## United States Patent [19]

### Sugiyama et al.

### [54] BALLOON CATHETER

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- [73] Assignee: Terumo Kabushiki Kaisha, Tokyo, Japan
- [21] Appl. No.: 277,564
- [22] Filed: Nov. 29, 1988

### [30] Foreign Application Priority Data

Dec. 1, 1987 [JP] Japan ..... 62-303930

- [51] Int. Cl.<sup>5</sup> ..... A61M 25/10

- 604/282, 192–196; 128/344

### [45] Date of Patent: Feb. 19, 1991

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[57]

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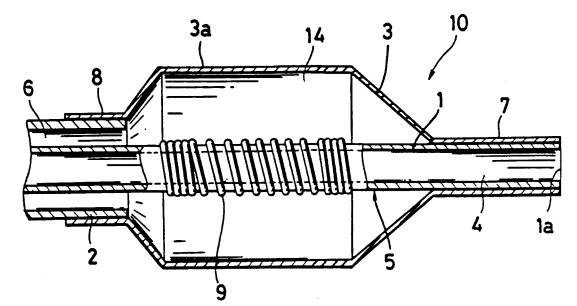
Primary Examiner-Stephen C. Pellegrino

Attorney, Agent, or Firm—Frishauf, Holtz, Goodman & Woodward

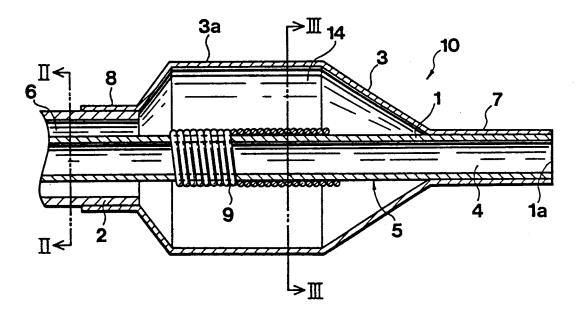
### ABSTRACT

There is provided a balloon catheter comprising a tubular body including at least one lumen, and a foldable balloon provided at a predetermined distal portion on the outer surface of said tubular body so that the balloon communicates with at least one lumen in said tubular body, wherein reinforcement is provided at a predetermined portion on the outer surface of said tubular body surrounded by said balloon. The reinforcement is preferably formed on an X-ray opague material and in the form of a coil.

### 13 Claims, 7 Drawing Sheets

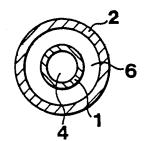


F | G.1

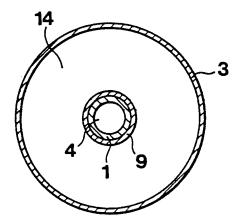


F | G.3

FIG.2

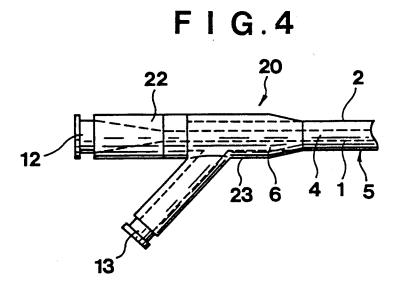


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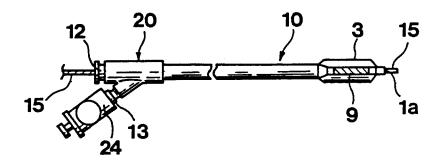


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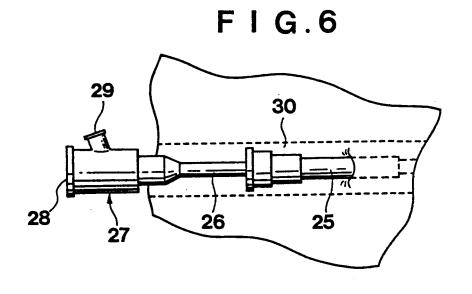
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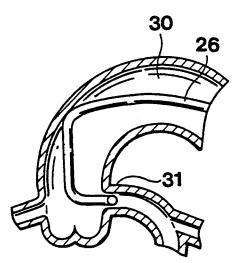


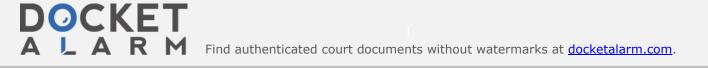


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F I G.7







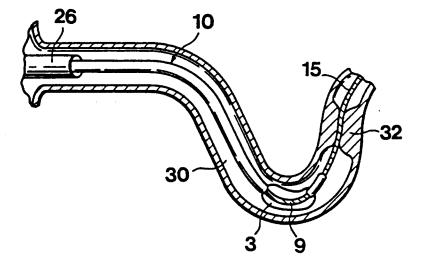
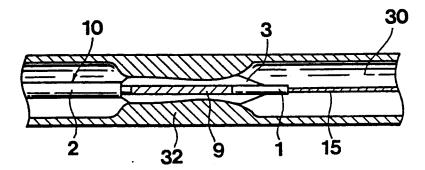


FIG.9



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