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Geist et al.

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(54) **LARYNGOSCOPE BLADE**

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See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,354,471 A	7/1944	Macintosh	
3,760,798 A	9/1973	Edinger	
4,344,419 A	8/1982	Burgin	
4,565,187 A	1/1986	Soloway	
4,570,614 A *	2/1986	Bauman	A61B 1/07
			600/193
4,607,623 A	8/1986	Bauman	
4,681,094 A	7/1987	Rolnick	
4,958,624 A	9/1990	Stone et al.	

(Continued)

FOREIGN PATENT DOCUMENTS

WO WO-2005082231 A1 9/2005

OTHER PUBLICATIONS

International Search Report and Written Opinion mailed Aug. 14, 2008 for PCT Application No. PCT/US2008/057549.

(Continued)

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(57) **ABSTRACT**

Embodiments of a laryngoscope blade for being removable mounted to a laryngoscope handle. In some embodiments, the laryngoscope blade may include a blade portion including a proximal end and a distal end provided with an optic window; a base portion including two base halves mounted to each other and to the proximal end of the blade portion such that the proximal end of the blade portion is located between each base half; and an optic light pipe including a proximal end disposed between the two base halves and a distal end extending through the optic window.

20 Claims, 8 Drawing Sheets

