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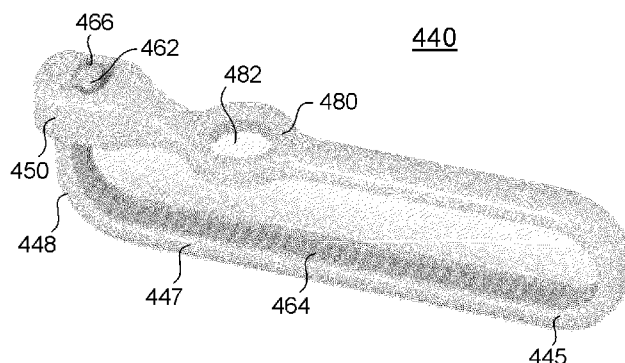


FIG. 11B

(57) Abstract: In some embodiments, a method comprises forming a lumen in a first bone portion and forming a lumen in a second bone portion. The method further includes inserting a portion of a flexible fastening band through the lumen in the first bone portion and through the lumen in the second bone portion, and inserting the portion of the flexible fastening band into a fastener mechanism monolithically formed with the flexible fastening band. The method further includes advancing the portion of the flexible fastening band through the fastener mechanism until the first bone portion and the second bone portion are stabilized.



INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 14/19302

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - A61B 17/70 (2015.01)

CPC - A61B 17/7053

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)

CPC: A61B 17/7053 IPC(8): A61B 17/70 (2015.01)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC: 606/249, 246, 263, 279; 623/17.11, 17.16 (keyword limited; terms below)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PatBase; Google Patents; Google

Search Terms Used: spine, spinal, vertebra*, band%, cable%, tether%, wire%, string%, anchor, fastener, screw, spinous process*, stabiliz*

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2010/0185241 A1 (MALANDAIN) 22 July 2010 (22.07.2010) fig 5-8, para [0046]-[0048], [0051]	1, 3, 6
Y		1, 4-5
X	US 5,725,582 A (BEVAN et al) 10 March 1998 (10.03.1998) fig 5, 13B-D, col 1, ln 56-65col 5, ln 56-67, col 6, ln 63-67	1, 8-9
Y	US 2012/0221060 A1 (BLAIN) 30 August 2012 (30.08.2012) fig 8,9, para [0058]	1, 4-5
Y	US 2009/0198282 A1 (FIELDING et al) 06 August 2009 (06.08.2009) fig 7, 8A-8D, para [0046]-[0047]	1-2, 7
Y	US 2008/0009866 A1 (ALAMIN et al) 10 January 2008 (10.01.2008) fig 4, para [0031]	1-2, 7
Y	US 2008/0177264 A1 (ALAMIN et al) 24 July 2008 (24.07.2008) fig 11, 12, para [0041]	2

☐ Further documents are listed in the continuation of Box C.

* 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

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 14/19302

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.:
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:
This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I: Claims 1-9, directed to a method for stabilizing bone.

Group II: Claims 10-21 directed to an apparatus and a kit.

The inventions listed as Groups I-II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

----Continued on Supplemental Page----

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 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.:
1-9

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.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 14/19302

Continuation of Box III: Observations where unity of invention is lacking

SPECIAL TECHNICAL FEATURES

The invention of Group I includes the special technical features of particular method steps including disposing a flexible band into contact with a first bone portion and into contact with a second bone portion, advancing a portion of the flexible band through an attachment connection of the flexible band until the first bone portion and the second bone portion are stabilized, and advancing a portion of a fastener through the aperture and into the first bone portion until the flexible band is secured to the first bone portion, not required by the claims of Group II.

COMMON TECHNICAL FEATURES

Groups I and II are related as an apparatus (group II) and potential method(s) for use thereof (group I). The inventions of Groups I-II share the technical features of Claims 10 and 16. The apparatus is known in the prior art, as shown in US 2009/0018662 A1 to Pasquet, et al. (hereinafter 'Pasquet').

Regarding claim 10, Pasquet discloses an apparatus (20, abstract), comprising:

a flexible elongate body (46) including a distal end portion, a body portion, and an attachment connection (42) that is configured to receive the distal end portion (fig 2, para [0041]-[0042]); and
an anchor (21, 50) configured to receive a fastener (60, fig 2, para [0045]-[0046]) that is configured to secure the flexible elongate body to a first bone portion (10, fig 4) via the anchor (fig 4, pedicle screws 60 further serve to secure flexible body to spinous process);
the attachment connection configured to receive the distal end portion of the flexible elongate body when the body portion of the flexible elongate body is disposed in contact with a first bone portion and in contact with a second bone portion (intended use, see fig 4 which shows elongate body in contact with spinous process 10 and attachment connection 42).

Regarding claim 16, Pasquet discloses a kit, comprising:

a fastener (60, fig 2-4, para [0045]); and
a flexible band 20, 46, 50) having an interface portion (52, fig 2, para [0043]-[0048]) configured to receive the fastener, the flexible band configured to stabilize a first bone portion (10, fig 4) and a second bone portion (14, fig 4 - device capable of stabilizing first and second bone portions); and
the fastener configured to anchor the flexible band to the first bone portion such that the first bone portion and the flexible band are stabilized after being anchored (intended use, see fig 4, fastener capable of anchoring flexible band 46 to first bone 10 after fastener is crewed into bone).

As the common technical features were known in the art at the time of the invention, these cannot be considered special technical feature that would otherwise unify the groups.

Therefore, Groups I-II lack unity under PCT Rule 13 because they do not share a same or corresponding special technical feature.