



(12) **United States Patent**  
**Pinchasik**

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(54) **APPARATUS AND METHOD FOR SECURING A STENT ON A BALLOON**

(75) Inventor: **Gregory Pinchasik, Herzlia (IL)**

(73) Assignee: **Medinol Ltd., Tel Aviv (IL)**

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/360,415**

(22) Filed: **Jul. 23, 1999**

**Related U.S. Application Data**

(63) Continuation of application No. 09/218,503, filed on Dec. 22, 1998, now abandoned.

(51) **Int. Cl.<sup>7</sup>** ..... **A61B 17/00**

(52) **U.S. Cl.** ..... **606/1; 29/516**

(58) **Field of Search** ..... 606/1, 108, 198;  
72/409.19, 402, 410, 466.8, 416; 425/517;  
29/516, 235, 270, 407.01, 282, 283.5; 623/1.11,  
1.12, 1.23

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

- 5,183,085 A 2/1993 Timmermans
- 5,353,623 A \* 10/1994 Bobenhausen ..... 72/402
- 5,546,646 A 8/1996 Williams et al.
- 5,630,830 A 5/1997 Verbeek

- 5,725,519 A 3/1998 Penner et al.
- 5,893,867 A \* 4/1999 Bagaouis et al. .... 606/198
- 5,893,868 A 4/1999 Hanson et al.
- 5,931,851 A 8/1999 Mroales
- 5,951,540 A \* 9/1999 Verbeek ..... 606/1
- 5,992,000 A 11/1999 Humphrey et al.
- 6,009,614 A \* 1/2000 Morales ..... 29/561
- 6,024,737 A 2/2000 Morales

**FOREIGN PATENT DOCUMENTS**

- DE 195 32 288 3/1999
- WO WO97/20593 6/1997

\* cited by examiner

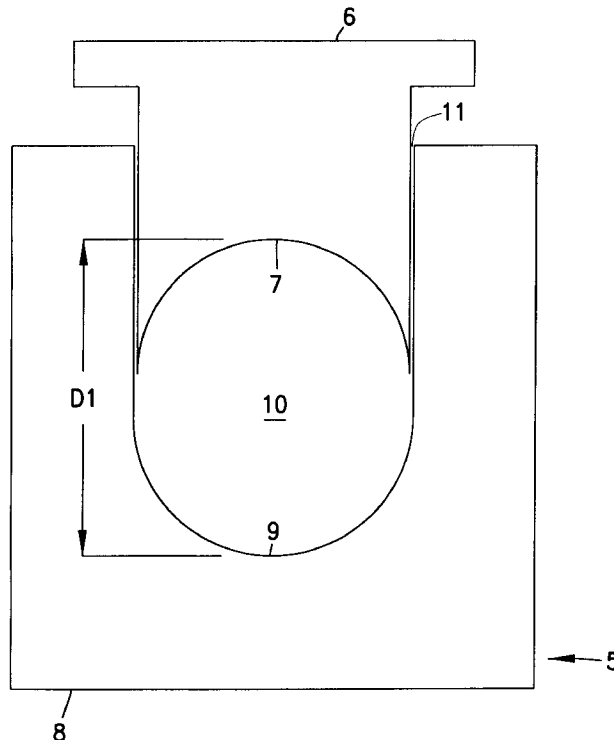
*Primary Examiner*—Eduardo C. Robert

(74) *Attorney, Agent, or Firm*—Kenyon & Kenyon

(57) **ABSTRACT**

Apparatus and method for securing a stent to a balloon catheter. A first clamping portion and a second clamping portion are arranged for movement toward and away from each other and are provided with recesses defining a channel to receive a stent crimping sleeve having a longitudinal bore. The stent is slid into the longitudinal bore of the stent crimping sleeve and the balloon catheter is then slid into the longitudinal bore of the stent. The first and second clamping portions are moved towards each other and apply pressure to the external surface of the stent crimping sleeve causing the internal diameter of the longitudinal bore to get smaller and apply pressure to the external surface of the stent and crimp the stent to the balloon.

**5 Claims, 8 Drawing Sheets**



**Edwards Lifesciences v. Boston Scientific Scimed**

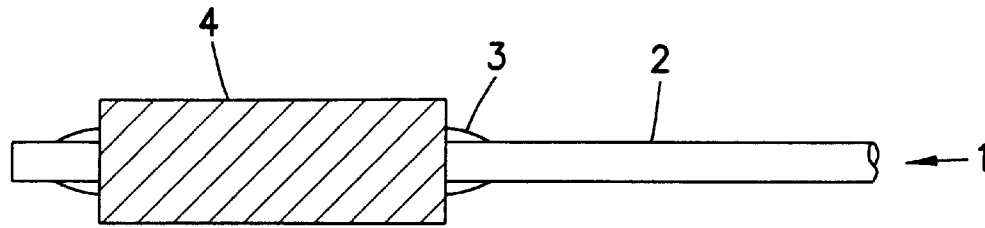


FIG. 1

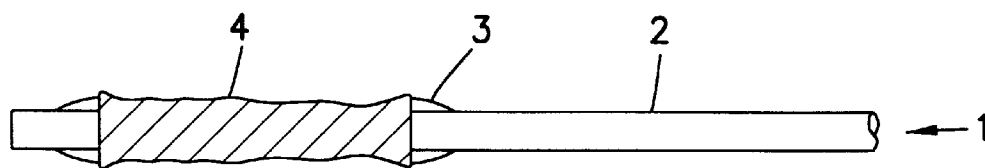


FIG. 2

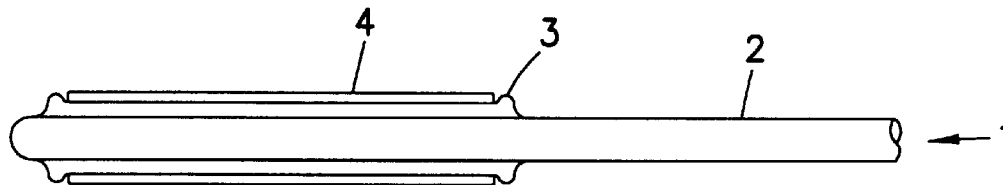


FIG. 11

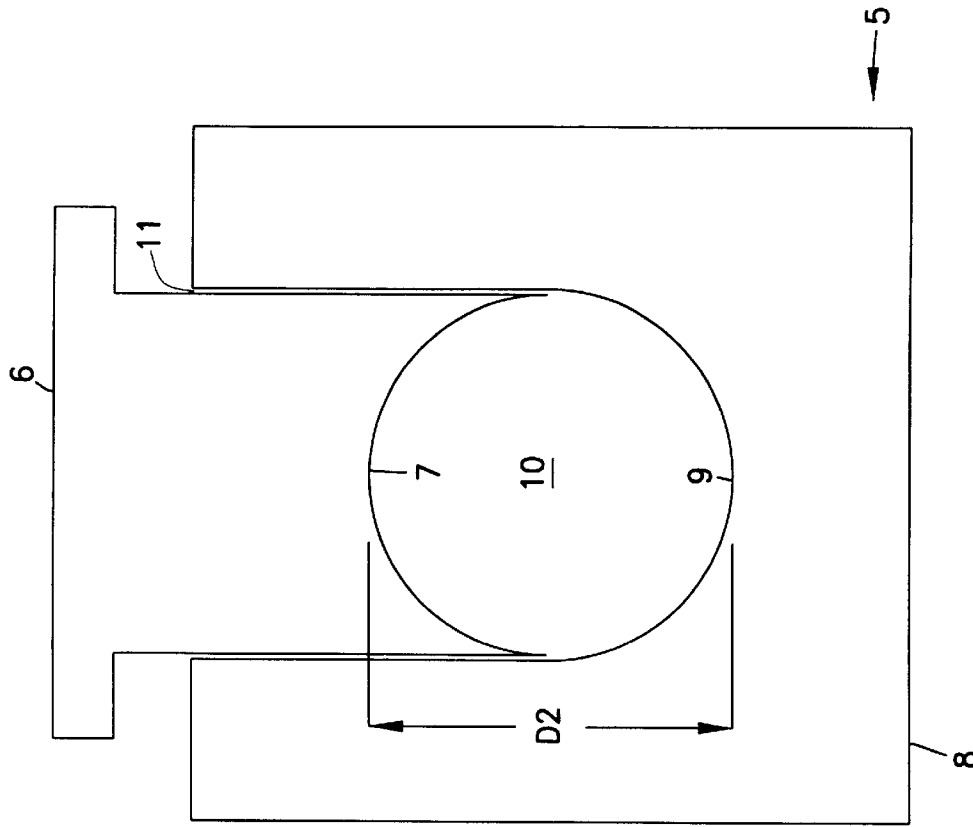


FIG. 4

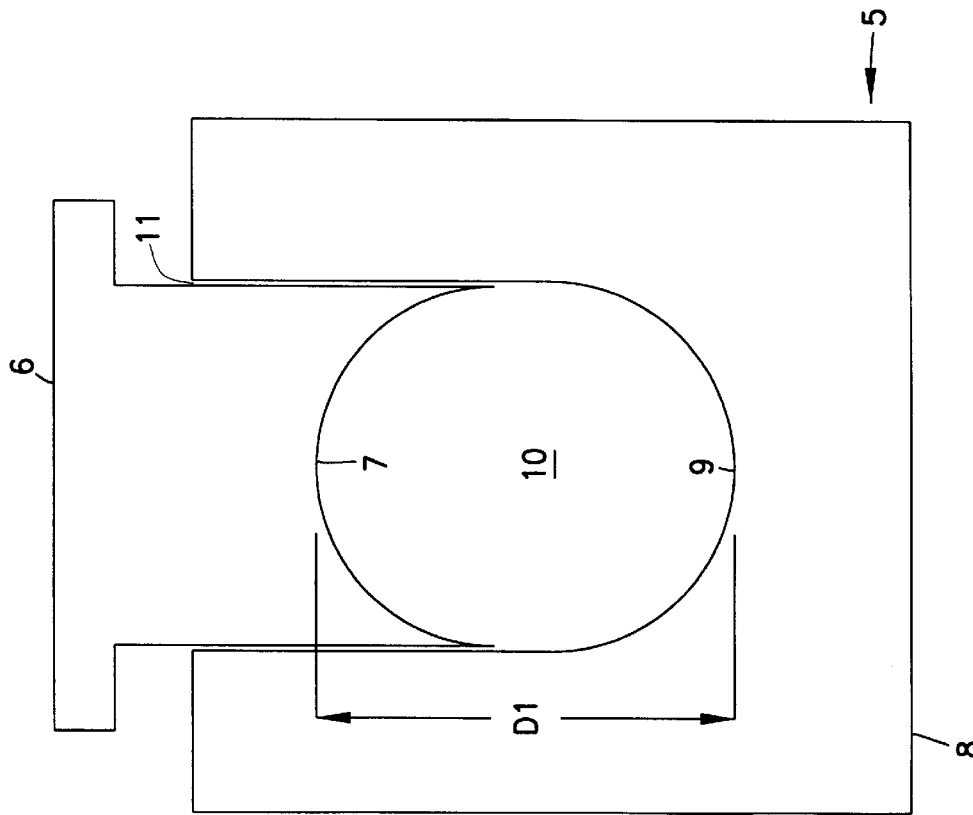


FIG. 3

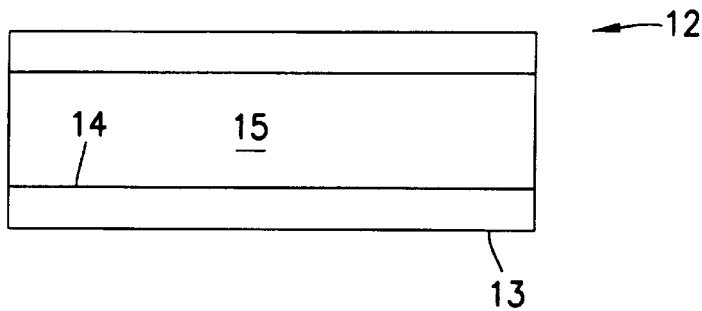


FIG. 5

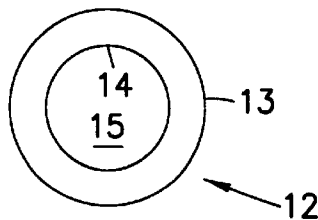


FIG. 6

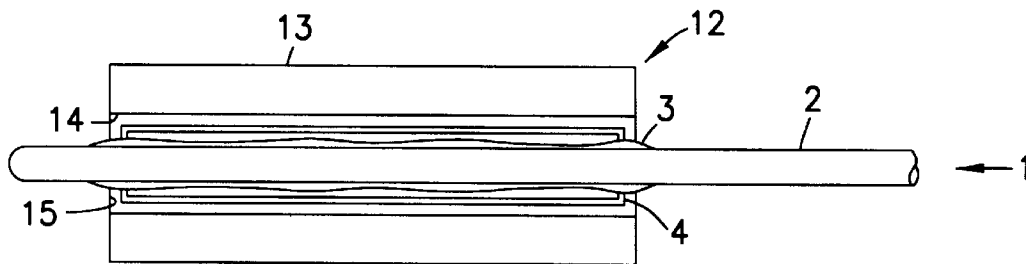


FIG. 7

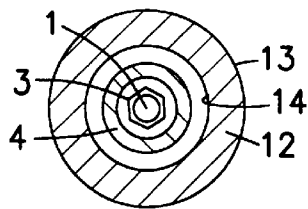


FIG. 8

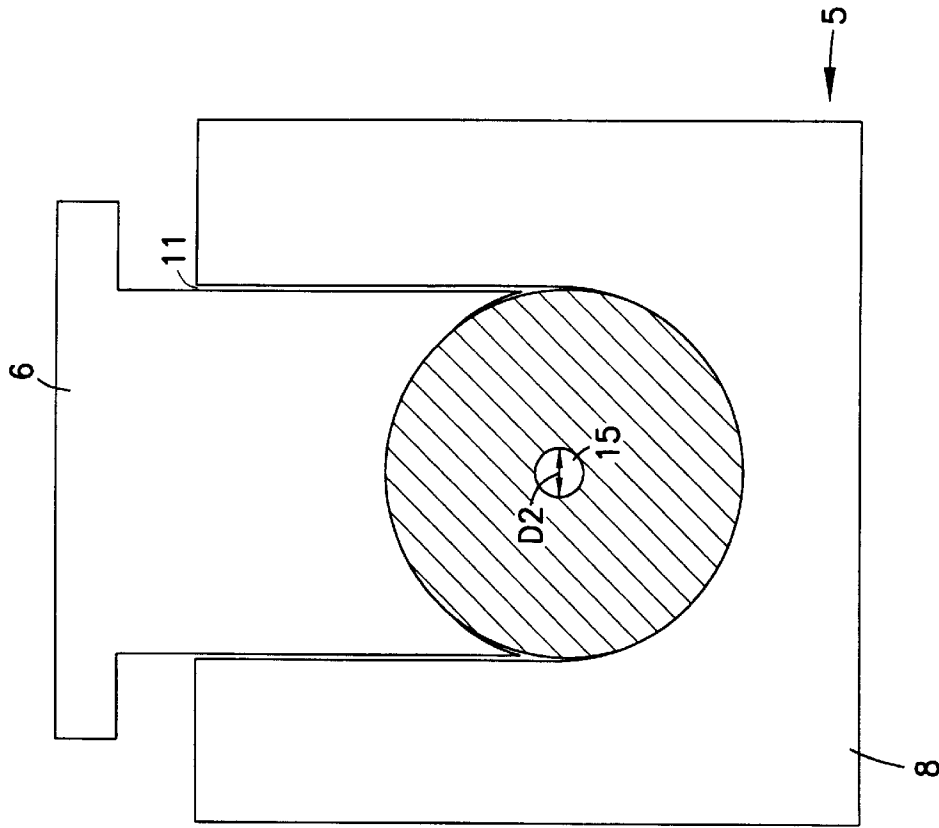


FIG. 9

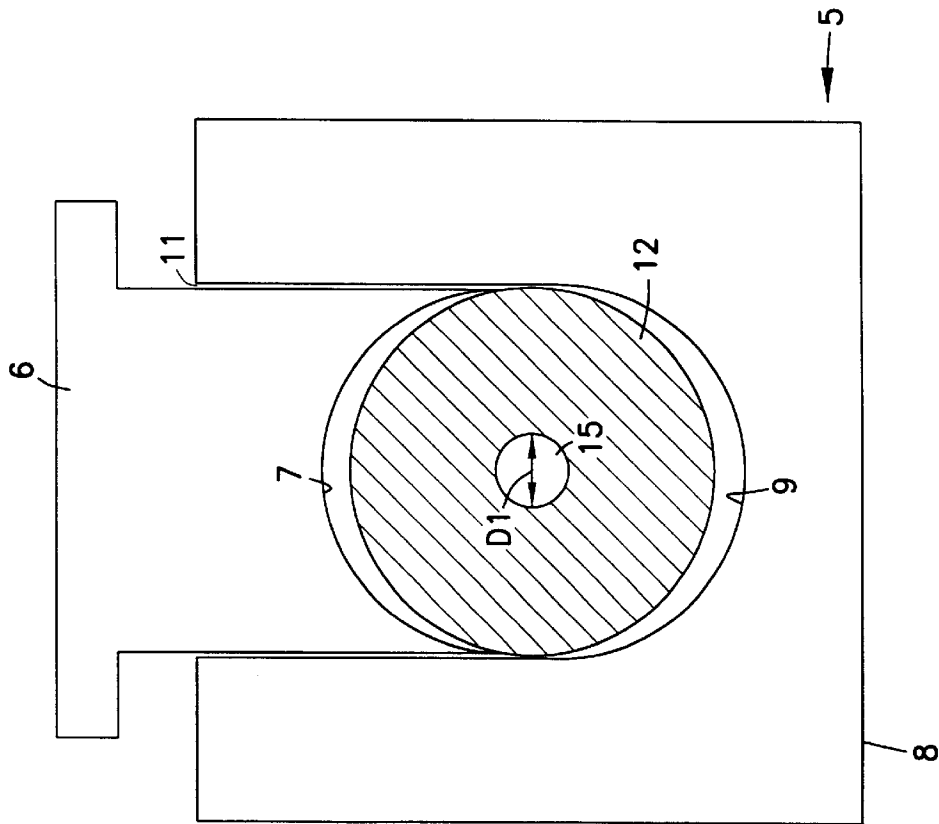


FIG. 10

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