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United States Patent [19]

Field

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[54] **INTRODUCERS AND ASSEMBLIES**

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[51] **Int. Cl.**[6] **A61M 25/00**

[52] **U.S. Cl.** **604/530**; 604/536

[58] **Field of Search** 600/581, 585, 600/120, 170, 194; 604/167, 170, 282, 164

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,957,055	5/1976	Linder et al.	128/351
4,634,432	1/1987	Kocak	604/167
4,817,613	4/1989	Jaraczewski et al.	604/282
4,897,079	1/1990	Zaleski et al.	604/43
4,911,691	3/1990	Aniuk et al.	604/164
4,983,170	1/1991	Etheredge, III et al.	604/270
5,015,238	5/1991	Solomon et al.	604/164
5,085,649	2/1992	Flynn	604/264
5,266,669	11/1993	Onwunaka et al.	528/28
5,342,383	8/1994	Thomas	606/190
5,395,332	3/1995	Ressemann et al.	604/96
5,397,302	3/1995	Weaver et al.	604/54
5,443,907	8/1995	Slaikeu et al.	428/375
5,489,269	2/1996	Aldrich et al.	604/95
5,599,305	2/1997	Hermann et al.	604/53
5,643,174	7/1997	Yamamoto et al.	600/114
5,704,926	1/1998	Sutton	604/282
5,752,937	5/1998	Otten et al.	604/161
5,762,630	6/1998	Bley et al.	604/264

FOREIGN PATENT DOCUMENTS

0 606 832 A2	7/1994	European Pat. Off. .
WO 84/04664	12/1984	WIPO .
WO 93/19807	10/1993	WIPO .

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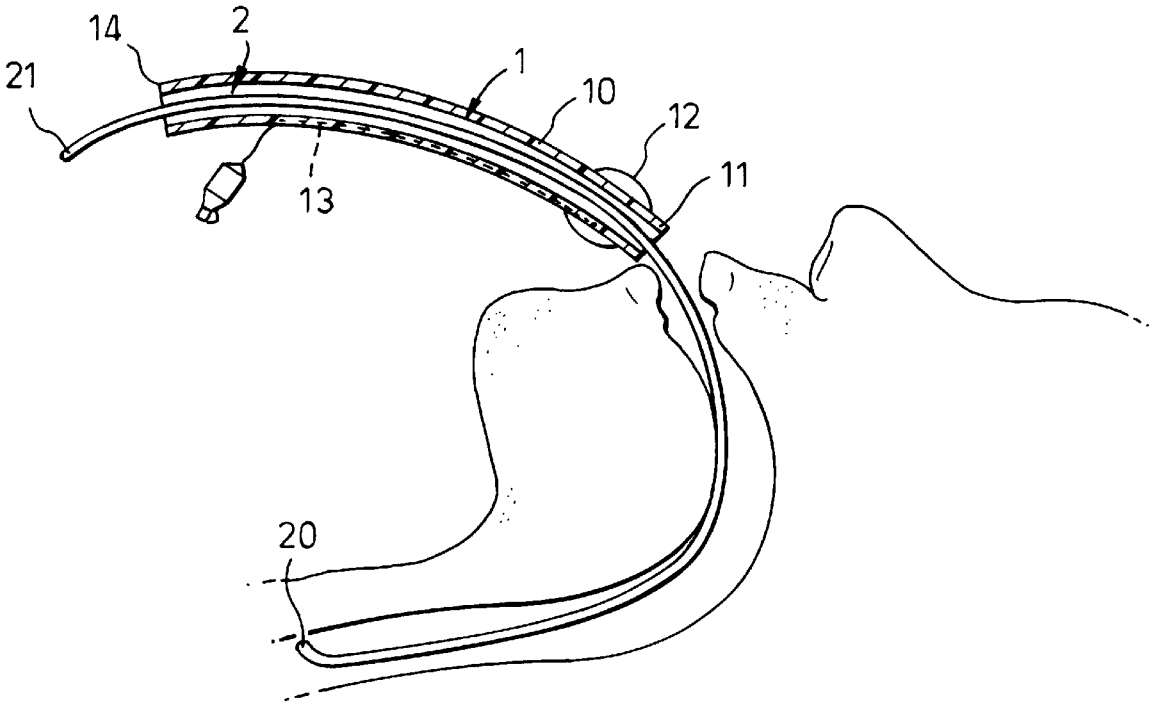
[57] **ABSTRACT**

An introducer, such as for an endotracheal tube, comprises a solid rod made of an aliphatic polyurethane containing about 20% barium sulphate. The hardness of the material is about 60 Shore D so that the introducer is resilient within a range of deformation and beyond this range it is bendable into a set shape that only resumes its original shape at a slower rate.

6 Claims, 2 Drawing Sheets