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**United States Patent** [19]**Layne**[11] **Patent Number:** **6,096,027**[45] **Date of Patent:** **Aug. 1, 2000**[54] **BAG ENCLOSED STENT LOADING APPARATUS**[75] Inventor: **Richard Layne**, Phoenix, Ariz.[73] Assignee: **Impra, Inc., a subsidiary of C.R. Bard, Inc.**, Tempe, Ariz.[21] Appl. No.: **09/310,763**[22] Filed: **May 12, 1999****Related U.S. Application Data**

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[51] **Int. Cl.<sup>7</sup>** ..... **A61B 17/00**[52] **U.S. Cl.** ..... **606/1; 606/108; 606/198**[58] **Field of Search** ..... 606/1, 108, 106,  
606/109, 192, 194, 195, 198, 200, 209;  
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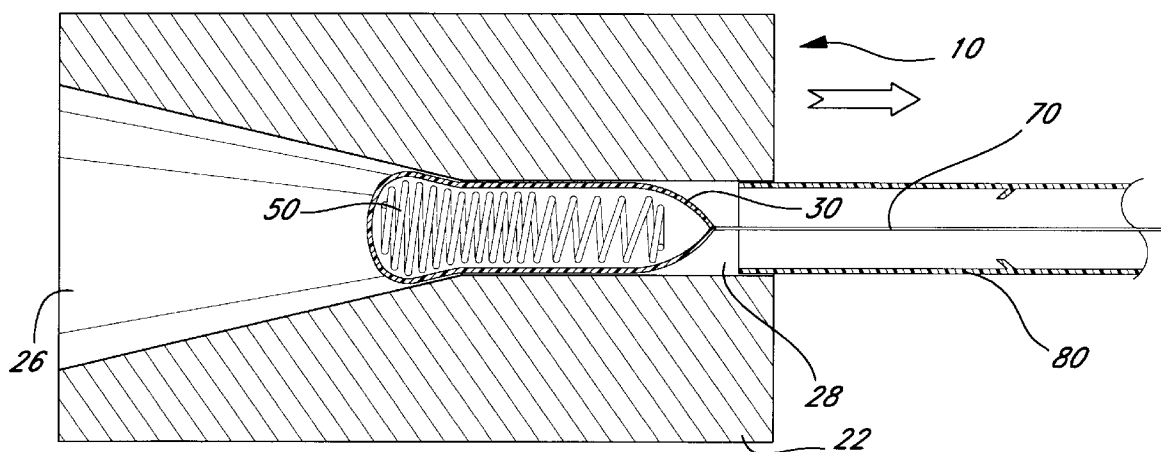
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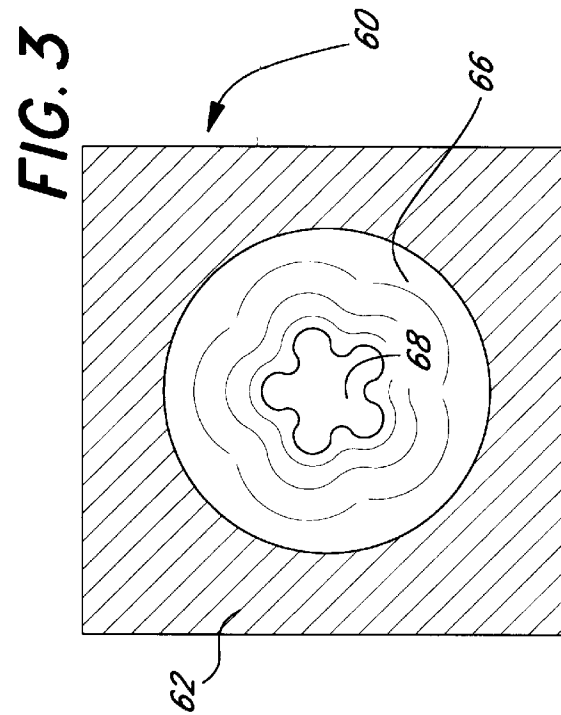
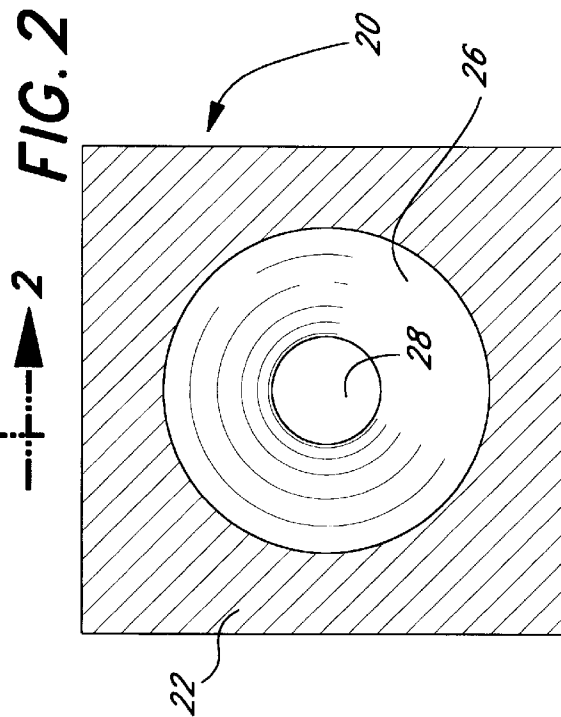
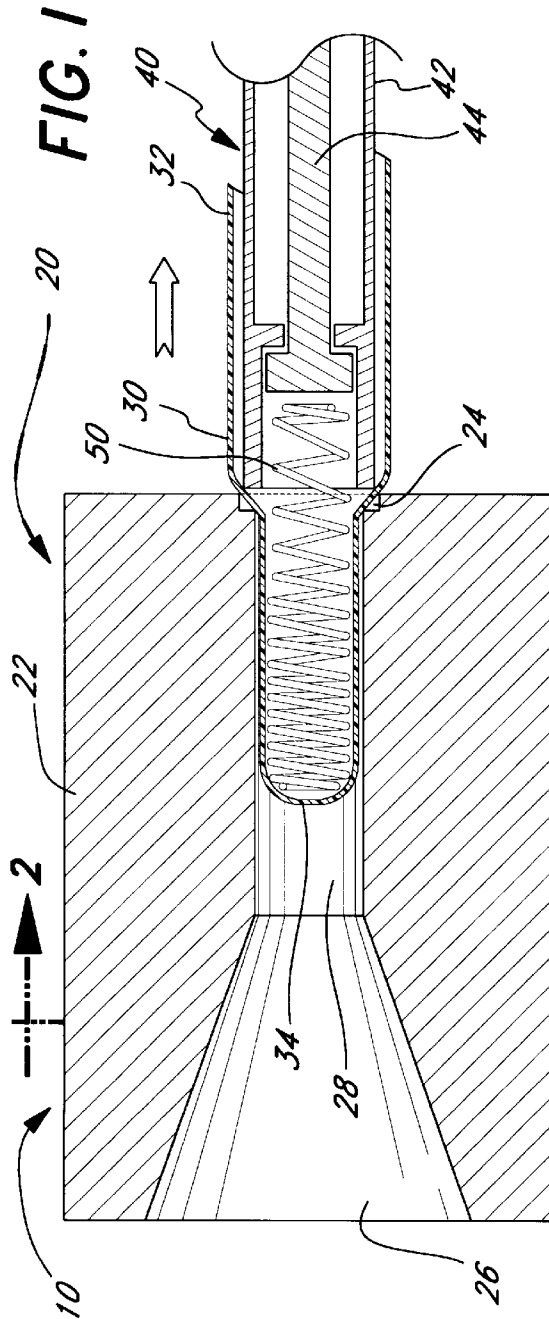
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*Primary Examiner*—Jeffrey A. Smith*Assistant Examiner*—Eduardo C. Robert*Attorney, Agent, or Firm*—Graham & James LLP[57] **ABSTRACT**

An apparatus for loading a stent onto or into a catheter. A flexible sterile sleeve is provided to encase the stent as it is pulled through a loading device. The loading device is a simple design utilizing a tapered passageway. The passageway has first diameter at a proximal end which tapers to a second diameter, forming a funnel. The passageway continues at the second diameter forming a tube. The sleeved stent is pulled through the loading device from the proximal end to the distal end, smoothly compressing the stent. Depending on the type of stent and catheter being used, the stent is either crimped onto the catheter as it is pulled through the funnel, or is loaded into a catheter positioned at the distal end of the loading device. The sleeve acts to minimize the frictional forces to which the stent is subjected and to eliminate the longitudinal force that the stent would be subjected to if pushed or pulled directly. The sleeve may be close-ended to provide an additional sterility barrier about the stent.

**15 Claims, 4 Drawing Sheets****Edwards Lifesciences v. Boston Scientific****U.S. Patent No. 6,915,560****IPR2017-00444 EX. 2028**



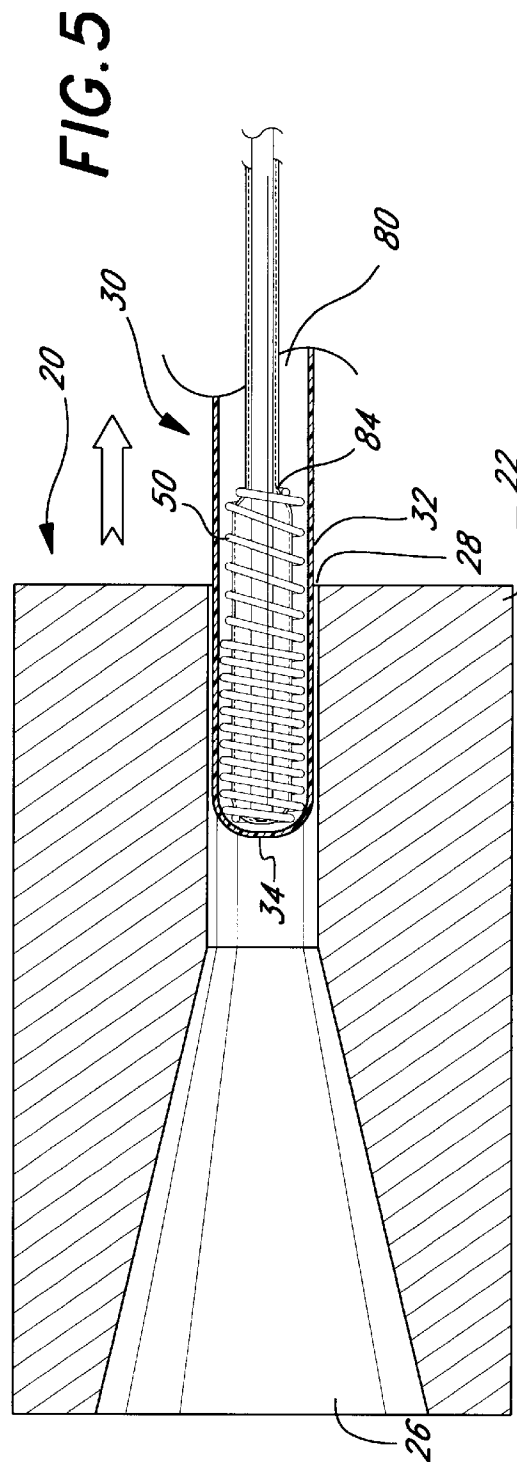
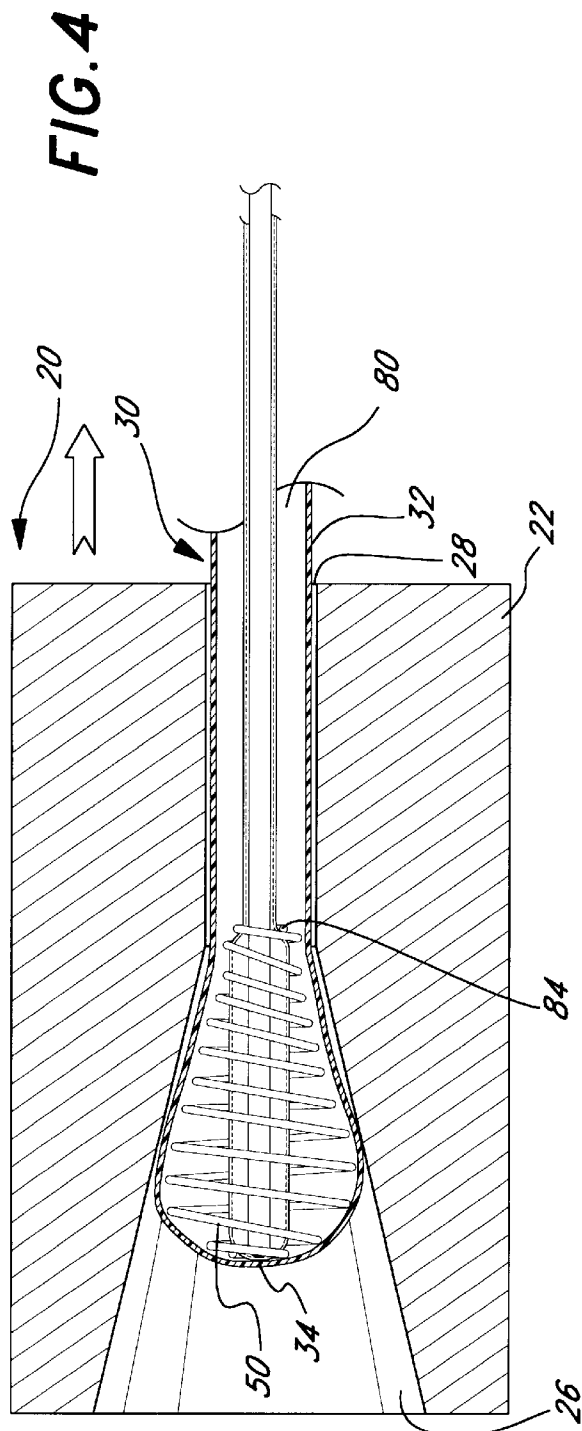
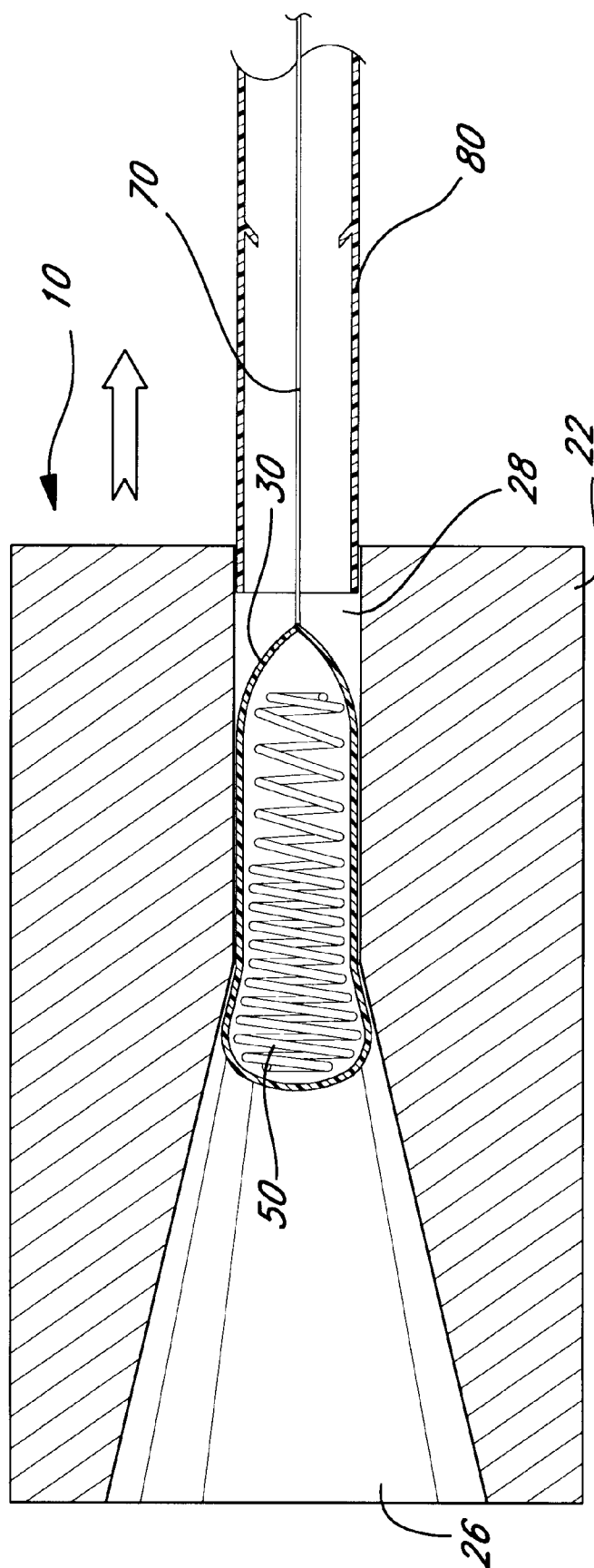
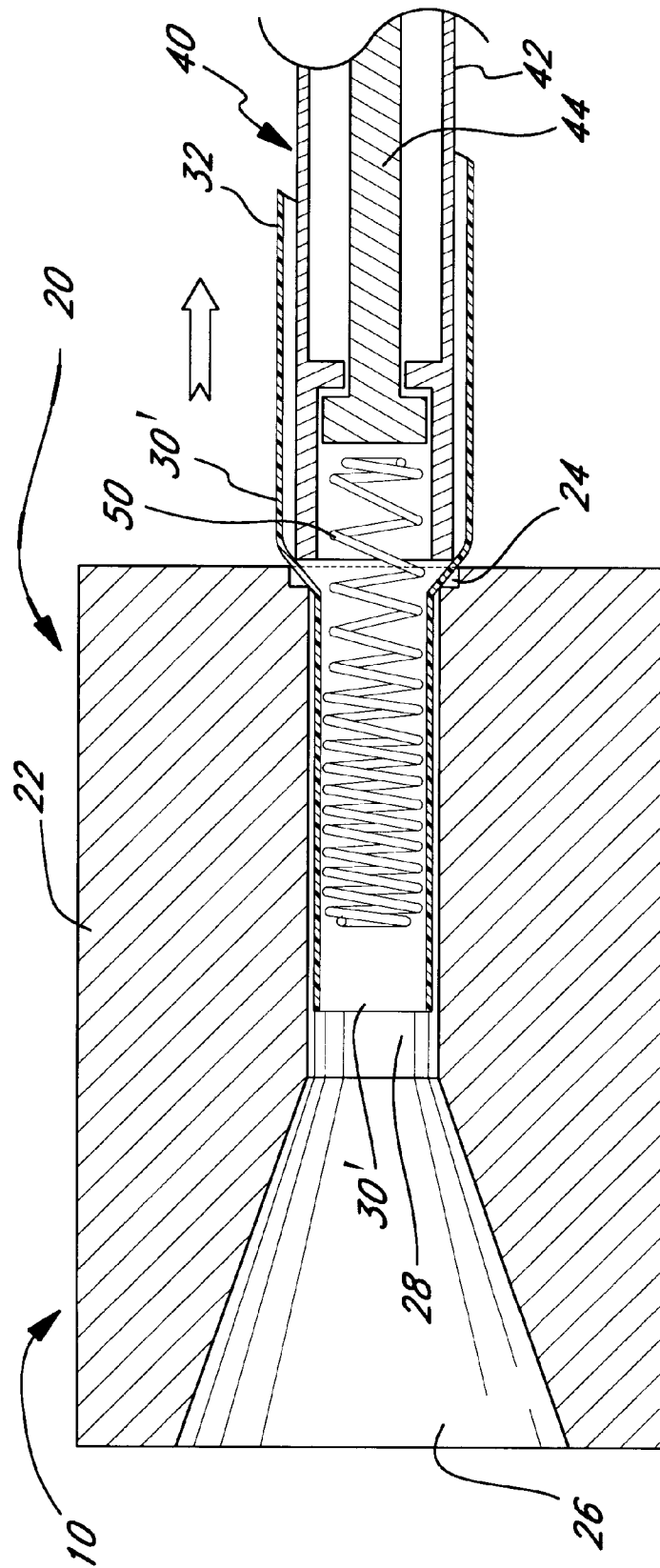


FIG. 6



**FIG. 7**



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