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[Continued on next page]

(54) Title: APPARATUS FOR DELIVERY OF THERAPEUTIC MATERIAL TO AN INTERVERTEBRAL DISC AND METHOD OF USE

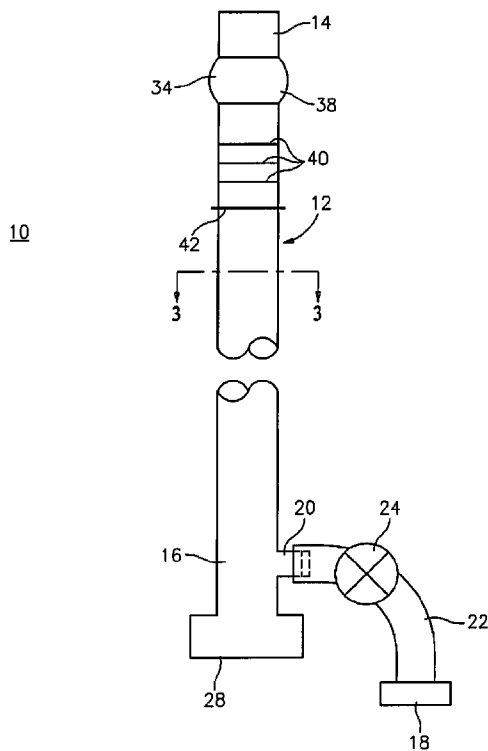


FIG. 1

(57) Abstract: An apparatus, for introducing fluent therapeutic material through an annulus fibrosus of an intervertebral disc, includes a needle having a distal end for insertion through an entry site of the annulus fibrosus. The needle defines a first conduit through which the pressurized fluent therapeutic material is introduced. An expandable seal is disposed about an exterior surface of the needle. The expandable seal has a non-expanded, non-sealing configuration to facilitate penetration of the needle through the annulus fibrosus and withdrawal of the needle therefrom. The expandable seal also has an expanded, sealing configuration during introduction of the fluent therapeutic material. The expandable seal then engages the annulus fibrosus in its expanded, sealing configuration to prevent or minimize leakage of fluent therapeutic material through the entry site. The expandable seal assumes its expanded, sealing configuration during introduction of fluent therapeutic material under pressure into the annulus fibrosus.

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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

Korean utility models and applications for utility models
Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: needle, leakage, seal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6206851 B1 (PROSL, FRANK R.) 27 March 2001 See claims 1-40, figures 1-14	1-15
A	US 5637088 A1 (WENNER, DONALD E. et al.) 10 June 1997 See claims 1-20, figures 1-4	1-15
A	US 5693029 A1 (LEONHARDT, HOWARD J.) 02 December 1997 See claims 1-17, figures 1-5	1-15
A	US 2004-0024371 A1 (GIANNI, PLICCHI et al.) 05 February 2004 See claims 1-43, figures 1-16	1-15

 Further documents are listed in the continuation of Box C. See patent family annex.

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 6206851 B1	27.03.2001	AU 1999-40907 A1 EP 1079880 A1 EP 1079880 A4 US 5954691 A1 US 6352521 B1 WO 00-16834 A1	10.04.2000 07.03.2001 09.01.2002 21.09.1999 05.03.2002 30.03.2000
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