

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

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[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

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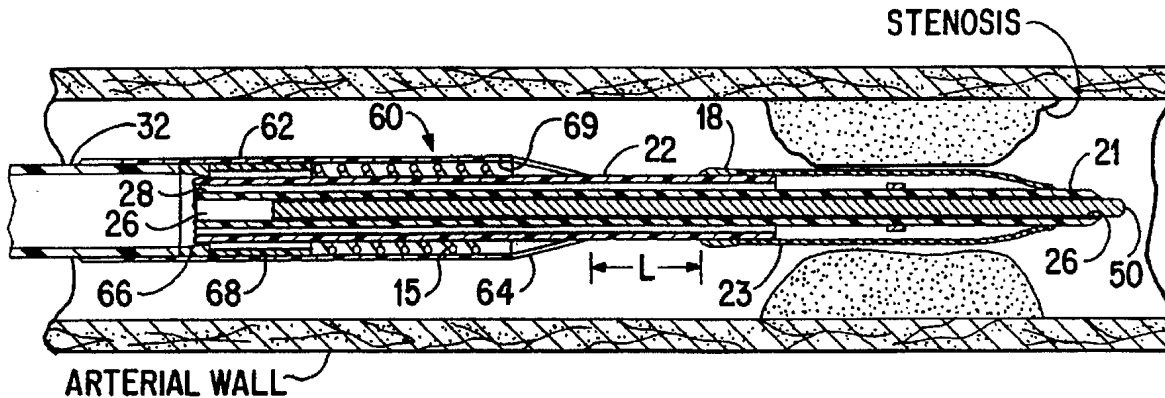
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[57] **ABSTRACT**

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



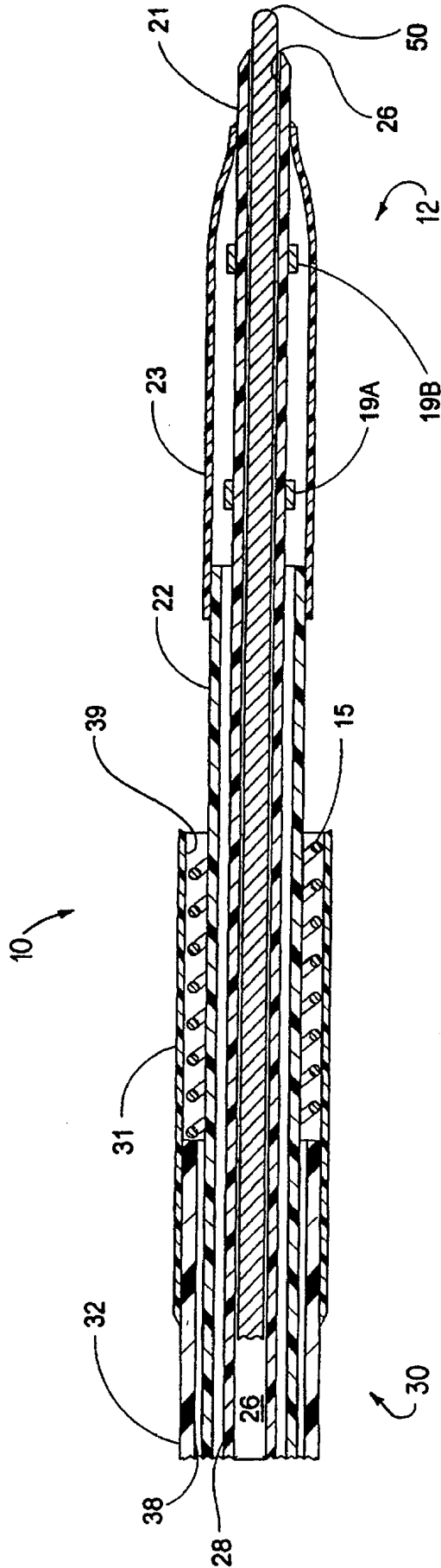


FIG. 1

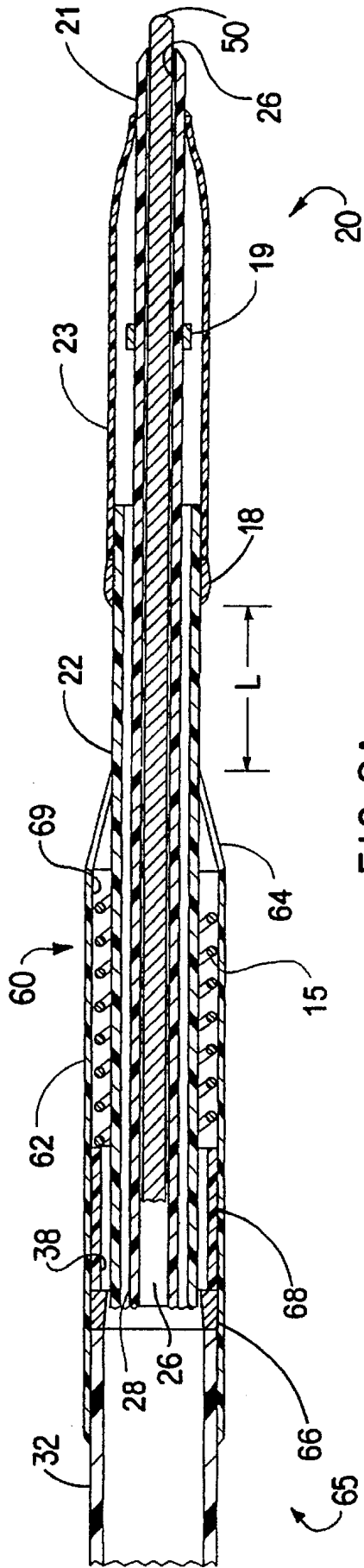


FIG. 2A

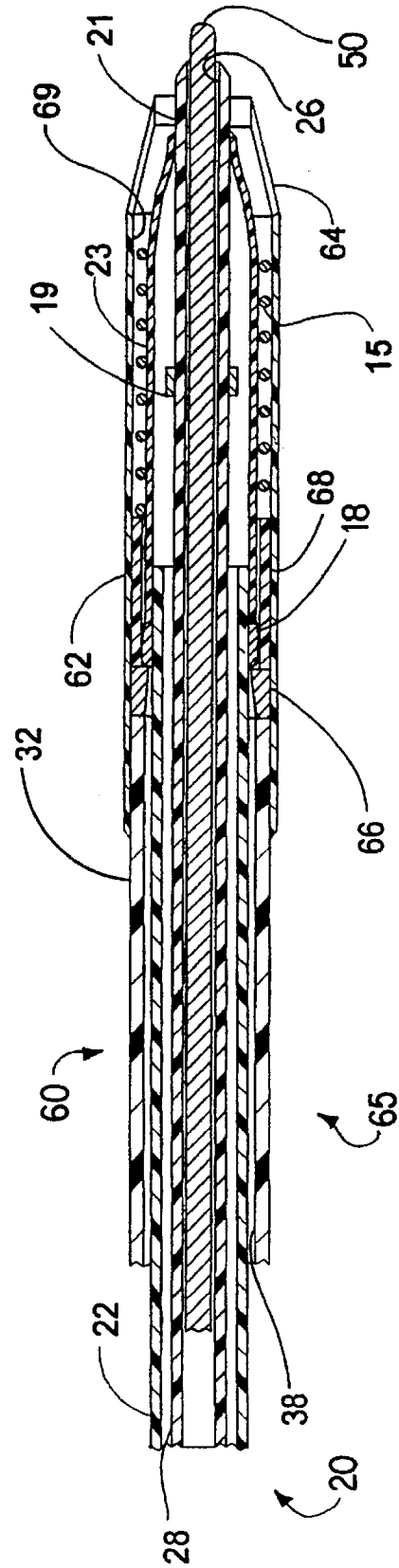


FIG. 2B

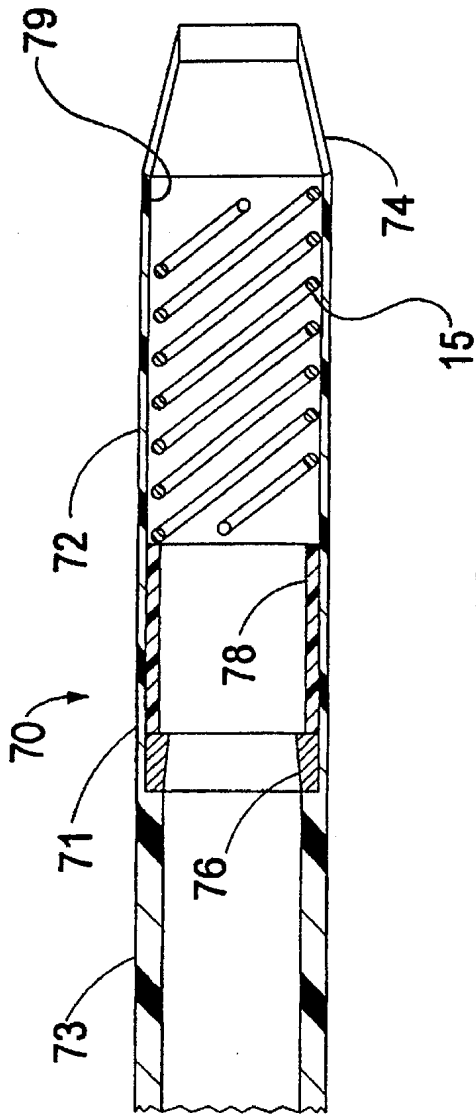


FIG. 3

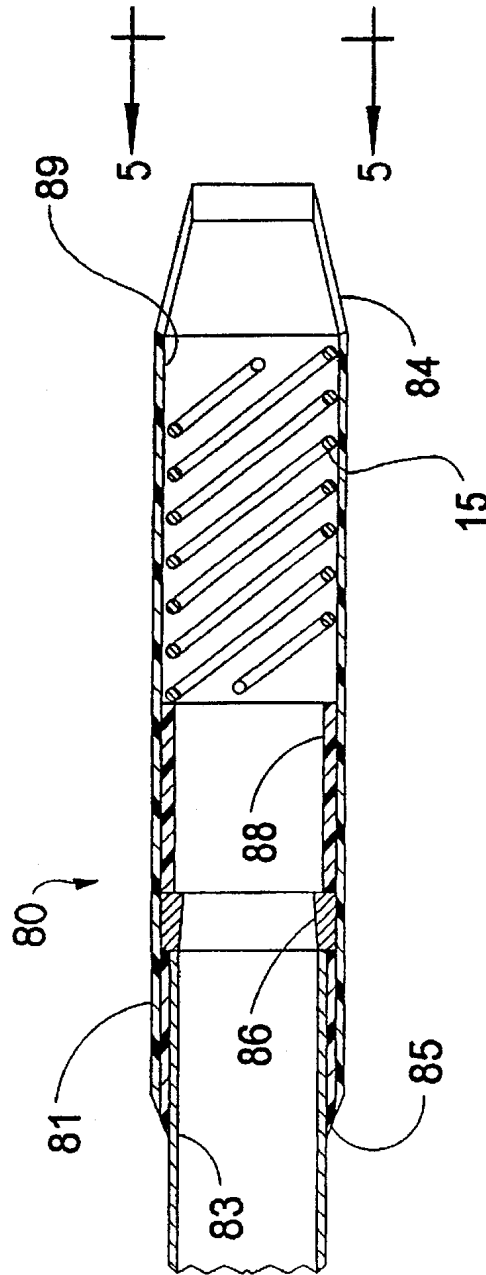


FIG. 4

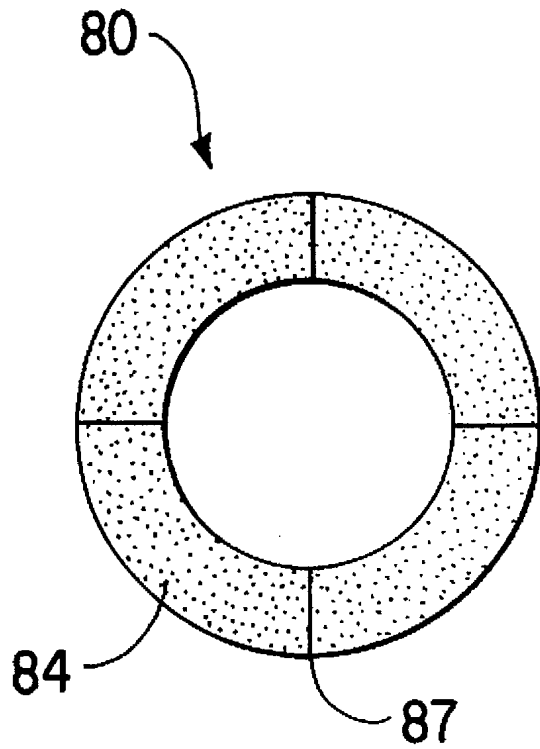


FIG. 5

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