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- (71) Applicant (for all designated States except US): BEC-
- (71) Applicant (for all designated States except US): BECTON, DICKINSON AND COMPANY [US/US]; Intellectual Property Department, Mail Code 089, 1 Becton Drive, Franklin Lakes, NJ 07417-1880 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): POWELL, Kenneth, G. [US/US]; 4513 Wood Valley Drive, Raleigh, NC 17613 (US).

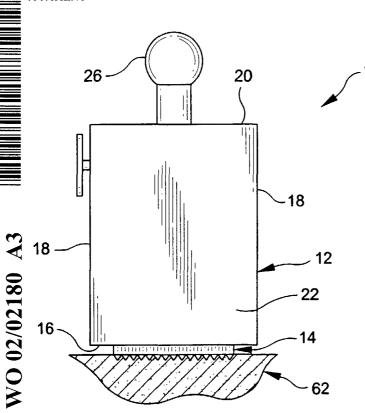
- (74) Agents: SCHMIDT, Richard, D. et al.; Venable, Baetjer, Howard & Civilett, LLP, 1201 New York Avenue, NW, Suite 1000, P.O. Box 34385, Washington, DC 20043-9998 (US).
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(54) Title: METHOD AND APPARATUS FOR TRANSDERMALLY SAMPLING OR ADMINISTERING A SUBSTANCE TO A PATIENT



(57) Abstract: A device for delivering or withdrawing a substance from a patient includes a support member, a skin penetrating device and an advancing assembly for advancing the skin penetrating device to an operating position. The advancing assembly includes a supply spool for supporting a web having the skin penetrating devices attached thereon and a take up spool for receiving the web with the spent skin penetrating devices. The support has a bottom wall with at least one opening for exposing the skin penetrating device for penetrating the skin of a patient. In one embodiment the skin penetrating devices are microneedles having a length of about 50-2000 microns.

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CLASSIFICATION OF SUBJECT MATTER A61B10/00 A61B17/322 A61M37/00 According to International Patent Classification (IPC) or to both national classification and IPC Minimum documentation searched (classification system followed by classification symbols) IPC 7 A61M A61B A61N 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 Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. WO 97 03718 A (BOEHRINGER INGELHEIM KG 1,2,10, ;EICHER JOACHIM (DE); ZIERENBERG BERND (DE) 6 February 1997 (1997-02-06) 16,23, Α page 8, paragraph 2; figures 24,26 WO 95 12357 A (MEDIPRO SCIENCES LTD) 1-4,16Α 11 May 1995 (1995-05-11) page 8, line 5 -page 10, line 4; figures US 5 964 729 A (CHOI SANG BAE ET AL) Α 1,16 12 October 1999 (1999-10-12) abstract; figures US 5 250 023 A (LEE HAI BANG ET AL) Α 1,16 5 October 1993 (1993-10-05) cited in the application abstract; figures Further documents are listed in the continuation of box C. Х Patent family members are listed in annex. ° Special categories of cited documents: *T* later document published after the international filing date or priority date and not in conflict with the application but "A" document defining the general state of the art which is not considered to be of particular relevance cited to understand the principle or theory underlying the "E" earlier document but published on or after the international "X" document of particular relevance; the claimed invention filing date cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "I." document which may throw doubts on priority claim(s) or "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu-ments, such combination being obvious to a person skilled in the art. which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 26/02/2002 19 February 2002 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo ni, Kousouretas, I Fax: (+31-70) 340-3016

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