



US009408593B2

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

(10) **Patent No.:** **US 9,408,593 B2**  
(45) **Date of Patent:** **Aug. 9, 2016**

(54) **INSERTABLE ENDOSCOPIC INSTRUMENT FOR TISSUE REMOVAL**

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(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 202 days.

(21) Appl. No.: **14/316,203**

(22) Filed: **Jun. 26, 2014**

(65) **Prior Publication Data**

US 2015/0025541 A1 Jan. 22, 2015

**Related U.S. Application Data**

(63) Continuation of application No. 14/280,202, filed on May 16, 2014, now Pat. No. 8,882,680, which is a continuation-in-part of application No. 13/336,491, filed on Dec. 23, 2011.

(60) Provisional application No. 61/824,760, filed on May 17, 2013, provisional application No. 61/566,472, filed on Dec. 2, 2011.

(51) **Int. Cl.**

**A61B 10/04** (2006.01)  
**A61B 10/02** (2006.01)

(Continued)

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

CPC ..... **A61B 10/04** (2013.01); **A61B 1/005** (2013.01); **A61B 1/00094** (2013.01);  
(Continued)

(58) **Field of Classification Search**

CPC ..... A61B 1/00094; A61B 1/00133; A61B

1/015; A61B 1/018; A61B 1/31; A61B 10/04; A61B 10/0266; A61B 10/0275; A61B 17/320016; A61B 17/32002; A61B 2017/320032; A61B 2017/320064; A61B 2017/00973; A61B 2217/005; A61B 2217/007  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

3,760,810 A 9/1973 Van Hoorn  
3,834,392 A 9/1974 Lampman et al.

(Continued)

**FOREIGN PATENT DOCUMENTS**

DE 33 39 322 A1 5/1984  
DE 33 20 076 A1 12/1984

(Continued)

**OTHER PUBLICATIONS**

US Office Action in U.S. Appl. No. 13/336,491 DTD Sep. 18, 2015.

(Continued)

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(57) **ABSTRACT**

An improved flexible endoscopic instrument to precisely and efficiently obtains samples of flat polyps and multiple polyps from a patient by debriiding one or more polyps and retrieving the debriided polyps without having to alternate between using a separate cutting tool and a separate sample retrieving tool and may be used with an endoscope. In one aspect, the cutting tool is coupled to a flexible torque coil or torque rope that is configured to transfer rotational energy from a powered actuator through the length of the endoscope onto the cutting tool.

**19 Claims, 70 Drawing Sheets**

