

[54] **INTEGRATED CATHETER SYSTEM FOR BALLOON ANGIOPLASTY AND STENT DELIVERY**

[76] Inventors: **Robert E. Fischell**, 14600 Viburnum Dr., Dayton, Md. 21036; **Tim A. Fischell**, 1018 Chancery La., Nashville, Tenn. 37215; **David R. Fischell**, 71 Riverlawn Dr., Fair Haven, N.J. 07704

5,192,297	3/1993	Hull .....	606/195
5,266,073	11/1993	Hall .....	623/1
5,344,426	9/1994	Lau et al. ....	606/198
5,456,694	10/1995	Marin et al. ....	606/198
5,484,444	1/1996	Braunschweiler et al. ....	606/108
5,507,768	4/1996	Lau et al. ....	606/198

*Primary Examiner*—Robert A. Hafer  
*Assistant Examiner*—Chalin Smith  
*Attorney, Agent, or Firm*—Morton J. Rosenberg; David I. Klein

[21] Appl. No.: 458,471

[22] Filed: Jun. 2, 1995

[51] Int. Cl.<sup>6</sup> ..... A61M 29/00

[52] U.S. Cl. .... 604/96; 604/104; 606/108; 606/194

[58] Field of Search ..... 604/96, 102, 104, 604/160, 161, 171, 264, 280; 606/195, 191, 198, 200, 108, 194; 623/1, 12, 11

[56] **References Cited**

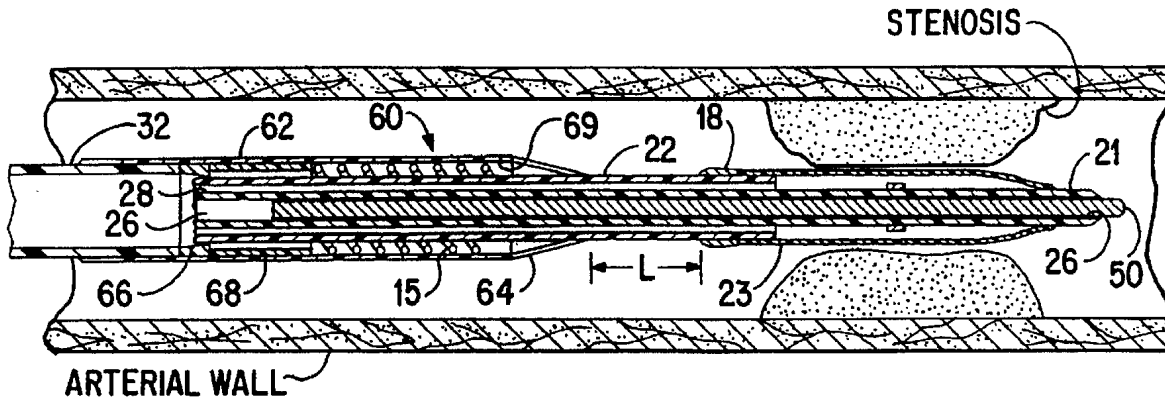
U.S. PATENT DOCUMENTS

4,955,895	9/1990	Sugiyama .....	606/194
4,969,890	11/1990	Sugita et al. ....	606/192
5,019,090	5/1991	Pinchuk .....	606/194
5,092,877	3/1992	Pinchuk .....	623/1

[57] **ABSTRACT**

This invention is directed to an integrated catheter system (60) including a stent catheter (65) and a balloon angioplasty catheter (20). The balloon angioplasty catheter (20) has an inflatable balloon (23) mounted near the catheter's distal end which is initially used for dilation of a vessel at a low balloon pressure to partially inflate the balloon (23). The stent catheter (65) contains a stent (15) within a stent containment cavity (69) and the stent (15) is displaced over the balloon (23). The stent (15) is held in place over the partially inflated balloon (23) and an outer tube (62) of the stent catheter (65) is pulled back. The stent (15) is deployed and the balloon (23) is reinflated to a higher pressure to embed the stent (15) into the wall of the vessel.

15 Claims, 9 Drawing Sheets



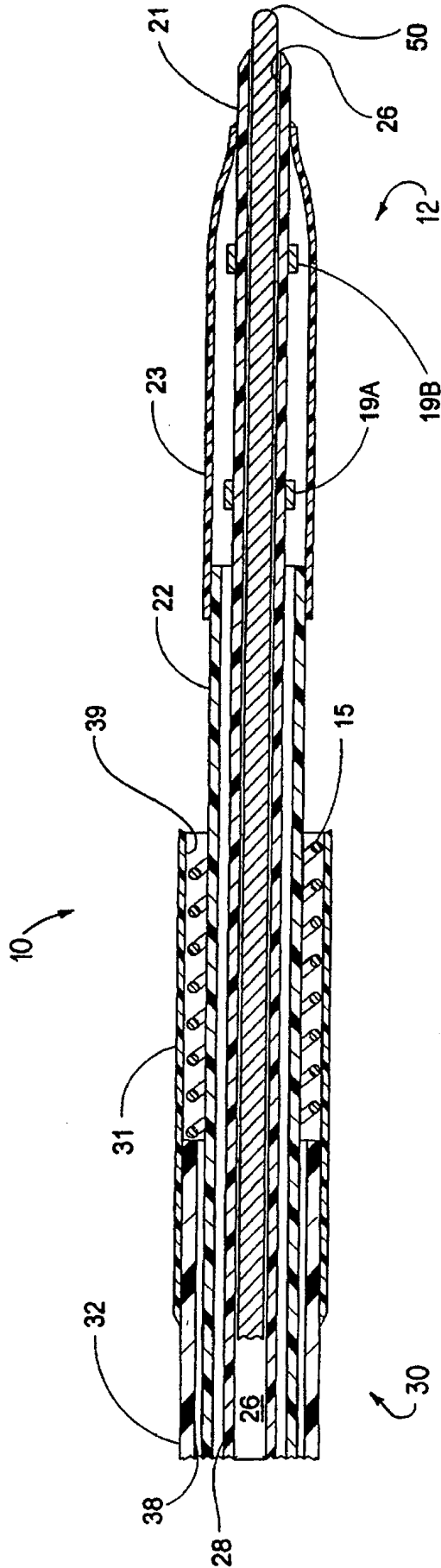


FIG. 1

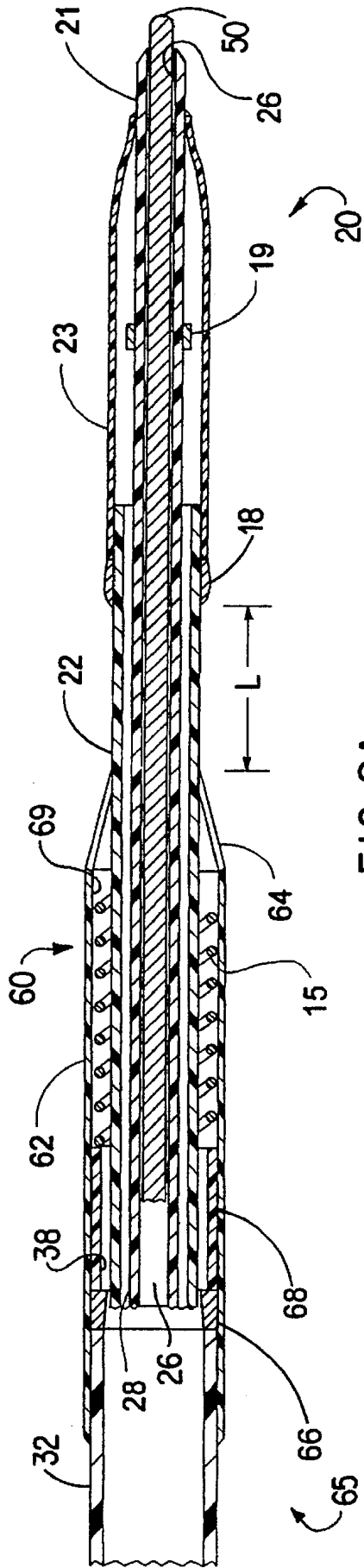


FIG. 2A

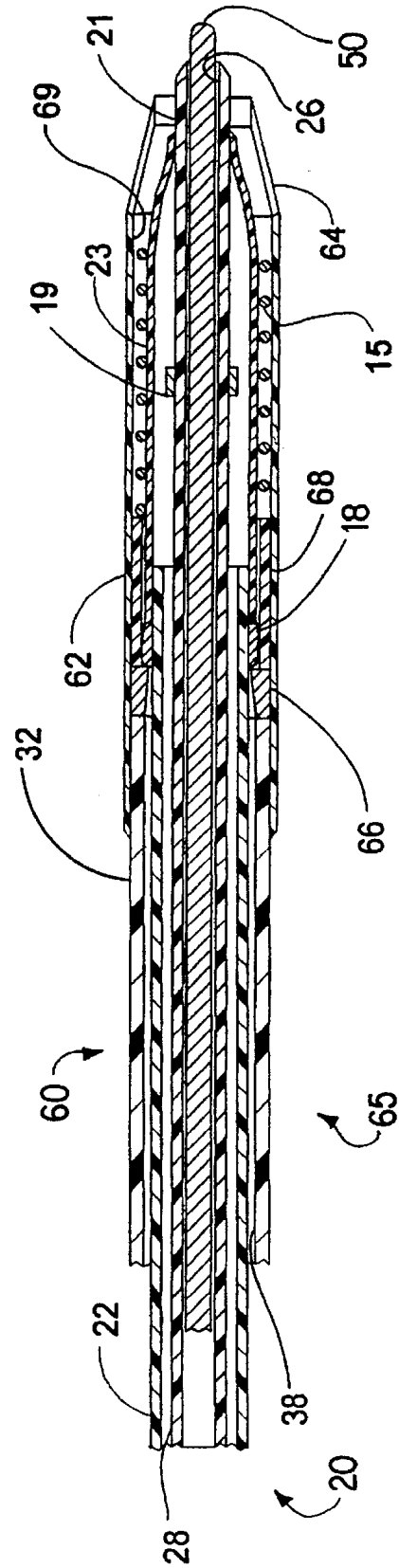


FIG. 2B

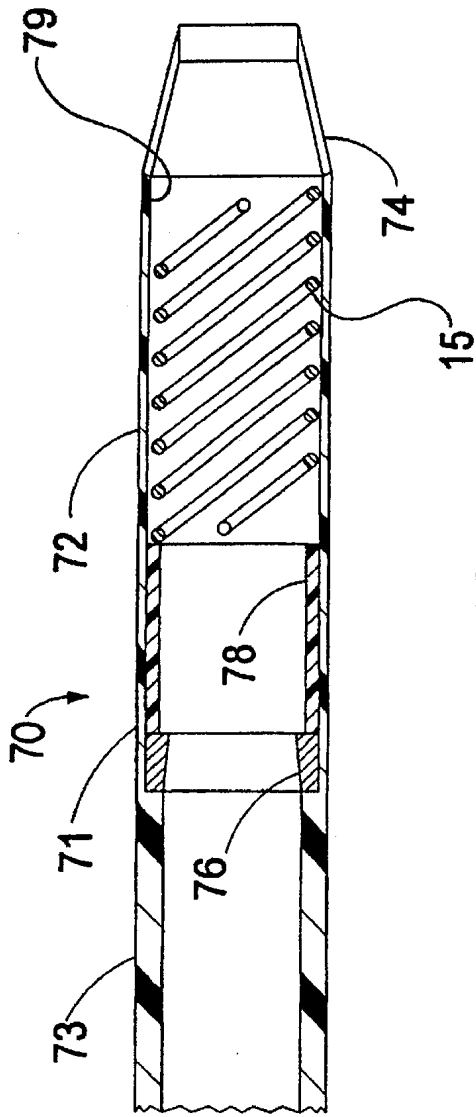


FIG. 3

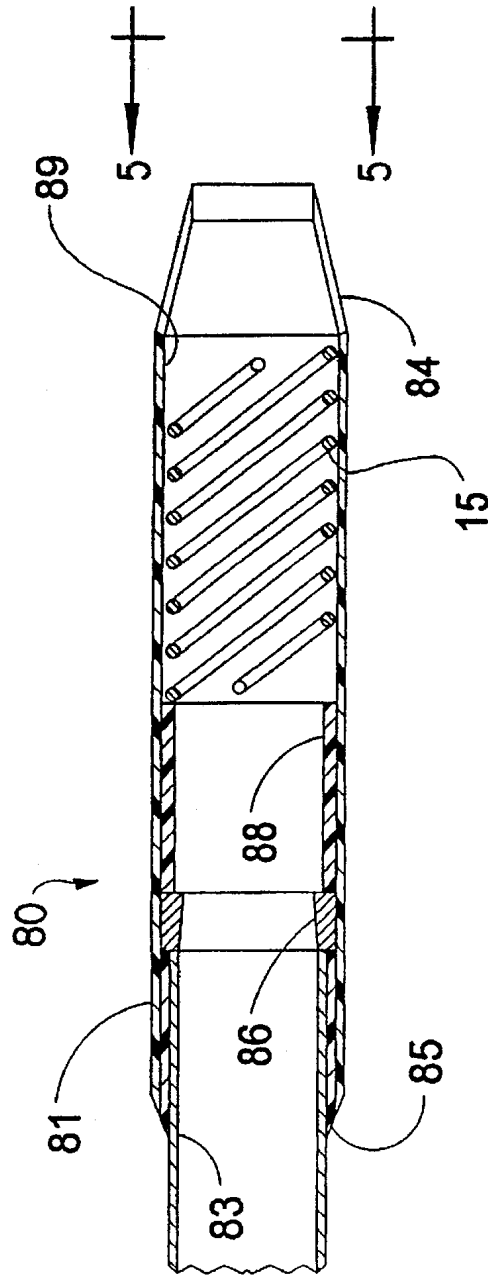


FIG. 4

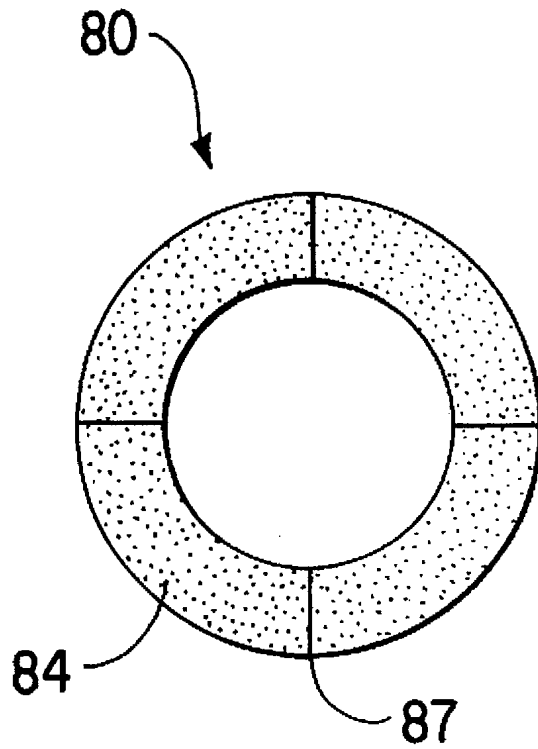


FIG. 5

# Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

## Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

## API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

## LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

## FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

## E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.