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Hissong

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[54] **LASER COMPATIBLE JET VENTILATION TUBE**

FOREIGN PATENT DOCUMENTS

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0074809 3/1983 European Pat. Off. A61M 25/00
0420486 4/1991 European Pat. Off. A61M 29/02
0425361 5/1991 European Pat. Off. A61M 16/04

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OTHER PUBLICATIONS

[21] Appl. No.: **963,164**

"New Endotracheal Tube For Laser Surgery of the Larynx", by Norton et al., Ann Otol 57:1975, pp. 544-557.

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[51] Int. Cl.⁶ **A61M 16/00**

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[58] Field of Search **128/200.26, 207.14, 128/207.15**

[57] ABSTRACT

The jet ventilation tube includes a flexible conduit with a flexible monitoring line, a centering portion for centering the tube in a trachea and a flexible reinforcement member for the conduit. The conduit is formed of combustion resistant plastic material and the noncombustible reinforcement member is in the form of a straight or coiled wire. The straight wire reinforcement can be located outside the conduit, whereas the coiled wire reinforcement can be located inside or outside the conduit. The integrity of the conduit is maintained by the reinforcement member and helps prevent break-up of the conduit in the event of a laser strike. A centering portion of the jet tube can be reinforced with wire, formed as a segmented structure or as a spirally expanded extension of the reinforcing coil.

[56] References Cited

U.S. PATENT DOCUMENTS

2,210,744	8/1940	Winder	128/207.15
4,378,796	4/1983	Milhaud	128/207.15
4,489,722	12/1984	Ferraro et al.	128/207.15
4,584,998	4/1986	McGrail	128/207.15
4,632,108	12/1986	Geil	128/207.15
4,825,858	5/1989	Frankel	128/207.15
4,834,087	5/1989	Coleman et al.	128/207.15
4,976,261	12/1990	Gluck et al.	128/207.15
5,019,057	5/1991	Truckai	604/282
5,065,757	11/1991	Dragisic et al.	128/207.15
5,139,019	8/1992	Smith et al.	128/207.15
5,193,533	3/1993	Body et al.	128/207.14

27 Claims, 4 Drawing Sheets

