



US0065952B2

(12) **United States Patent**
Forsberg

(10) **Patent No.:** **US 6,595,952 B2**
(45) **Date of Patent:** **Jul. 22, 2003**

- (54) **GUIDE CATHETER WITH BACKUP SUPPORT SYSTEM**
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- (73) Assignee: **SciMed Life Systems, Inc.**, Maple Grove, MN (US)
- (*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 66 days.

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- (21) Appl. No.: **09/754,713**
- (22) Filed: **Jan. 4, 2001**
- (65) **Prior Publication Data**

US 2002/0087143 A1 Jul. 4, 2002

- (51) **Int. Cl.⁷** **A61M 31/00**; A61M 29/00; A61M 25/00
- (52) **U.S. Cl.** **604/93.01**; 604/104; 604/525
- (58) **Field of Search** 604/6.16, 507, 604/508, 509, 93.01, 96.01, 104, 523, 524, 525, 532; 606/194

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(57) **ABSTRACT**

An intravascular catheter (e.g. guide or diagnostic catheter) that includes a specially designed distal tip to provide enhanced back-up support. The distal tip (e.g., distal 2 cm of the shaft) has a lateral extent or profile (e.g., wave shape) that is larger than the lumen of the coronary artery adjacent the ostium when the tip is in a relaxed state. The over-sized lateral extent causes the distal tip to frictionally engage the coronary artery and anchor within the ostium. The lateral extent or profile of the distal tip may be decreased by inserting a guide wire therethrough to facilitate insertion of the distal tip into the ostium. After the distal tip is inserted into the ostium, the guide wire may be removed to allow the lateral extent of the distal tip to increase and thereby anchor the distal tip in the ostium.

15 Claims, 4 Drawing Sheets

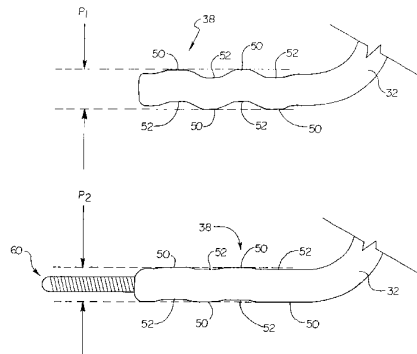


Fig. 1

PRIOR ART

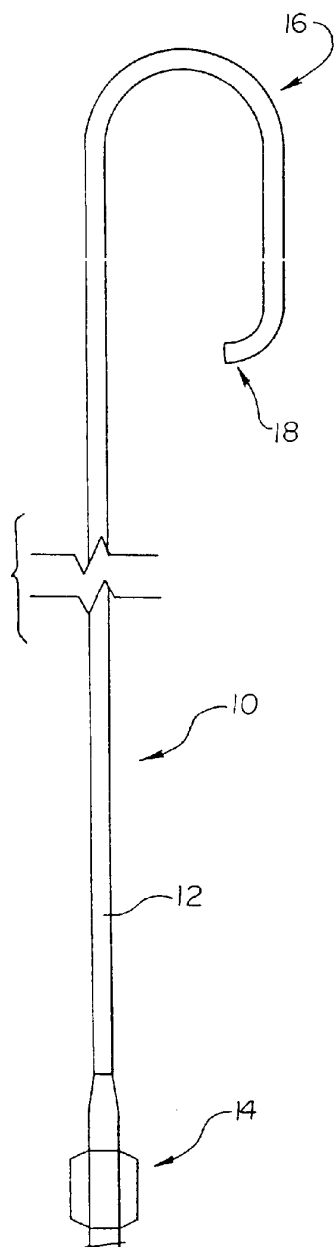


Fig. 2

PRIOR ART

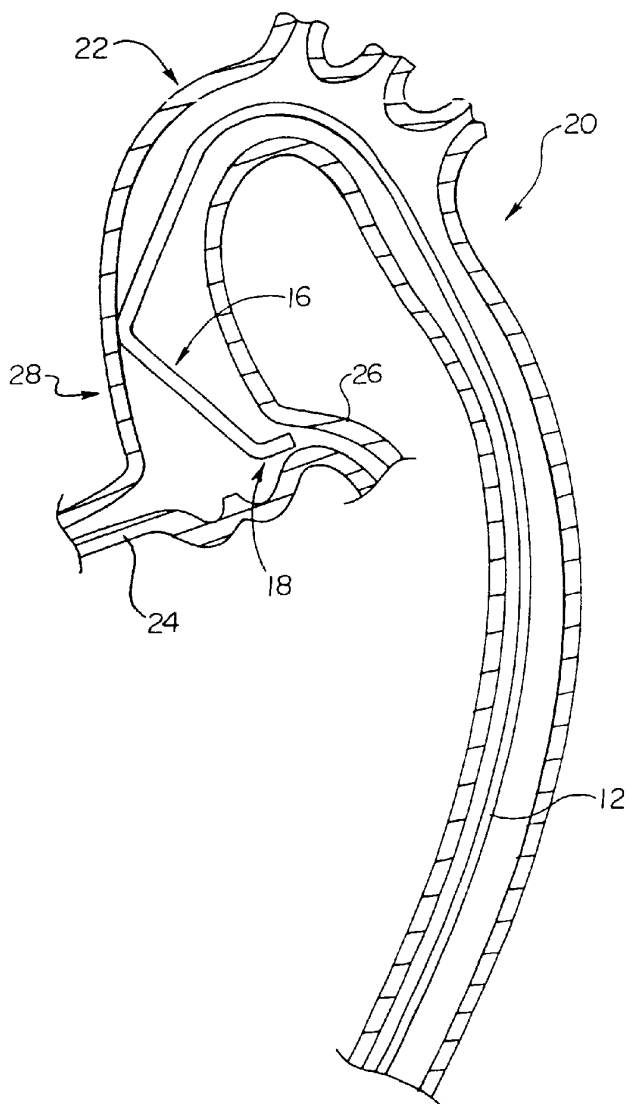


Fig. 3

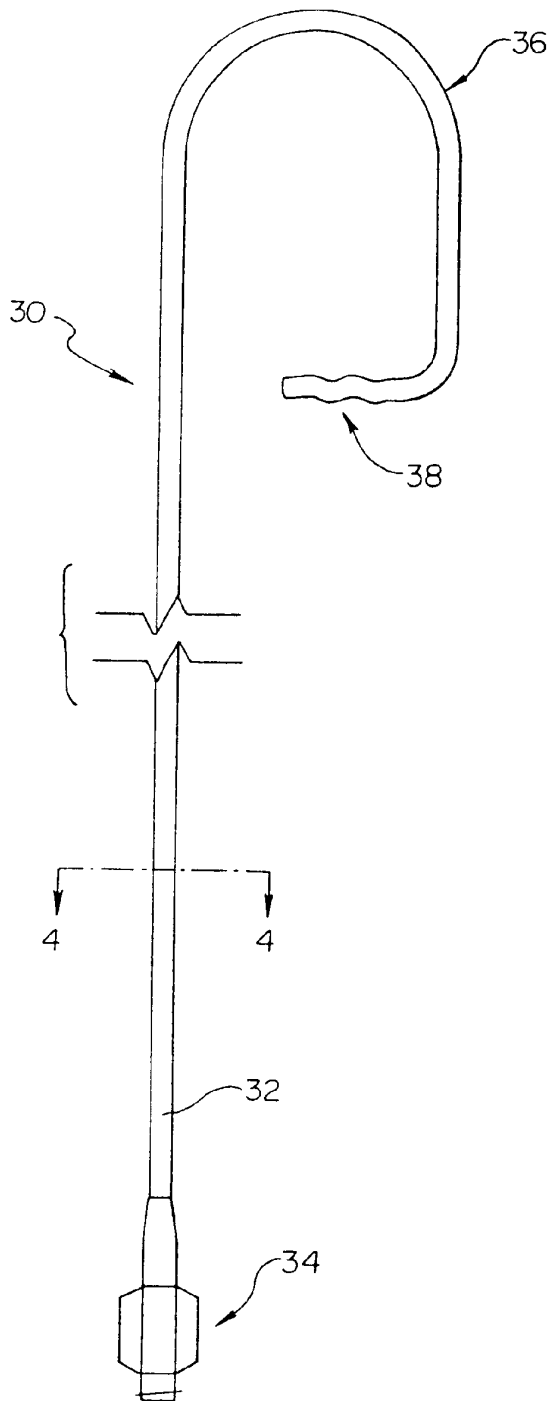


Fig. 4

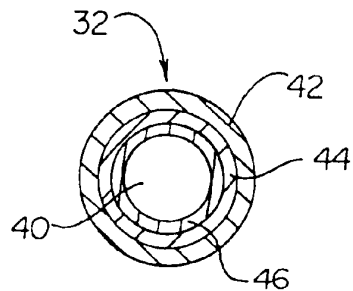


Fig. 5A

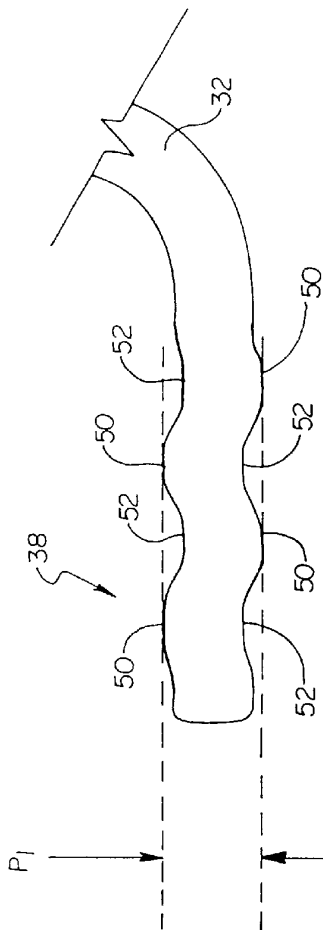


Fig. 5B

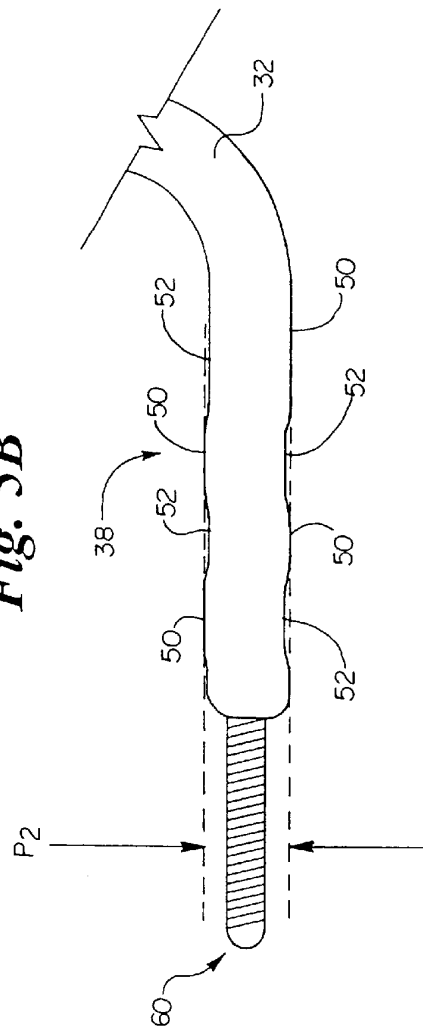
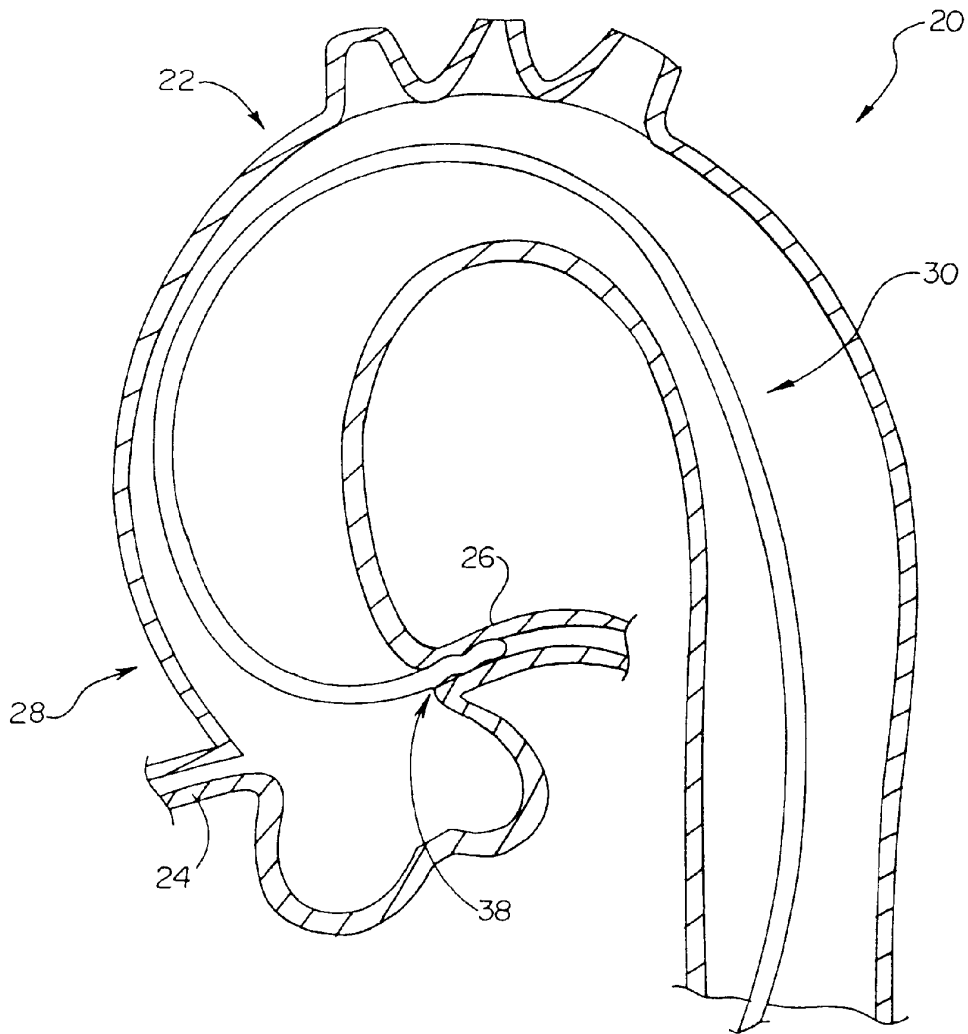


Fig. 6



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