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Bonutti

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(54) **TRACHEAL INTUBINATION**

(75) Inventor: **Peter M. Bonutti**, Effingham, IL (US)

(73) Assignee: **The Bonutti 2003 Trust -A**, Effingham, IL (US)

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(58) **Field of Search** 128/200.26, 205.23, 128/207.14, 207.15, 207.29; 600/109, 409, 410, 424; 604/93.01

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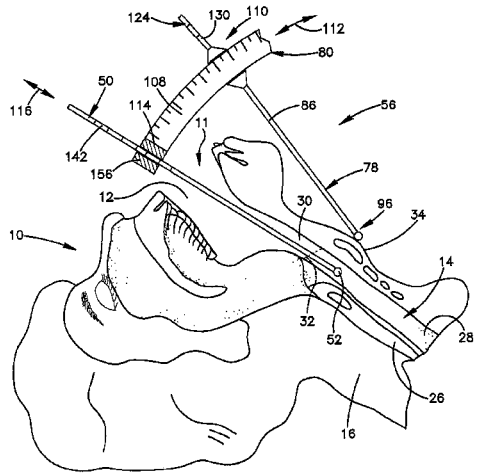
Primary Examiner—Aaron J. Lewis
(74) *Attorney, Agent, or Firm*—Fleit Kain Gibbons Gutman Bongini & Bianco; Paul D. Bianco; Martin Fleit

(57) **ABSTRACT**

A tracheal tube positioning apparatus is located relative to a patient's trachea by engaging the patient's Adam's apple. Indicia on relatively movable sections of the positioning apparatus provides an indication of the distance between the patient's mouth and the patient's larynx. A flexible guide rod is moved through a distance corresponding to the distance between the patient's mouth and larynx, as determined by the positioning apparatus. A magnet is utilized to attract a leading end portion of the guide rod. A plurality of emitters may be disposed in an array around the patient's Adam's apple. Outputs from the emitters are detected by a detector connected with the guide rod and by a detector connected with the tracheal tube. Alternatively, a plurality of detectors may be disposed in an array around the patient's Adam's apple to detect the output from an emitter connected with the guide rod and by an emitter connected with the tracheal tube. Expandable elements may be connected with the guide rod and/or tracheal tube to steer movement along an insertion path.

54 Claims, 14 Drawing Sheets