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United States Patent [19]

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Klein et al.

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- [54] **METHOD AND APPARATUS FOR INTRALUMINAL PROSTHESIS DELIVERY**
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- [73] Assignee: **LocalMed, Inc.**, Palo Alto, Calif.
- [21] Appl. No.: **704,801**
- [22] Filed: **Aug. 26, 1996**

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Related U.S. Application Data

- [60] Provisional application No. 60/002,847 Aug. 28, 1995.
- [51] Int. Cl.⁶ **A61F 11/00**
- [52] U.S. Cl. **606/108; 606/195; 606/198**
- [58] Field of Search 606/108, 191, 606/192, 190, 195, 194

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Assistant Examiner—Justine R. Yu
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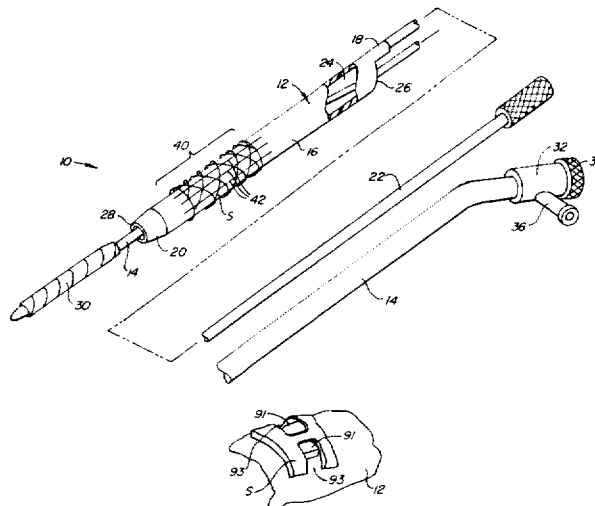
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[57] ABSTRACT

A catheter for use in combination with a balloon angioplasty catheter for delivering stents and other intraluminal prostheses comprises a tubular catheter body having a radially expandible portion. The stent is disposed over the radially expandible portion, and structure is provided for retaining the stent on the tubular body prior to deployment. The retaining structure may be active, i.e., requiring the user to retract retaining elements, such as axial members, sheaths, or the like. Alternatively, the retaining structure may be passive, wherein balloon expansion results in release of the prosthesis from the retaining structure. Particular methods for fluoroscopically positioning stents using such delivery catheters, for delivering two or more stents using such delivery catheters, and for overexpanding the ends of the stents for anchoring them in place, are also described.

23 Claims, 22 Drawing Sheets



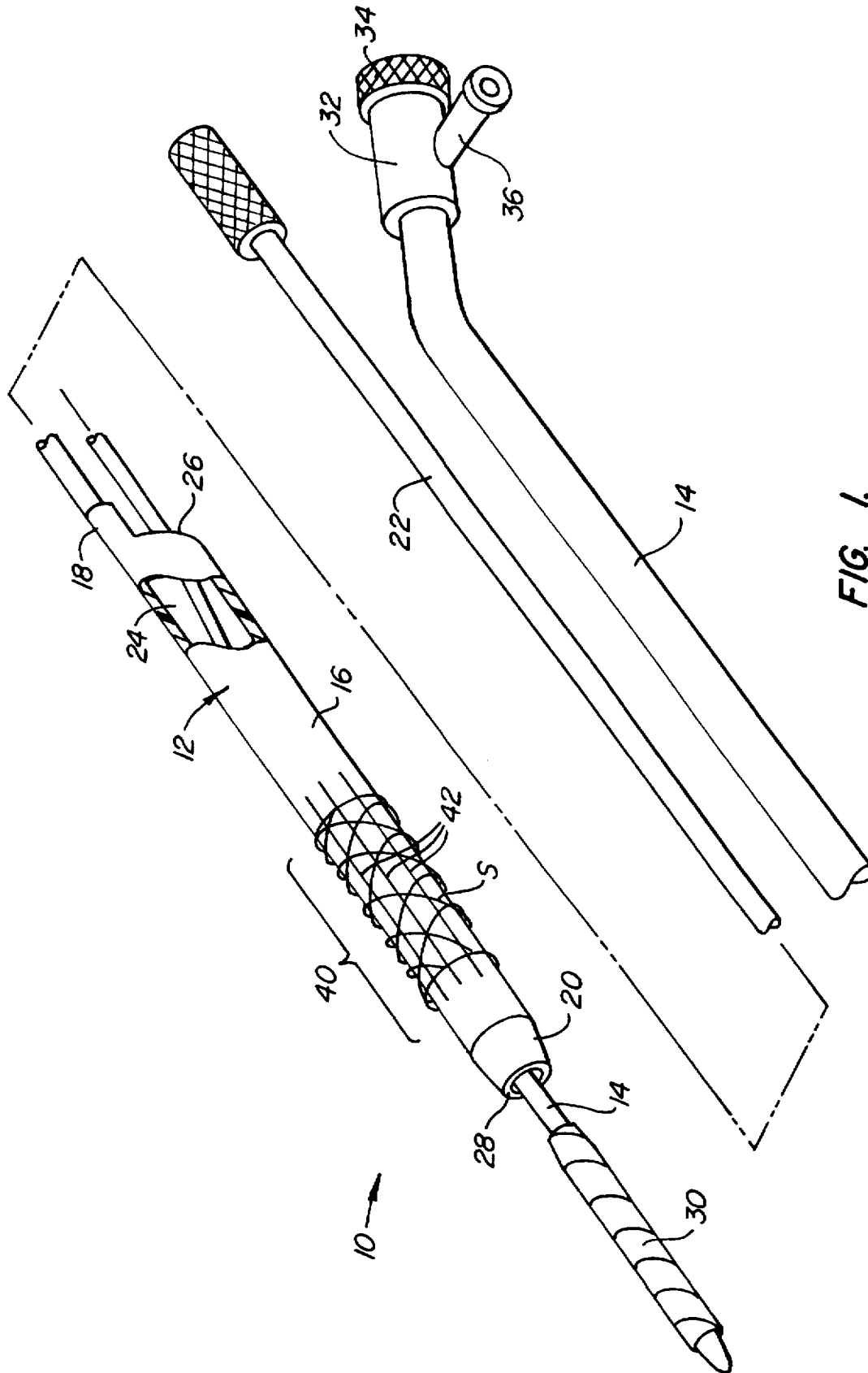
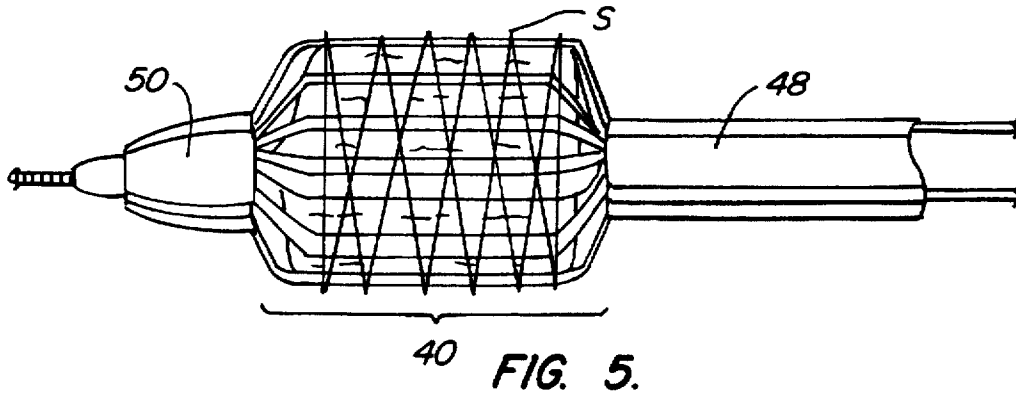
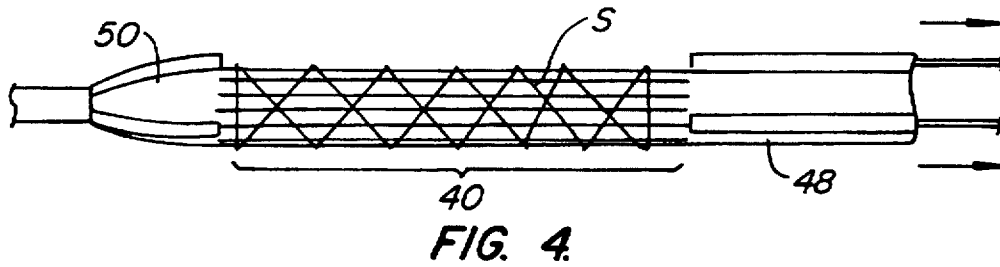
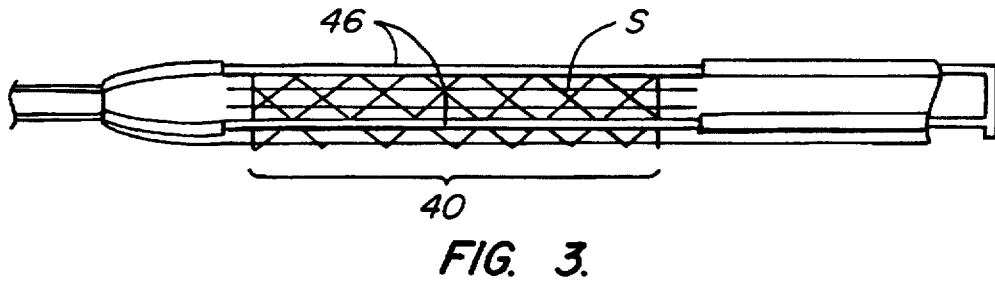
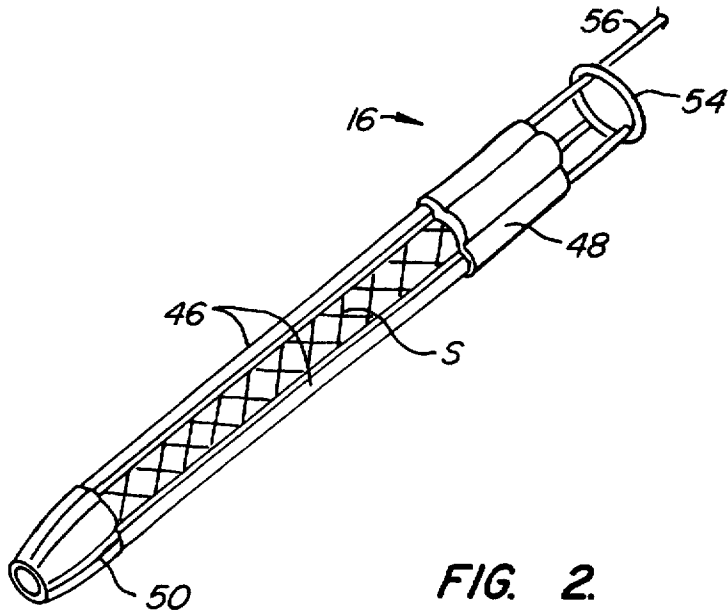


FIG. 1.



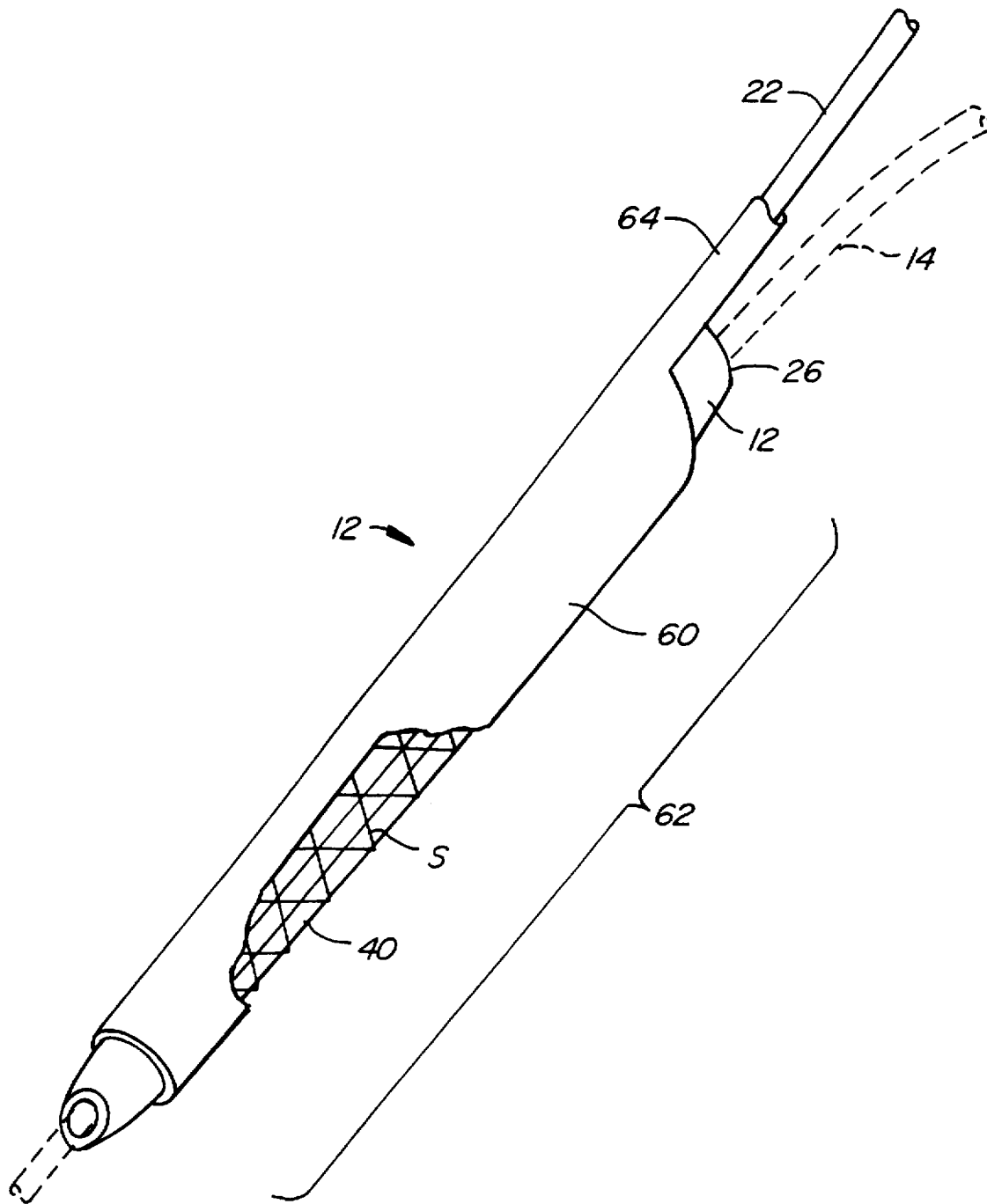


FIG. 6.

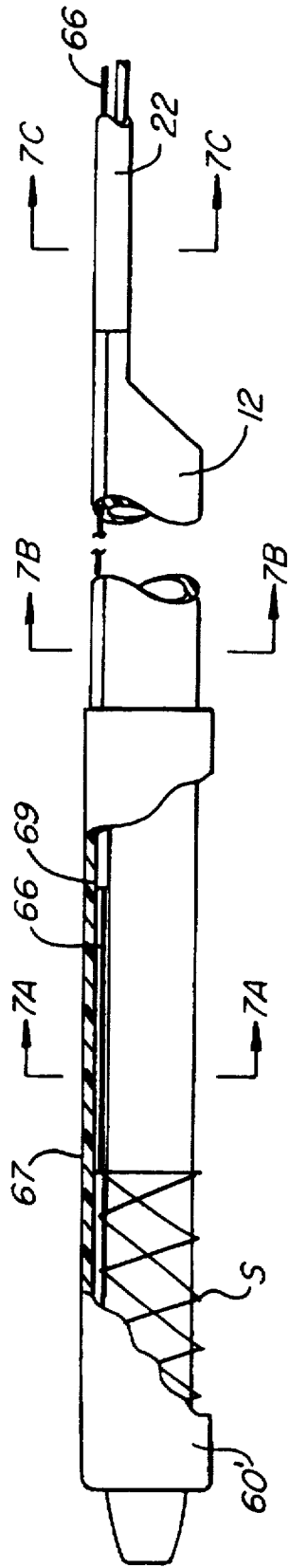


FIG. 7.

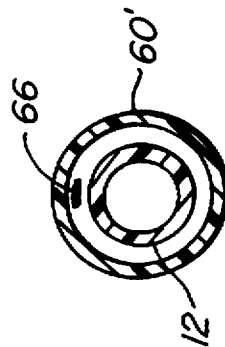


FIG. 7A.

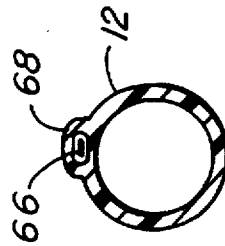


FIG. 7B.



FIG. 7C.

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