



# United States Patent [19]

[11] **Patent Number:** 5,911,752

**Dustrude et al.**

[45] **Date of Patent:** Jun. 15, 1999

[54] **METHOD FOR COLLAPSING A STENT**

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**James V. Donadio, III**, Chaska; **J. Edward Shapland, II**, Shoreview, all of Minn.

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[73] Assignee: **IntraTherapeutics, Inc.**, St. Paul, Minn.

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[21] Appl. No.: **08/710,245**

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[22] Filed: **Sep. 13, 1996**

[51] **Int. Cl.<sup>6</sup>** ..... **A61F 2/06**

[52] **U.S. Cl.** ..... **623/1; 606/191; 606/195; 606/198; 606/192; 604/96**

[58] **Field of Search** ..... **623/1, 11, 12; 604/96, 104; 606/153-156, 108, 190-200; 128/898**

*Primary Examiner*—Mickey Yu  
*Assistant Examiner*—Francis K. Cuddihy  
*Attorney, Agent, or Firm*—Merchant, Gould, Smith, Edell, Welter & Schmidt

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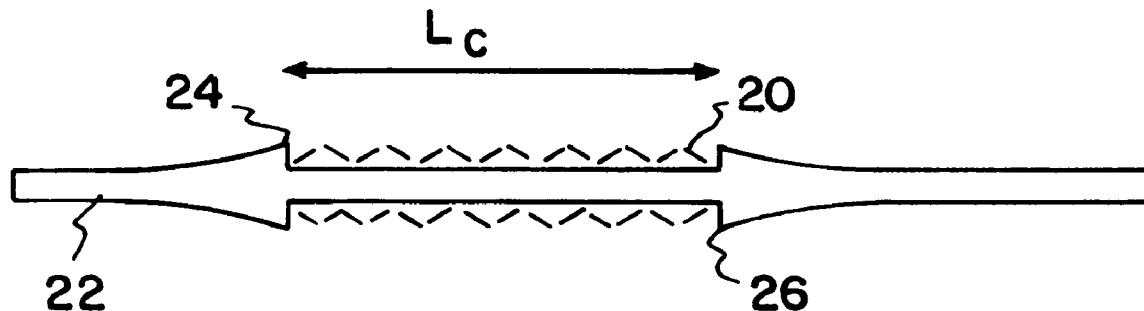
### [57] **ABSTRACT**

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A method for implanting a stent within a body passageway defined by a body wall. The method includes the step of fabricating the stent in an initial orientation in which the stent has an initial diameter and an initial length. The method also includes the step of collapsing the stent radially inward from the initial orientation to a collapsed orientation in which the stent has a collapsed length and a collapsed diameter. The stent is collapsed by deforming a portion of the stent beyond the elastic limit of the portion of the stent. The method further includes the step of positioning the collapsed stent at a desired location within the body passageway. Additionally, the method includes the step of expanding the stent radially outward from the collapsed orientation to a deployed orientation in which the stent has a deployed diameter and a deployed length. The deployed diameter and the deployed length are respectively substantially equal to the initial diameter and the initial length. The stent is expanding by deforming the portion of the stent beyond the elastic limit of the portion of the stent.

**6 Claims, 11 Drawing Sheets**



**Edwards Lifesciences v. Boston Scientific**  
**U.S. Patent No. 6,915,560**  
**IPR2017-00444 EX. 2038**

FIG. 1a



FIG. 1b

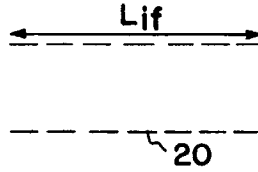


FIG. 1c



FIG. 1d

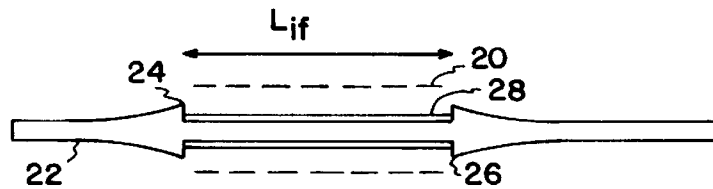


FIG. 1e

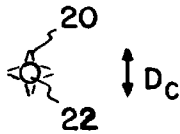


FIG. 1f

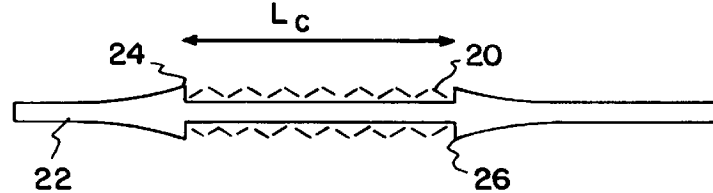


FIG. 1g

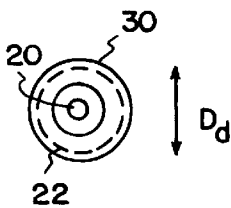


FIG. 1h

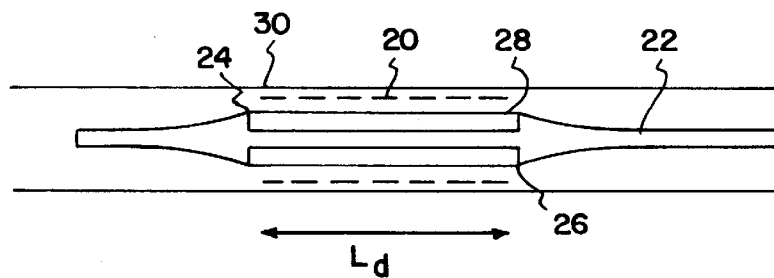


FIG. 2a

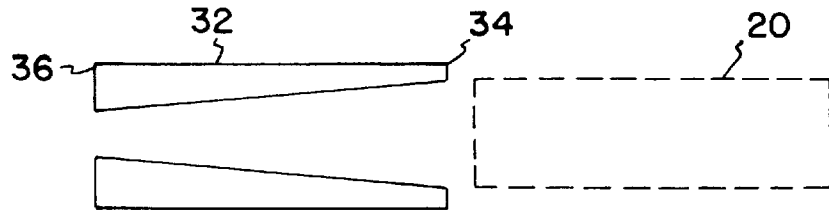


FIG. 2b

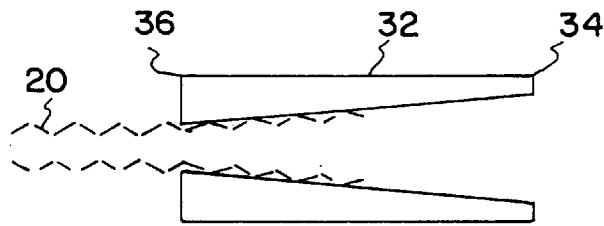


FIG. 2c

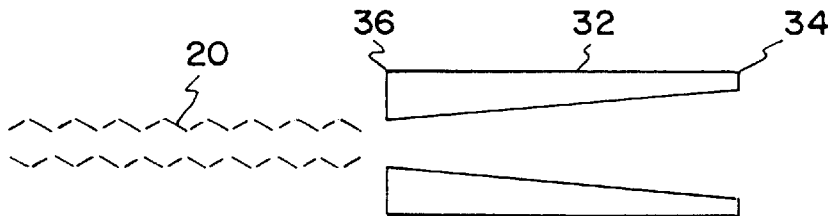


FIG. 3a

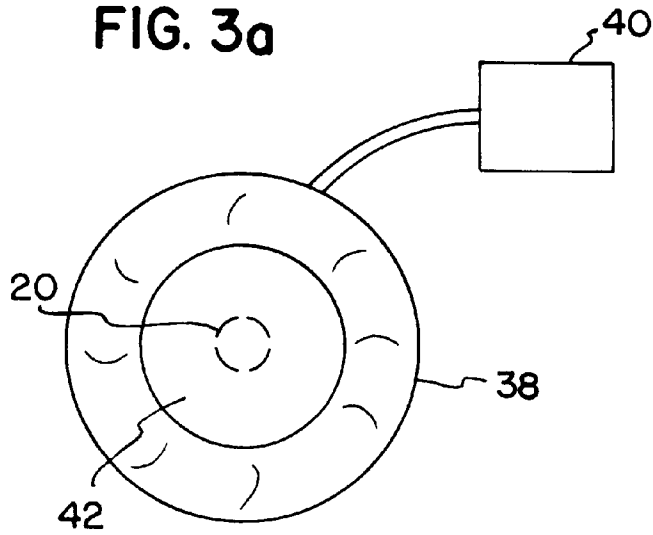


FIG. 3b

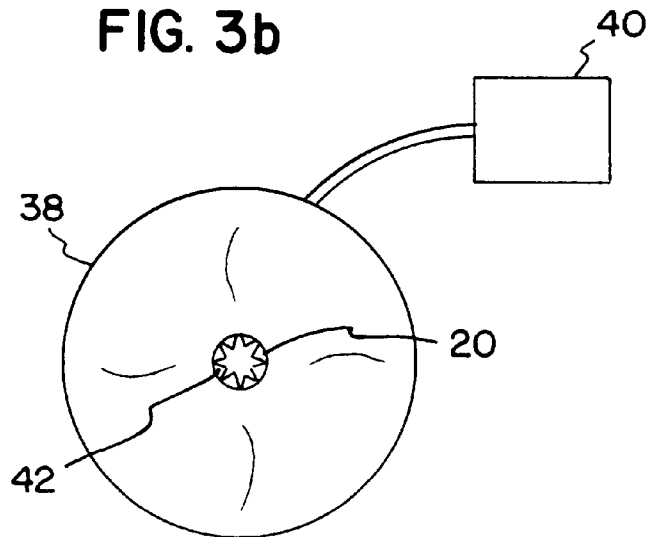


FIG. 4a

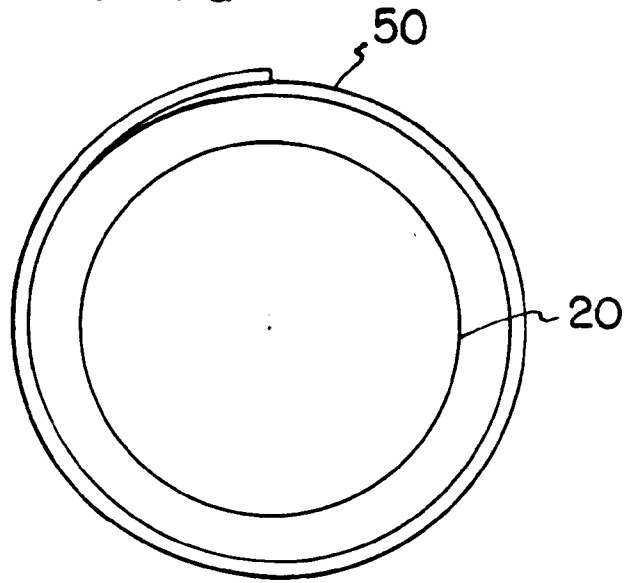
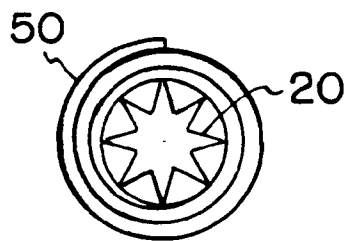


FIG. 4b



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