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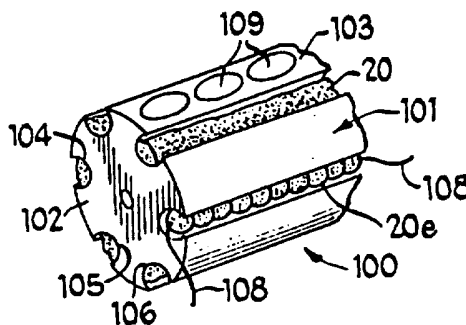
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<p>(21) International Application Number: PCT/US93/07869 (22) International Filing Date: 20 August 1993 (20.08.93) (30) Priority data: 934,114 20 August 1992 (20.08.92) US (71)(72) Applicant and Inventor: BRINKER, Mark [US/US]; 1701 Hermann Dr., #2806-28G, Houston, TX 77104 (US). (74) Agents: DICK, Richard, Eugene et al.; The Law Offices of Dick and Harris, 181 West Madison, Suite 3800, Chicago, IL 60602 (US).</p>	<p>(81) Designated States: AT, AU, BB, BG, BR, BY, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> (88) Date of publication of the international search report: 28 April 1994 (28.04.94)</p>	

(54) Title: ANTIBIOTIC ELUDING INTRAMEDULLARY NAIL APPARATUS



(57) Abstract

An antibiotic eluding intramedullary nail apparatus (10) for use in the intramedullary fixation of fractured long bones, such as femurs, tibias, fibulas, humeri, ulnas and radii as well as other orthopedic and bone reconstructive procedures, and in particular, fractures associated with an open wound exposing the soft tissue and medullary canal of the fractured bone to bacteria and other infectious micro-organisms. The apparatus (10) has an intramedullary nail to which is secured an antibiotic impregnated carrier compound (20), the apparatus (10) being surgically insertable within the medullary canal of a fractured bone using conventional intramedullary nailing techniques thus providing a sustained localized release of antibiotic agents in bactericidal concentrations, and/or chemotherapeutic agents for the fractured bone and thereby serving to permit the use of intramedullary nailing to repair injuries which may be otherwise contraindicated due to the risk of deep wound and/or bone infections and/or bone tumors.

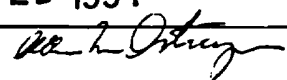
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US93/07869

A. CLASSIFICATION OF SUBJECT MATTER IPC(5) :A61B 17/56 US CL :606/62 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) U.S. : 606/62-69 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched None Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) None																				
C. DOCUMENTS CONSIDERED TO BE RELEVANT																				
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.																		
X	US, A, 4,863,444 (Blomer) 05 September 1989, see the entire document.	1-32																		
Y	US, A, 4,976,258 (Richter et al.) 11 December 1990, see the entire document.	1-32																		
Y	US, A, 4,919,666 (Buchhorn et al.) 24 April 1990, see the entire document.	1-32																		
Y	US, A, 5,053,035 (McLaren) 01 October 1991, see the entire document.	1-32																		
Y	US, A, 4,713,076 (Draenert) 15 December 1987, see the entire document.	7-8 and 21																		
Y	US, A, 4,514,865 (Harris) 07 May 1985, see the entire document.	13-15, 17-18, 26, and 32																		
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.																				
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Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. NOT APPLICABLE		Authorized officer  FOR MICHAEL BROWN Telephone No. (703) 308-0858																		