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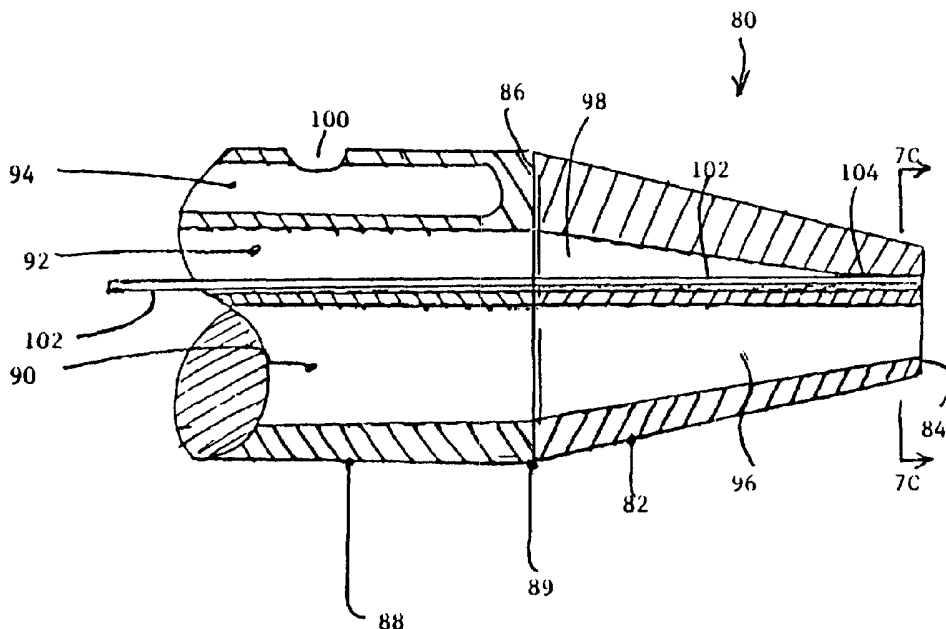
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(54) Title: CENTRAL VENOUS CATHETER HAVING A SOFT TIP AND FIBER OPTICS



(57) Abstract: A multiple lumen catheter having a soft, tapered multiple lumen distal tip for insertion into a body vessel. At least one medical implement lumen is used for placement or positioning of a biomedical sensor or other medical implement. The tip may be made of a softer material than the catheter body, or can be configured with thinner walls or a higher air-to-material ratio cross-section. Various geometrical configurations and combinations of materials can be used to decrease the resistance of the tip to an applied load. One particular application for the catheter of the present invention is as a central venous catheter equipped with fibers for measuring oximetry. The fibers extend to the distal end of the tip and are preferably secured therein with minimal adhesive so as to limit the stiffness added to the tip.

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International Application No
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A. CLASSIFICATION OF SUBJECT MATTER

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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X	US 5 456 680 A (HAMMERSMARK DAN J ET AL) 10 October 1995 (1995-10-10) column 4, line 17 -column 7, line 9; figures 1-11 ---	1-9, 11-14, 16,17, 19-32,34
X	EP 0 311 458 A (BARD INC C R) 12 April 1989 (1989-04-12) column 3, line 48 -column 4, line 4 column 8, line 45 -column 12, line 44; figures 1-9 --- -/--	1-6, 10-13, 24-30, 32,34



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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