



United States Patent [19]

[11] Patent Number: **5,746,764**

Green et al.

[45] Date of Patent: **May 5, 1998**

[54] STENT COMPRESSION INSTRUMENT

[57] ABSTRACT

[75] Inventors: **Nicholas A. Green**, Kinnelon, N.J.;
Fred E. Williams, Jr., Arab, Ala.

In accordance with the present invention, a fluid compression instrument and method for particular use in pre-surgically securing and conforming a vascular stent upon an angioplasty balloon, includes a housing for containing pressurized fluid and an elastic enclosing diaphragm secured within the housing and having an internal cavity and opening arranged to receive the stent disposed on the balloon catheter for secured compression. A pressure chamber is arranged within the housing as an envelope about the diaphragm to enable pressurized fluid forces within the pressure chamber to be imposed upon the outer surface of the diaphragm and transmitted through the diaphragm enabling circumferential application against the inserted stent in order uniformly to compress the stent with correspondingly secured purchase against the deflated balloon surface, producing complete adhesion of the stent thereon. The subsequent balloon inflation angioplasty and stent expansion is not impaired since the balloon remains in its deflated shape with the compressed stent closely conforming in contour throughout the balloon's 360° periphery. The entire stent mesh is uniformly compressed down including the open stent ends which prevents the many tiny stent mesh edges from protruding out and effectively prevents both vascular abrasion as well as shifting of the stent on the deflated balloon during the angioplasty insertion procedure.

[73] Assignees: **Atrion Medical Products, Inc.**, Arab, Ala.; **Cordis Corporation**, Miami, Fla.; a part interest

[21] Appl. No.: **745,317**

[22] Filed: **Nov. 12, 1996**

Related U.S. Application Data

[63] Continuation of Ser. No. 567,136, Dec. 4, 1995, abandoned.

[51] Int. Cl.⁶ **A61M 29/00**

[52] U.S. Cl. **606/194; 606/108**

[58] Field of Search **606/194, 1, 108, 606/192, 195, 198; 604/104, 141**

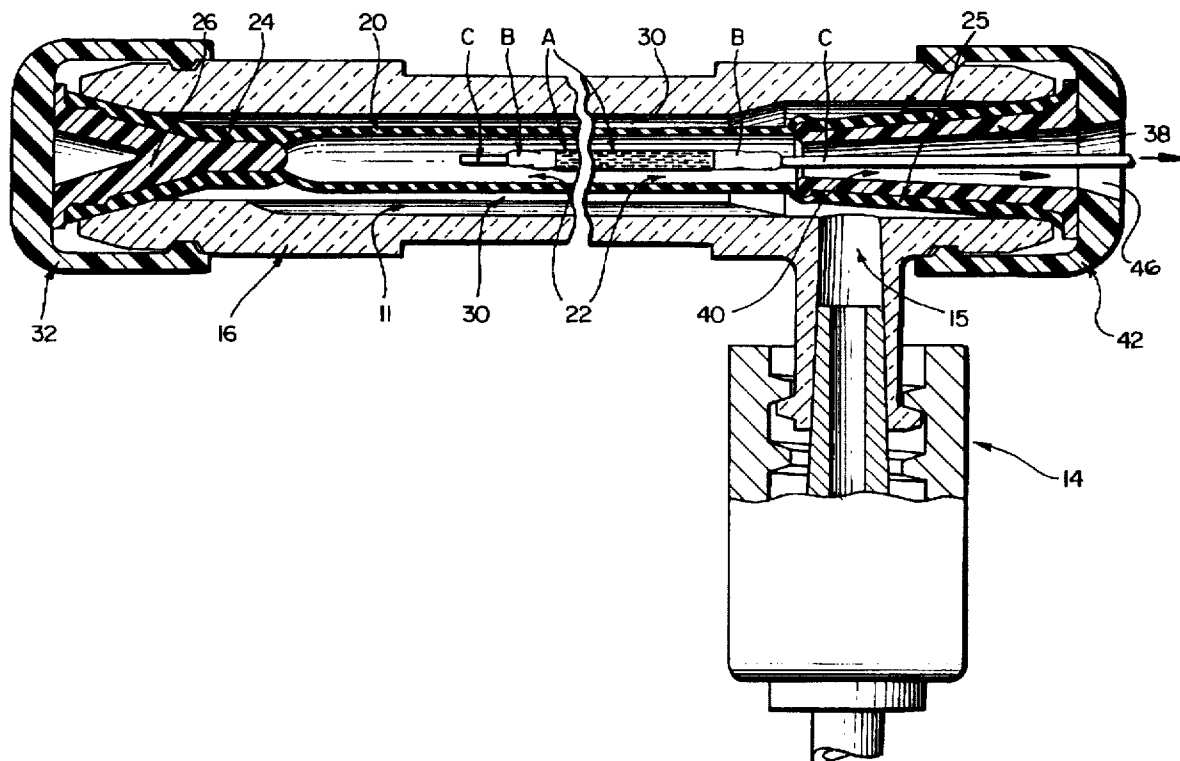
[56] References Cited

U.S. PATENT DOCUMENTS

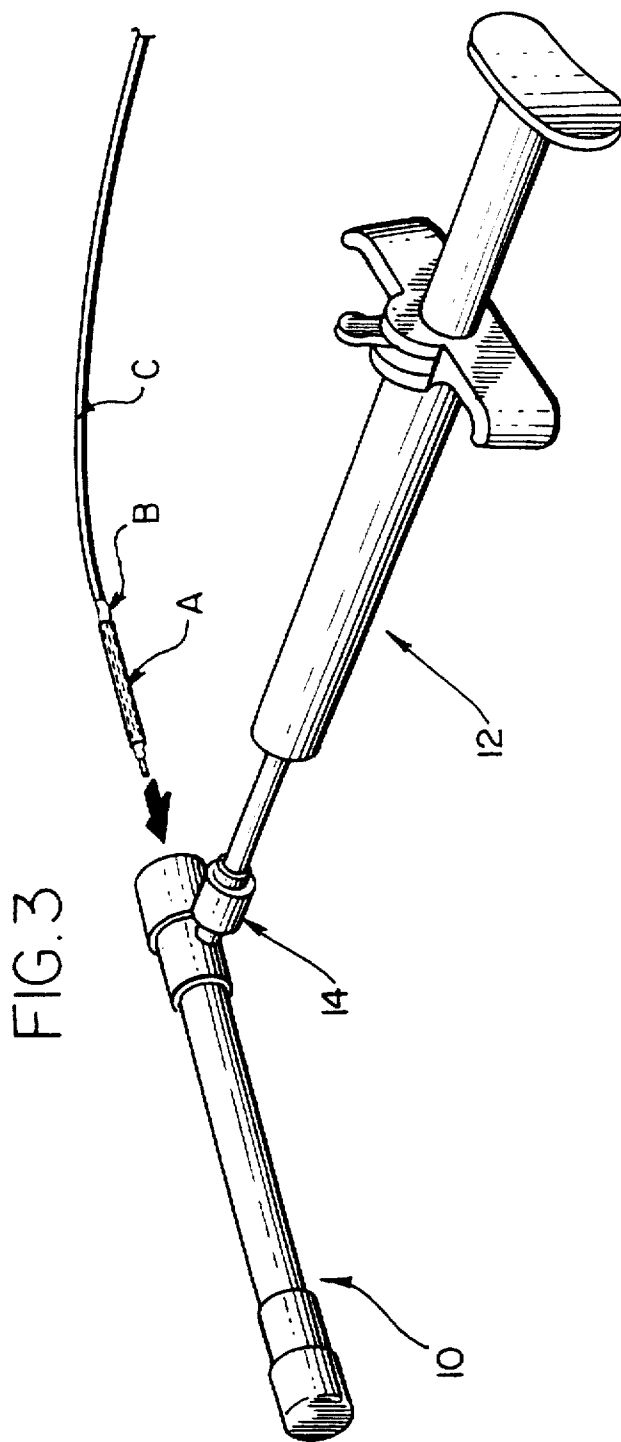
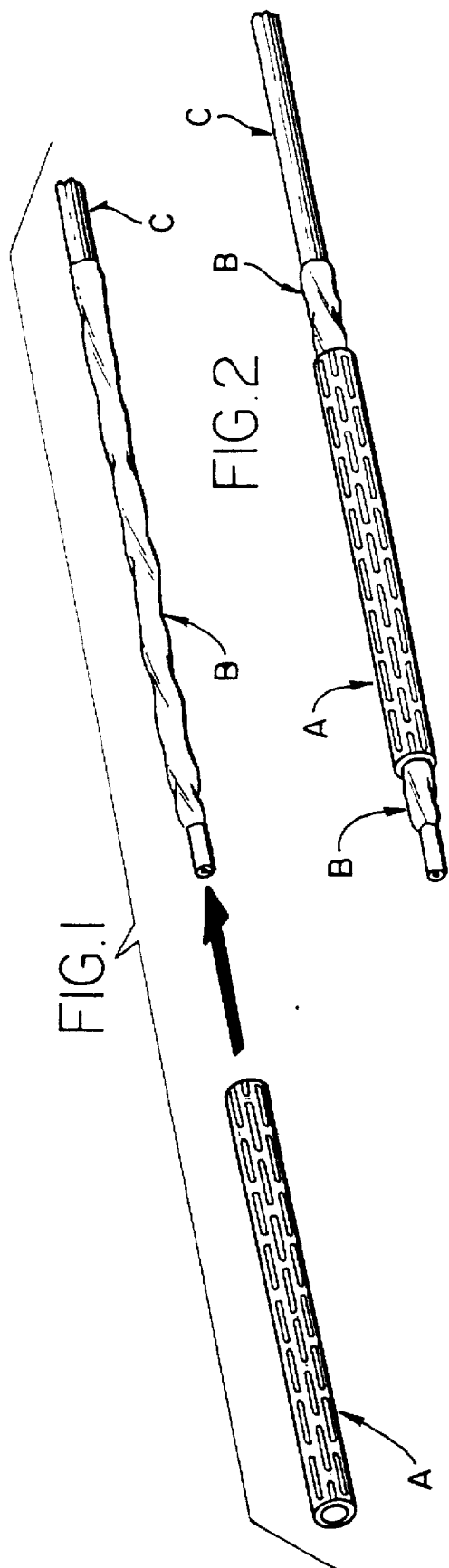
- 5,378,237 1/1995 Boussignac et al. 606/194
- 5,484,449 1/1996 Amundson et al. 606/194

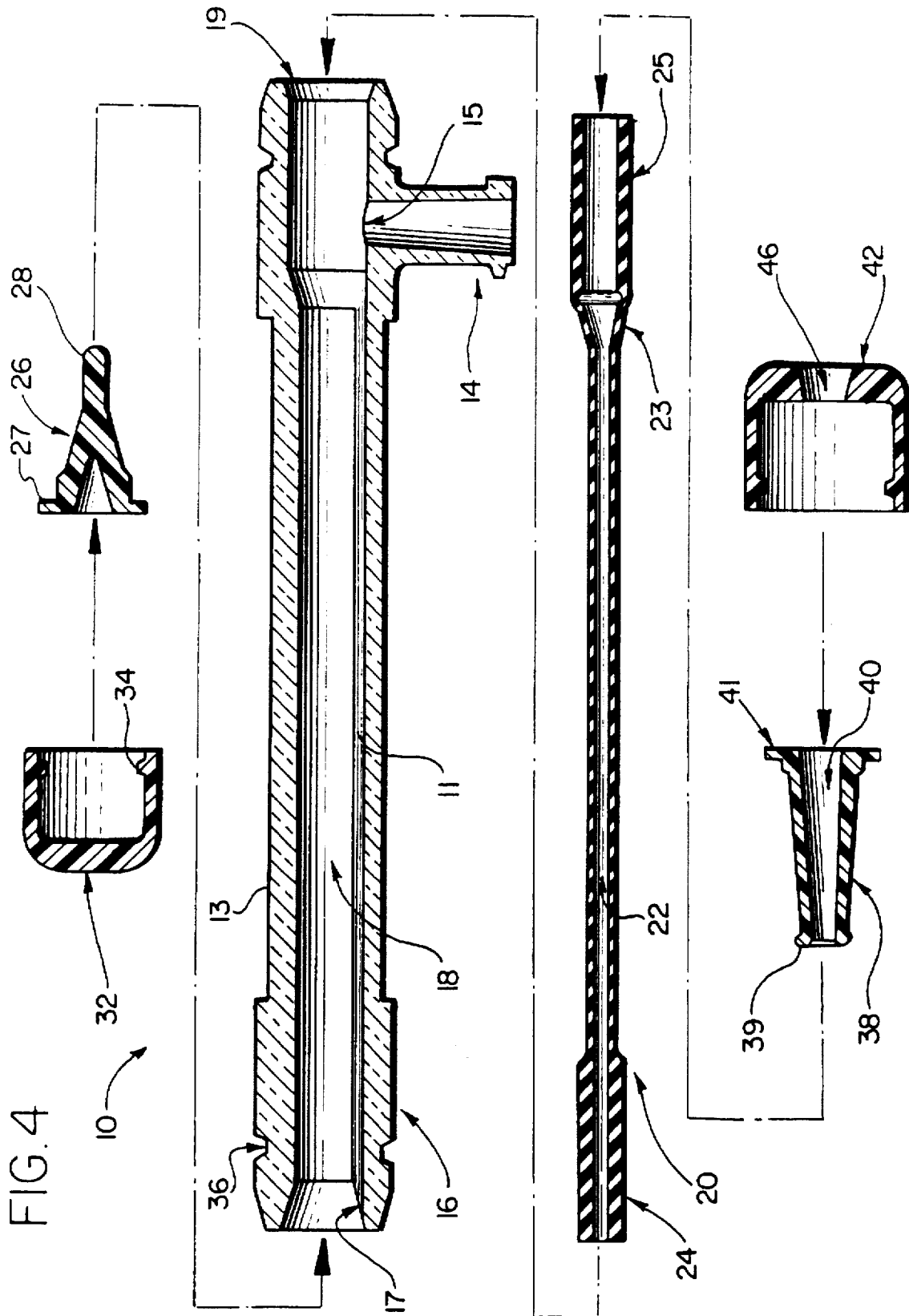
Primary Examiner—Michael Buiz
Assistant Examiner—Kevin Truong
Attorney, Agent, or Firm—Trexler, Bushnell, Giangiorgi & Blackstone, Ltd.

22 Claims, 5 Drawing Sheets



Edwards Lifesciences v. Boston Scientific
U.S. Patent No. 6,915,560
IPR2017-00444 EX. 2005





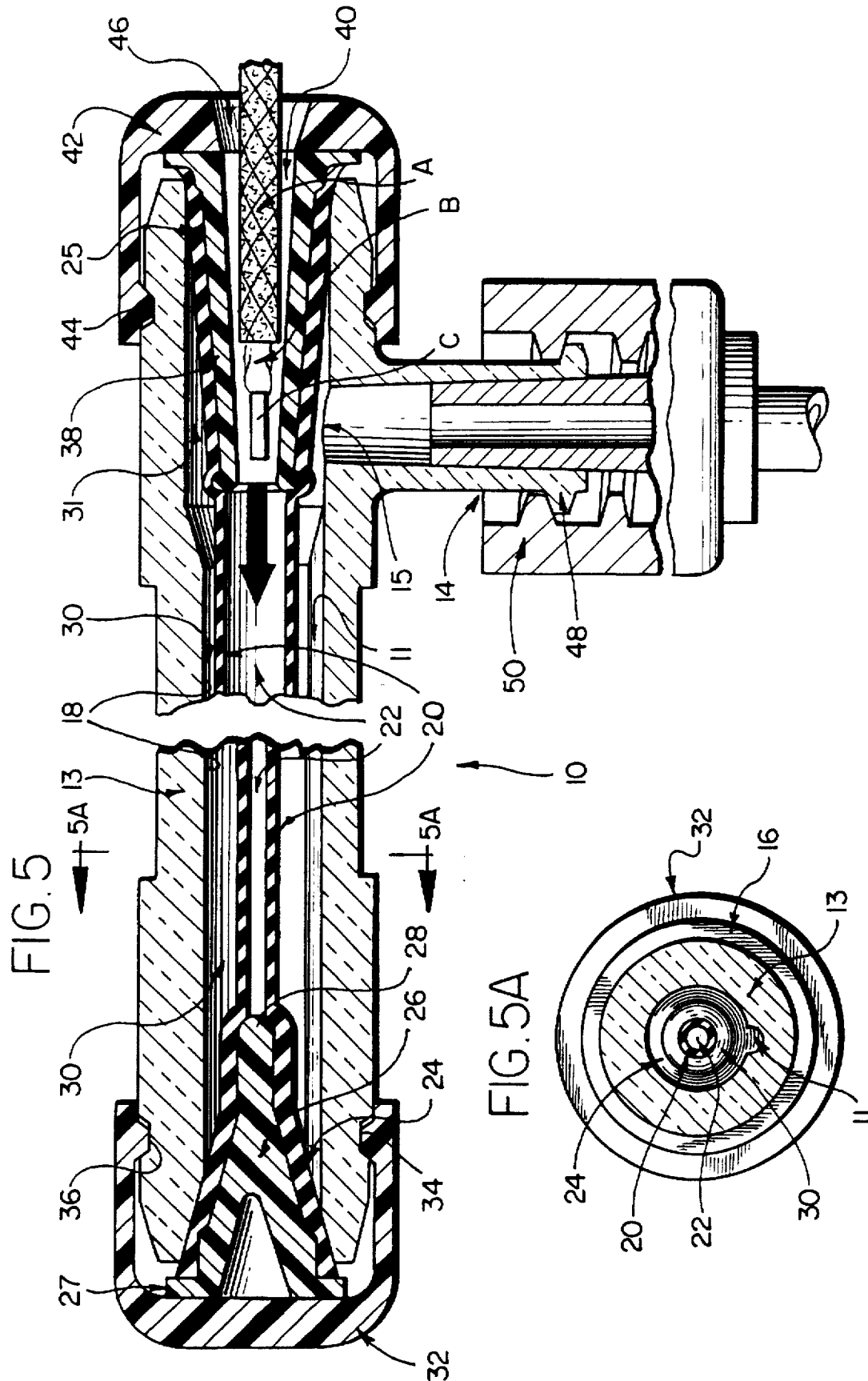
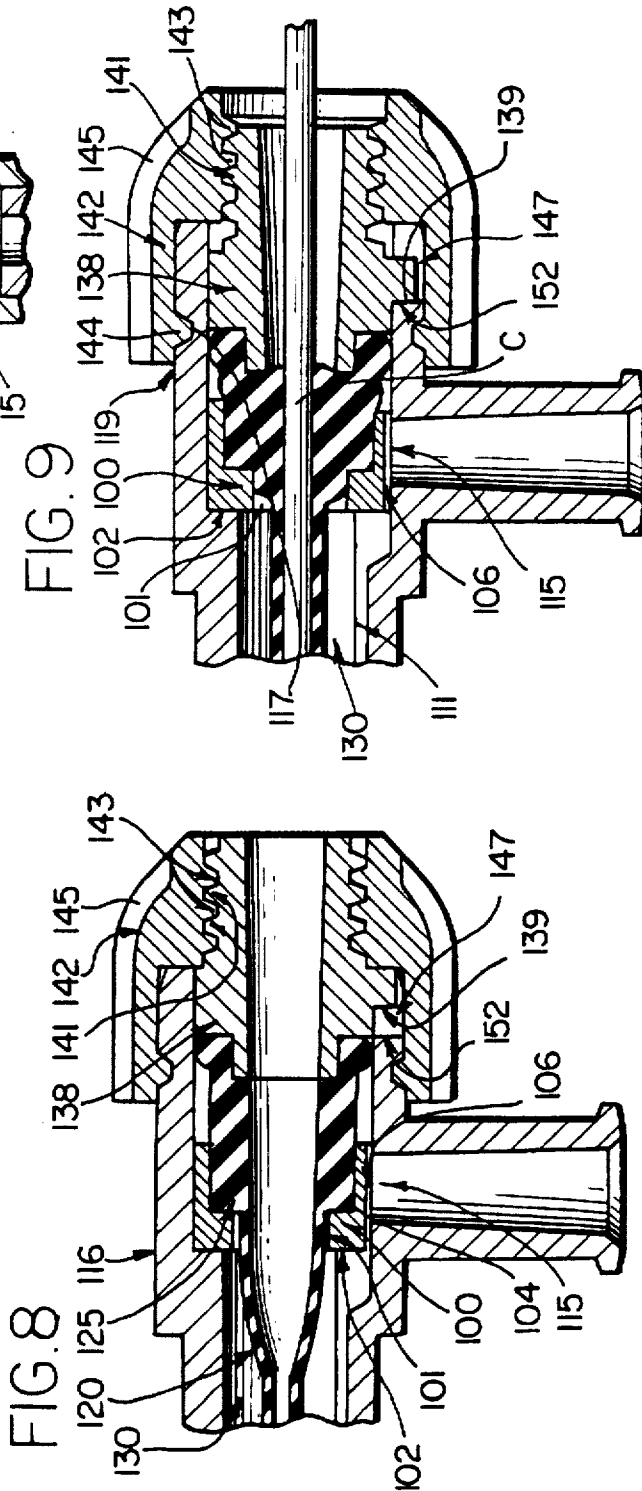
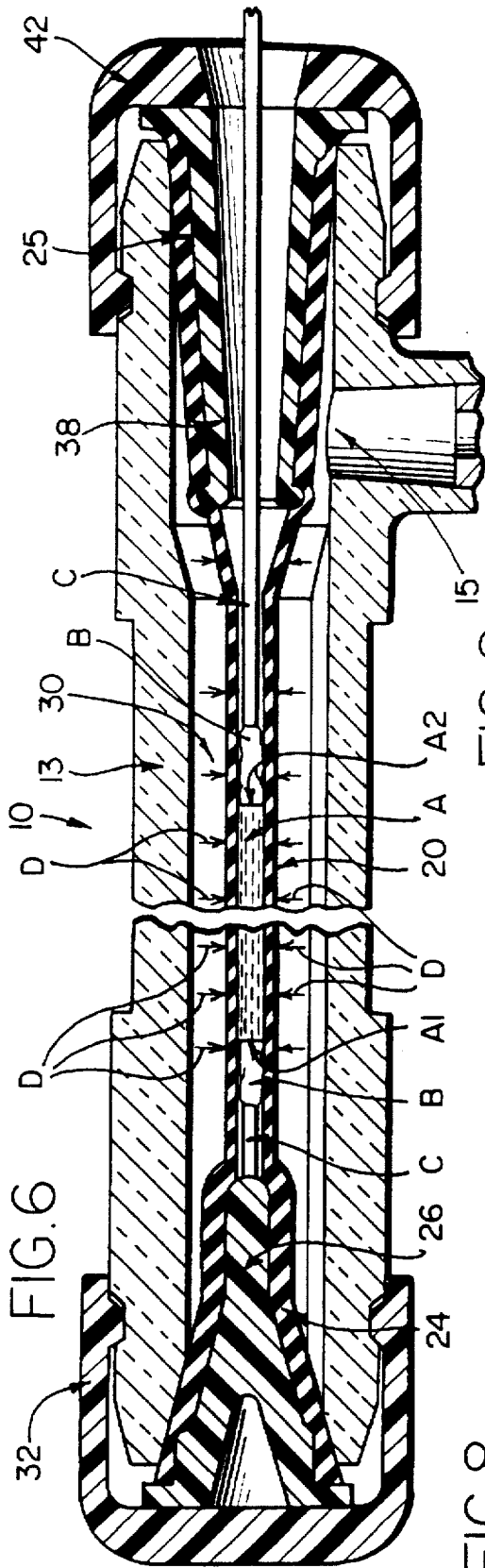


FIG. 5

FIG. 5A



Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.