



US009408642B2

(12) **United States Patent**
Wong et al.

(10) **Patent No.:** **US 9,408,642 B2**
(45) **Date of Patent:** **Aug. 9, 2016**

(54) **VERTEBRAL OSTEOSYNTHESIS ASSEMBLY FORMED BY A VERTEBRAL OSTEOSYNTHESIS MATERIAL AND INSTRUMENTS FOR PLACING SAID MATERIAL**

(58) **Field of Classification Search**
USPC 606/86 A
See application file for complete search history.

(75) Inventors: **Chung Chek Wong**, Kuching (MY);
Jean-Louis Labbe, Noumea (FR);
Julius Fernandez, Memphis, TN (US);
Victor Hsu, Ambler, PA (US)

(56) **References Cited**
U.S. PATENT DOCUMENTS
5,782,831 A * 7/1998 Sherman et al. 606/86 A
2004/0138662 A1* 7/2004 Landry et al. 606/61
(Continued)

(73) Assignee: **MEDICREA INTERNATIONAL**,
Neyron (FR)

FOREIGN PATENT DOCUMENTS
EP 1 415 603 A2 5/2004
WO WO 98/55038 A1 12/1998
WO WO 2009/011929 A1 1/2009

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 124 days.

OTHER PUBLICATIONS
Dec. 1, 2011 International Search Report issued in International Patent Application No. PCT/IB2011/053796.
(Continued)

(21) Appl. No.: **13/817,895**

(22) PCT Filed: **Aug. 30, 2011**

(86) PCT No.: **PCT/IB2011/053796**
§ 371 (c)(1),
(2), (4) Date: **Feb. 20, 2013**

Primary Examiner — Jan Christopher Merene
(74) *Attorney, Agent, or Firm* — Oliff PLC

(87) PCT Pub. No.: **WO2012/029025**
PCT Pub. Date: **Mar. 8, 2012**

(65) **Prior Publication Data**
US 2013/0150898 A1 Jun. 13, 2013

(57) **ABSTRACT**
In this assembly; each connecting piece comprises engaging means situated outside said conduit for engaging a connecting bar and outside said conduit for engaging on an anchor member, making it possible to grasp said connecting piece using a handling instrument. The assembly comprises at least one handling instrument comprising engaging means complementary to those comprised by each connecting piece. According to the invention, each anchor member is equipped with a proximal shaft, the length of which is such that it protrudes past the patient's skin after implantation of said anchor member on a vertebra. Each handling instrument is tubular and can be engaged on the proximal shaft of each anchor member so as to allow the movement of a connecting piece grasped by the instrument along the proximal shaft of each anchor member.

(30) **Foreign Application Priority Data**
Sep. 1, 2010 (FR) 10 56930

(51) **Int. Cl.**
A61B 17/70 (2006.01)

(52) **U.S. Cl.**
CPC **A61B 17/706** (2013.01); **A61B 17/7041** (2013.01); **A61B 17/7083** (2013.01); **A61B 17/7086** (2013.01); **A61B 17/7004** (2013.01); **A61B 17/7011** (2013.01)

8 Claims, 12 Drawing Sheets

