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Oneda et al.

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(54) **INFLATABLE MEMBER FOR AN ENDOSCOPE SHEATH**

(71) Applicant: **COGENTIX MEDICAL, INC.**,
Minnetonka, MN (US)

(72) Inventors: **Katsumi Oneda**, Alpine, NJ (US);
Edward Paul Harhen, Duxbury, MA (US);
Mark S. Landman, Sharon, MA (US)

(73) Assignee: **COGENTIX MEDICAL, INC.**,
Minnetonka, MN (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.

This patent is subject to a terminal disclaimer.

(58) **Field of Classification Search**
USPC 600/114–115, 121–125
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,066,070 A * 1/1978 Utsugi A61B 1/00082
600/115

4,148,307 A * 4/1979 Utsugi A61B 1/00156
600/115

(Continued)

OTHER PUBLICATIONS

Office Action in EP Application No. 03711472.5 dated Nov. 3, 2011.
Response to EP Office Action filed May 17, 2010 regarding Application No. 03711472.5.

Primary Examiner — Matthew J Kasztejna
(74) *Attorney, Agent, or Firm* — Barbara A. Wrigley; Fox Rothschild LLP

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(57) **ABSTRACT**

Apparatus and methods for attaching and forming enclosed inflatable members on an endoscope assembly with a disposable sheath are disclosed. In one embodiment, an apparatus includes a flexible and resilient cuff member that is positioned on the outer surface of the disposable sheath and sealably and fixedly bonded to the sheath cover material at the cuff edges to form an annular space capable of being inflated. The inflatable member formed thereby is inflated through a lumen internal to the sheath that has an opening into the interior annular space. The inflatable member may be inflated to exert a longitudinal force on the insertion tube, thereby moving the endoscope assembly along a body passage. Alternately, a sheath may include a plurality of inflatable cuffs that may be inflated to create an isolated space therebetween within the body passage.

9 Claims, 9 Drawing Sheets

