 relate to subject matter not finding the full support in the description as required by Article PCT since no specific mention is made of any method involving non-living or artificial tissue, and all the description of the prior art and of the problems to be solved by the invention relate to living tissue.

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, 8.2), should the problems which led to the Article 17(2) declaration be overcome.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2011/029935

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