



US009408735B2

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

(10) **Patent No.:** **US 9,408,735 B2**
(45) **Date of Patent:** ***Aug. 9, 2016**

(54) **METHODS OF IMPLANTING A PROSTHESIS AND TREATING AN ANEURYSM**

(58) **Field of Classification Search**
CPC A61F 2/962; A61F 2/95; A61F 2002/9505
USPC 623/1.11, 1.12
See application file for complete search history.

(71) Applicant: **Bolton Medical, Inc.**, Sunrise, FL (US)

(56) **References Cited**

(72) Inventors: **Samuel Arbefeulle**, Sunrise, FL (US);
Humberto Berra, Sunrise, FL (US);
Carol Barbre, Sunrise, FL (US);
Michael Moore, Sunrise, FL (US)

U.S. PATENT DOCUMENTS

(73) Assignee: **Bolton Medical, Inc.**, Sunrise, FL (US)

3,416,531 A 12/1968 Edwards
3,485,234 A 12/1969 Stevens

(Continued)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

FOREIGN PATENT DOCUMENTS

This patent is subject to a terminal disclaimer.

CN 2451136 Y 10/2001
DE 197 53 123 A1 8/1999

(Continued)

(21) Appl. No.: **14/157,194**

OTHER PUBLICATIONS

(22) Filed: **Jan. 16, 2014**

Notification of Transmittal of the International Search Report and the Written Opinion or the International Searching Authority, or the Declaration for International Application No. PCT/US04/28530, mailed Sep. 15, 2005.

(Continued)

(65) **Prior Publication Data**

US 2014/0135892 A1 May 15, 2014

Primary Examiner — Diane Yabut

Related U.S. Application Data

(74) *Attorney, Agent, or Firm* — Hamilton, Brook, Smith & Reynolds, P.C.

(63) Continuation of application No. 11/449,337, filed on Jun. 8, 2006, now Pat. No. 8,740,963, which is a continuation-in-part of application No. 10/784,462, filed on Feb. 23, 2004, now Pat. No. 8,292,943, said

(Continued)

(57) **ABSTRACT**

(51) **Int. Cl.**

A61F 2/06 (2013.01)
A61F 2/966 (2013.01)

(Continued)

A method of implanting a prosthesis in a patient at a treatment site includes advancing an outer catheter of a prosthesis delivery system in the patient distal to the treatment site. An inner sheath and a curved guidewire lumen of the delivery system are advanced from the outer catheter to the treatment site along a guidewire while the outer catheter remains stationary relative to the patient. Advancing the inner sheath causes rotation of the prosthesis to thereby rotationally align the prosthesis at the treatment site. The inner sheath is retracted to deploy a prosthesis from within the inner sheath and at the treatment site. The delivery system is then retracted from the patient.

(52) **U.S. Cl.**

CPC . **A61F 2/966** (2013.01); **A61F 2/07** (2013.01);
A61F 2/95 (2013.01); **A61M 25/0108** (2013.01);

(Continued)

5 Claims, 24 Drawing Sheets

