United States Patent [19]

Euteneuer et al.

[11] Patent Number: 5,445,646

[45] Date of Patent: Aug. 29, 1995

[54] **SINGLE LAYER HYDRAULIC SHEATH STENT DELIVERY APPARATUS AND METHOD**

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[21] Appl. No.: **245,919**

[22] Filed: **May 19, 1994**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 141,269, Oct. 22, 1993 pending.

[51] Int. Cl.⁶ **A61M 25/00**
[52] U.S. Cl. **606/198;** 604/96
[58] Field of Search 606/191, 194, 108, 192, 606/194, 195, 198, 200; 604/96, 104; 623/1, 12

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[57] **ABSTRACT**

A delivery system for implantation of a self-expanding stent in a vessel is consists of an elongate flexible catheter for delivering a self-expanding stent to a predetermined location in a vessel. The stent surrounds the flexible catheter near its distal end and is held in a delivery configuration where the stent has a reduced radius along its entire axial length by a stent retaining and release means. The stent retaining and release means is a single layer sheath retaining sleeve means for retaining the stent in its delivery configuration attached to a slipping sleeve means for releasing the stent to self-expand. A balloon may optionally be used to seat the stent in the vessel after self-expansion. The stent may also optionally be retained by water soluble or swelling bands.
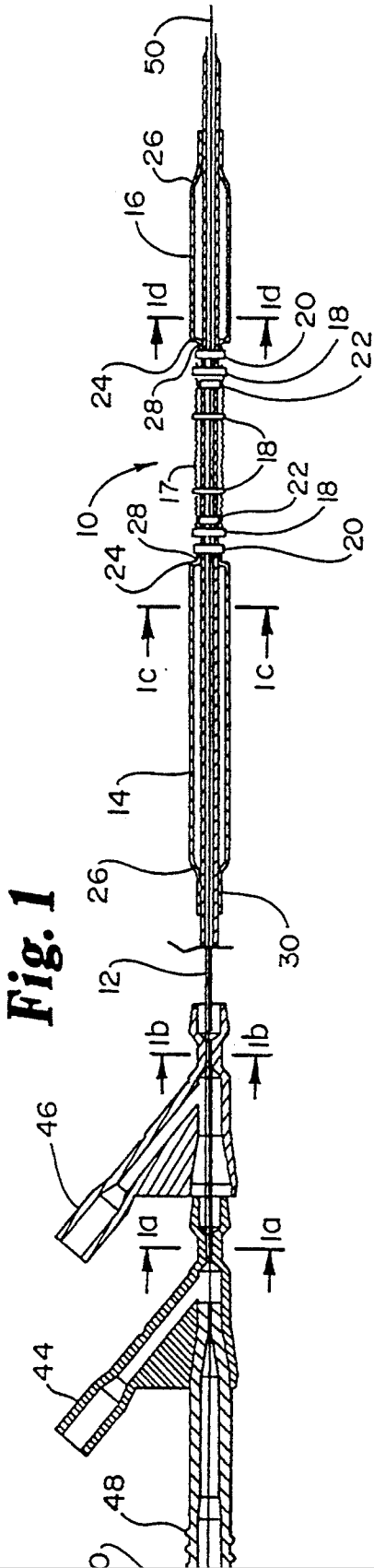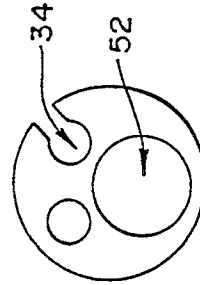
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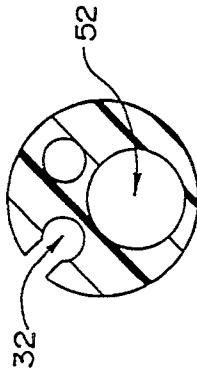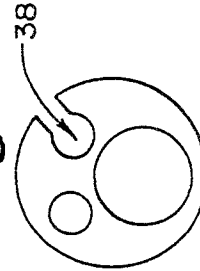
Fig. 1

Fig. 1a

Fig. 1b

Fig. 1c

Fig. 1d

Fig. 2

Fig. 2a

Fig. 2b
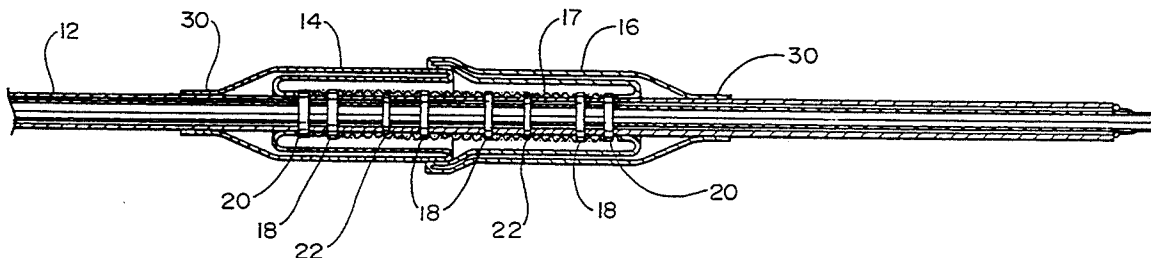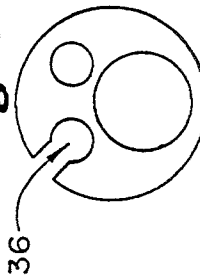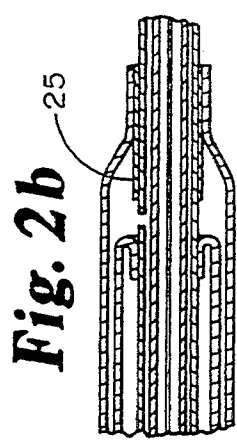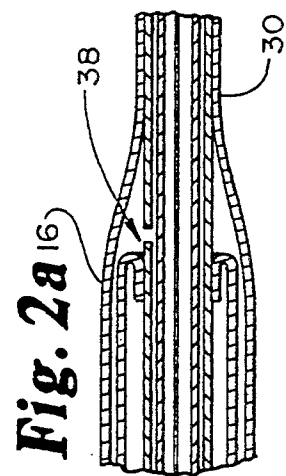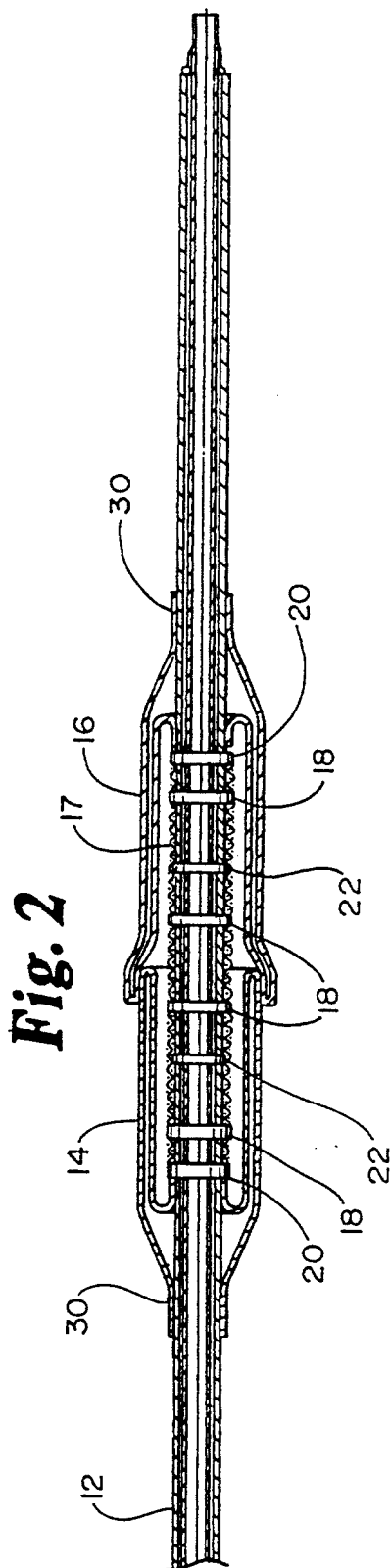
Fig. 3
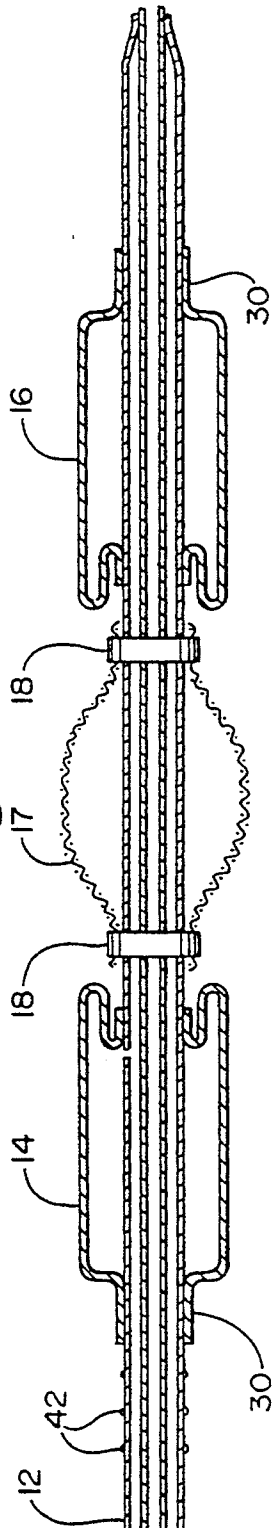
Fig. 4

Fig. 5

Fig. 6

DOCKET ALARM
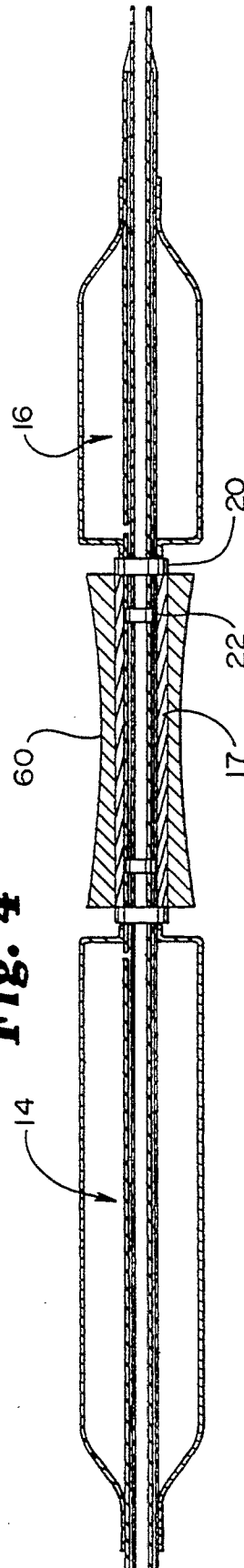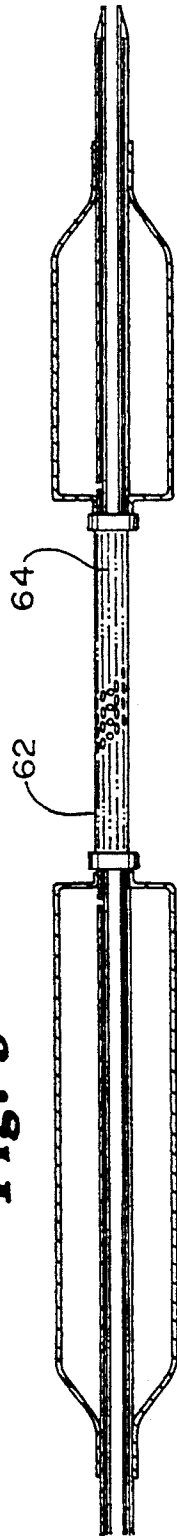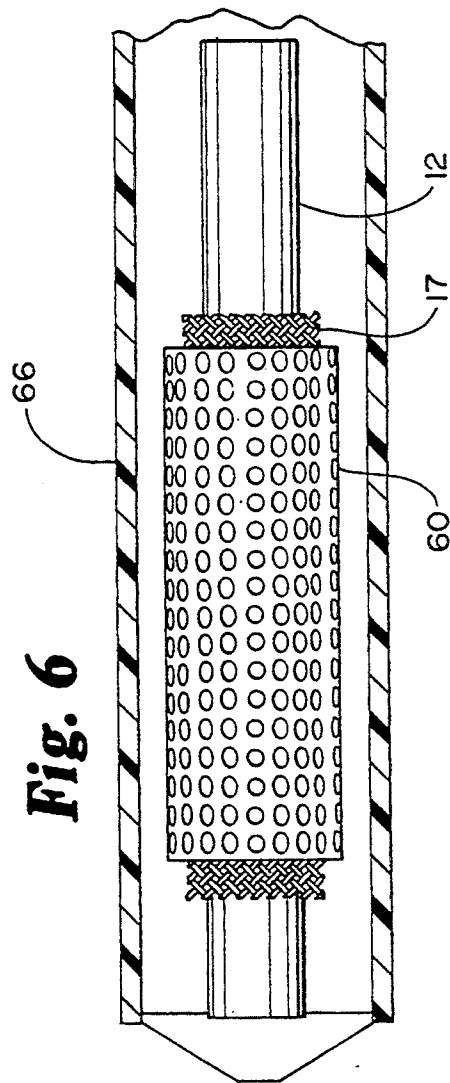
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