US009510830B2

(12) **United States Patent**
Shelton, IV et al.

(10) **Patent No.: US 9,510,830 B2**
(45) **Date of Patent: Dec. 6, 2016**

(54) **STAPLE CARTRIDGE**

(71) Applicant: **Ethicon Endo-Surgery, Inc.**, Cincinnati, OH (US)

(72) Inventors: **Frederick E. Shelton, IV**, Hillsboro, OH (US); **Michael E. Setser**, Burlington, KY (US); **William B. Weisenburgh, II**, Maineville, OH (US)

(73) Assignee: **Ethicon Endo-Surgery, LLC**, Guaynabo, PR (US)

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

(21) Appl. No.: **14/521,748**

(22) Filed: **Oct. 23, 2014**

(65) **Prior Publication Data**

US 2015/0041518 A1 Feb. 12, 2015

Related U.S. Application Data

(63) Continuation of application No. 14/175,148, filed on Feb. 7, 2014, which is a continuation of application

(Continued)

(51) **Int. Cl.**
A61B 17/10 (2006.01)
A61B 17/072 (2006.01)

(Continued)

(52) **U.S. Cl.**
CPC ***A61B 17/105*** (2013.01); ***A61B 17/064*** (2013.01); ***A61B 17/068*** (2013.01); ***A61B 17/0682*** (2013.01); ***A61B 17/072*** (2013.01); ***A61B 17/07207*** (2013.01); ***A61B 34/30*** (2016.02); ***A61B 50/20*** (2016.02); *A61B 17/320092* (2013.01); *A61B 18/1445* (2013.01); *A61B 34/37* (2016.02); *A61B 50/36* (2016.02); *A61B 2017/00017* (2013.01); *A61B 2017/00398* (2013.01); *A61B 2017/00473* (2013.01); *A61B 2017/00734* (2013.01); *A61B 2017/0688* (2013.01); *A61B 2017/07271* (2013.01); *A61B 2017/07278* (2013.01); *A61B 2017/2923* (2013.01); *A61B 2017/2927* (2013.01);

(Continued)

(58) **Field of Classification Search**
CPC A61B 17/072; A61B 17/068; A61B 2017/07271; A61B 2017/2946; A61B 2019/4873
USPC 227/175.1, 176.1, 175.4
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

66,052 A 6/1867 Smith
662,587 A 11/1900 Blake

(Continued)

FOREIGN PATENT DOCUMENTS

AU 2008207624 A1 3/2009
AU 2010214687 A1 9/2010

(Continued)

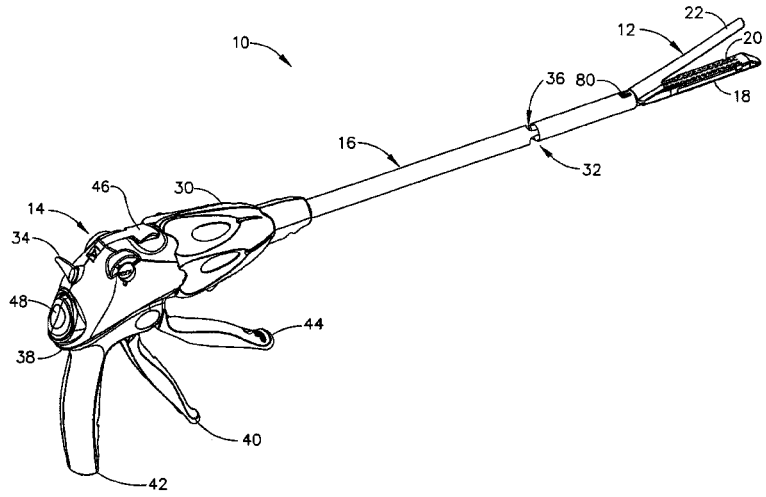
OTHER PUBLICATIONS

Taiwanese search report from TIPO for 096136827, dated Mar. 6, 2013 (1 page).

(Continued)

Primary Examiner — Michelle Lopez

(57) **ABSTRACT**

A staple cartridge comprising a mechanism configured to overcome an empty/missing cartridge lockout is disclosed.

1 Claim, 13 Drawing Sheets