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United States Patent [19]
Berg et al.

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- [54] **GUIDE CATHETER HAVING SELECTED FLEXURAL MODULUS SEGMENTS**
- [75] Inventors: **Todd A. Berg**, Lino Lakes; **Jason A. Galdonik**, Bloomington, both of Minn.
- [73] Assignee: **SciMed Life Systems, Inc.**, Maple Grove, Minn.
- [*] Notice: This patent is subject to a terminal disclaimer.

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- [21] Appl. No.: **08/800,927**
- [22] Filed: **Feb. 13, 1997**

Related U.S. Application Data

- [63] Continuation-in-part of application No. 08/703,635, Aug. 27, 1996, which is a continuation-in-part of application No. 08/195,222, Feb. 14, 1994, Pat. No. 5,569,218.
- [51] **Int. Cl.⁶** **A61M 25/00**
- [52] **U.S. Cl.** **604/525; 604/527; 138/125**
- [58] **Field of Search** 604/264, 280, 604/281, 282; 600/433-435; 138/130-132, 125, 129, 144

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Primary Examiner—Ronald Stright, Jr.
Attorney, Agent, or Firm—Crompton, Seager & Tufte, LLC

[57] **ABSTRACT**

A guiding catheter for use in coronary angioplasty and other cardiovascular interventions which incorporates a plurality of segment of selected flexural modulus in the shaft of the device. The segments which have a different flexibility than the sections immediately proximal and distal to them, creating zones in the catheter shaft which are either more or less flexible than other zones of the shaft. The flexibility and length of the shaft in a given zone is then matched to its clinical function and role. A mid-shaft zone is significantly softer than a proximal shaft or distal secondary curve to better traverse the aortic arch shape without storing too much energy. A secondary zone section is designed to have maximum stiffness to provide optimum backup support and stability.

26 Claims, 15 Drawing Sheets

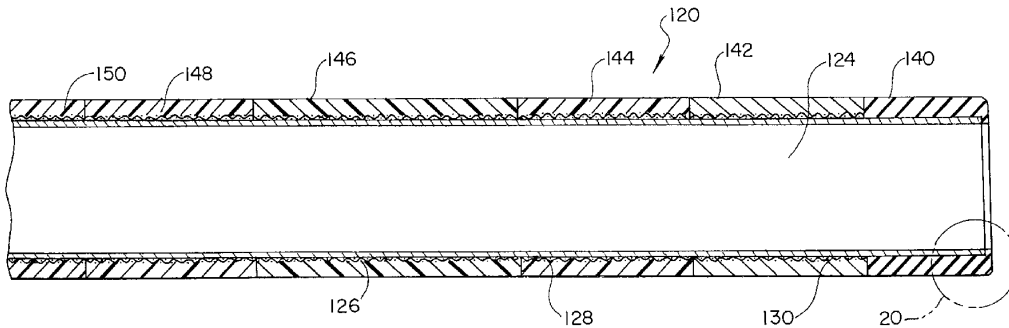


Fig. 1

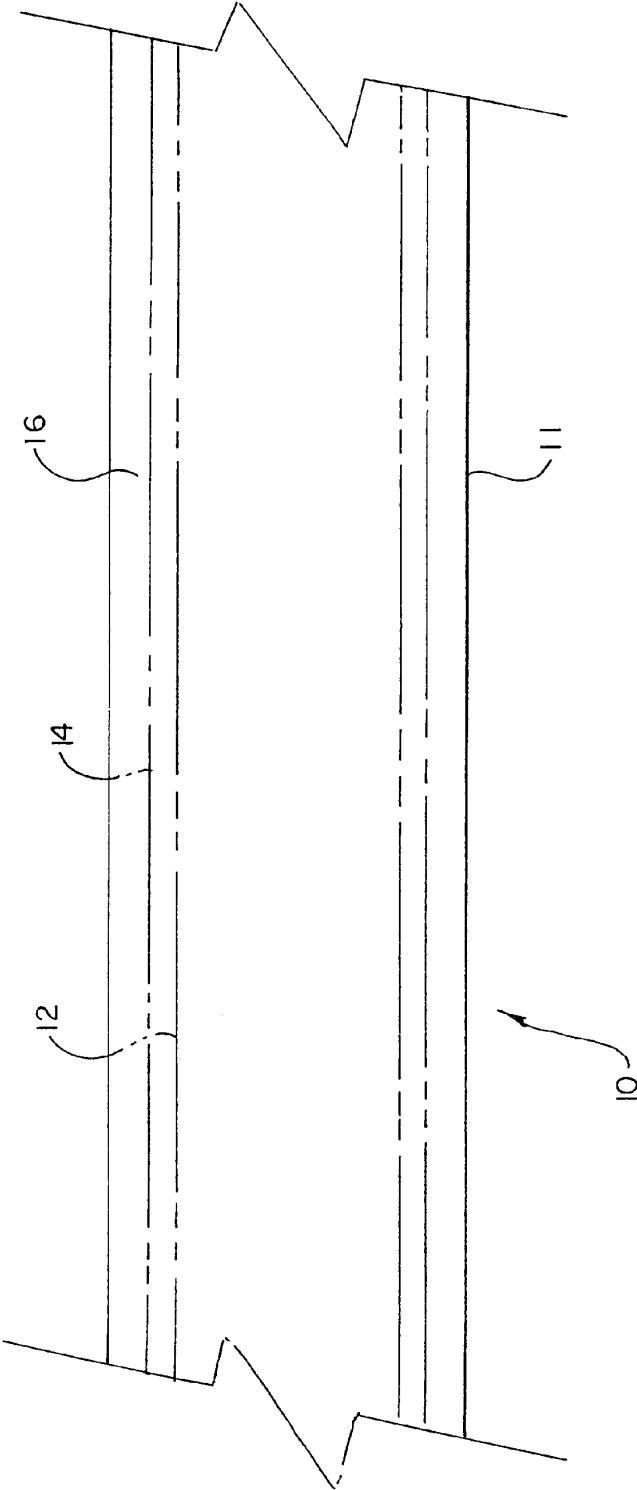


Fig. 2

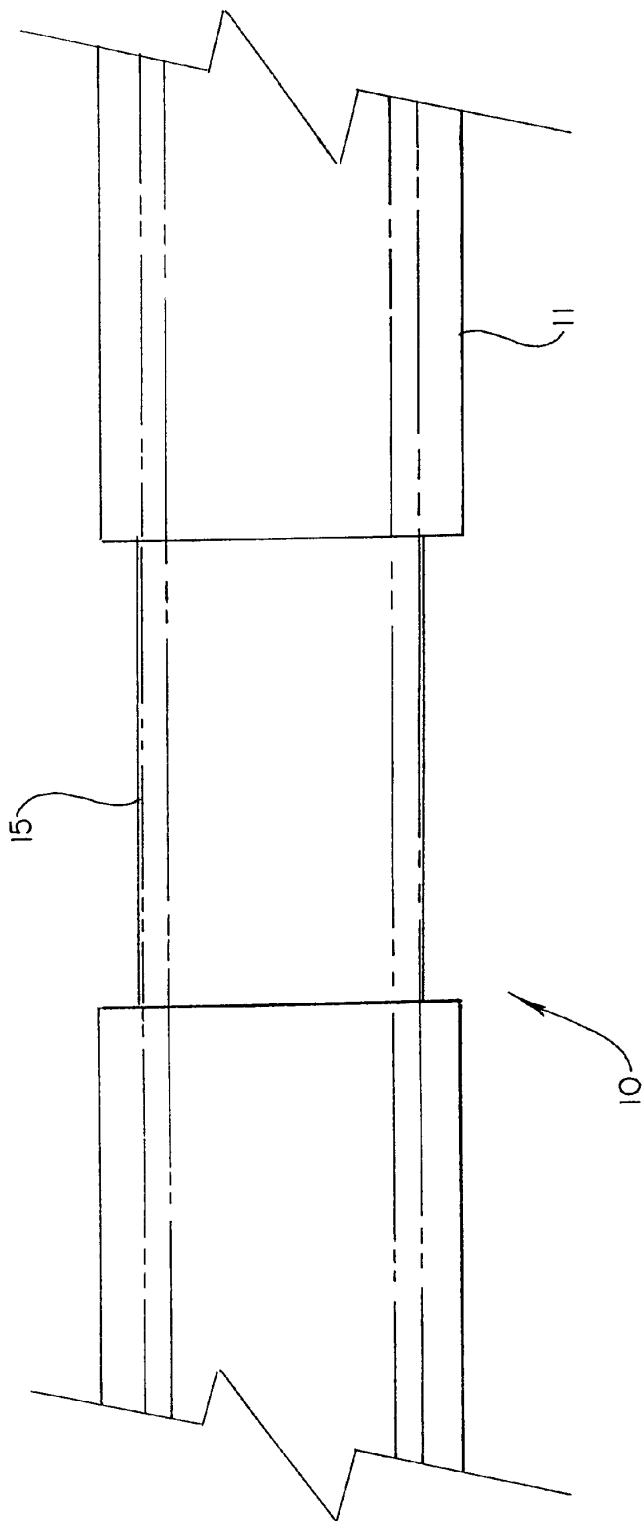
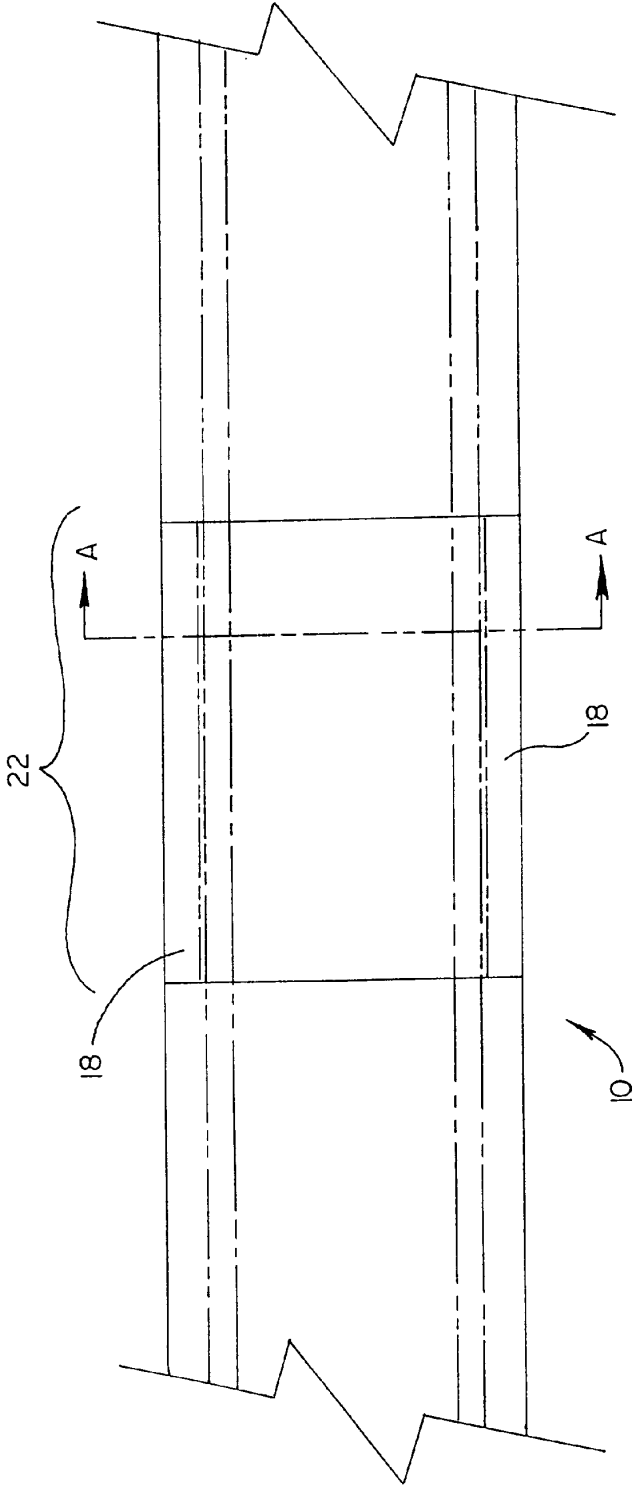
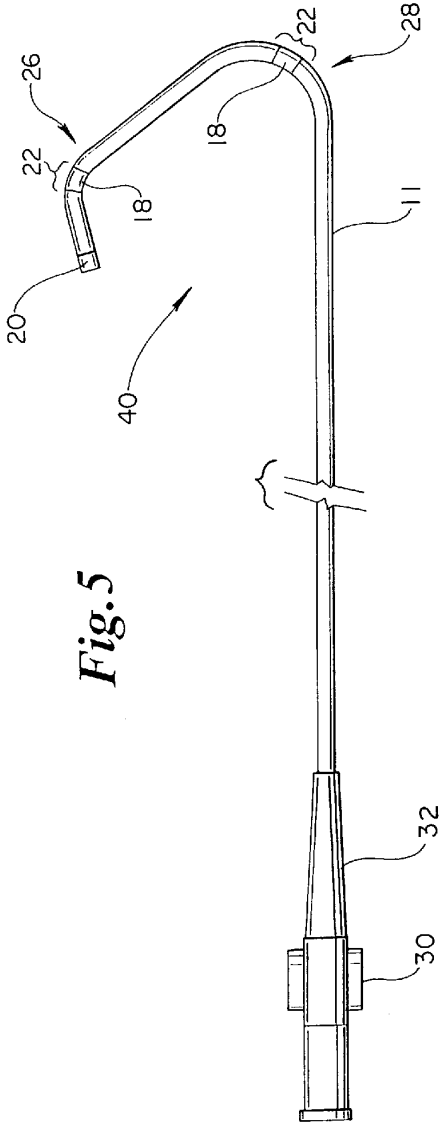
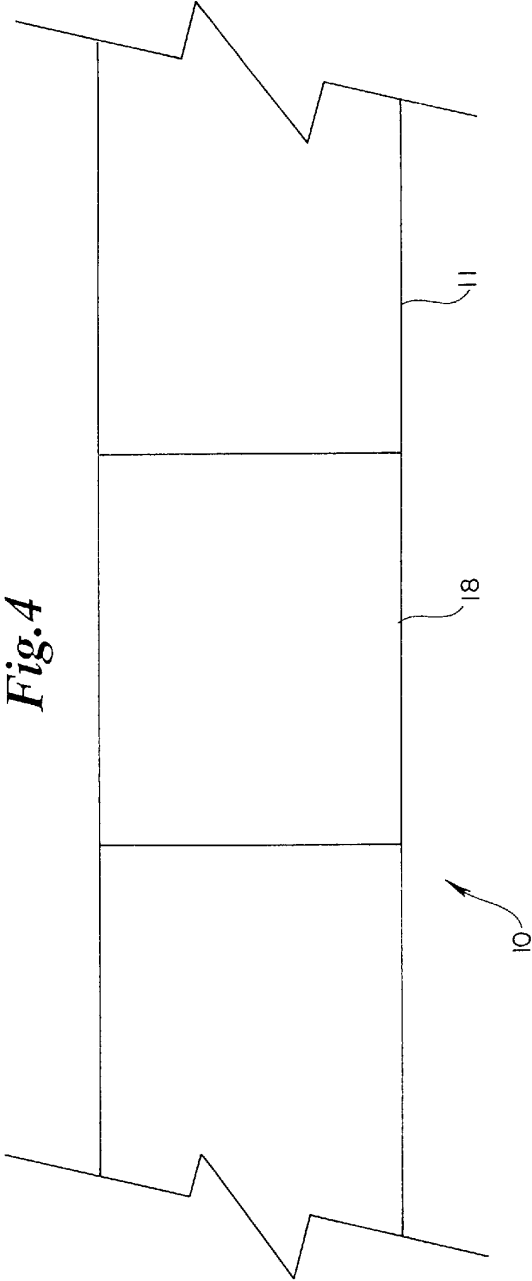


Fig. 3





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