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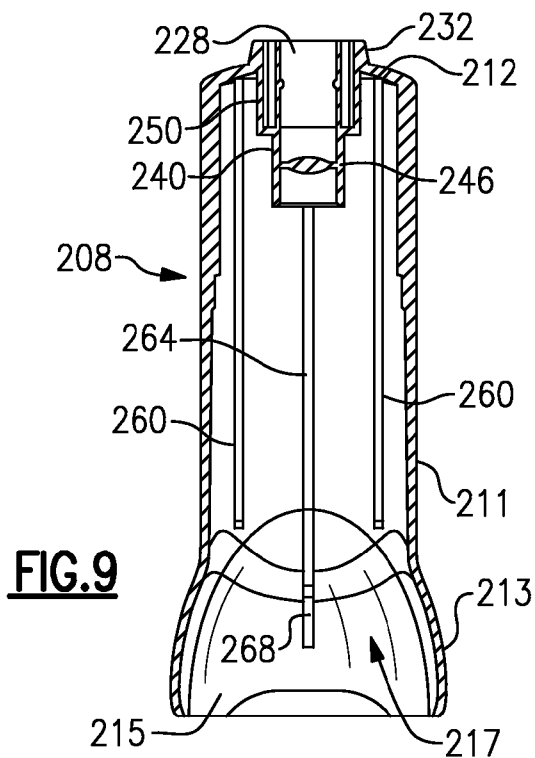
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HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,
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ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE,

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(54) Title: MEDICAL DIAGNOSTIC INSTRUMENT HAVING PORTABLE ILLUMINATOR



(57) Abstract: A portable medical diagnostic instrument includes an instrument head and a handle portion having an open-ended receiving cavity. A compact illuminator defined by a housing retaining a miniature light source and a power supply is releasably fitted within the open-ended receiving cavity of the handle portion wherein the light source of the illuminator is optically coupled with the instrument on assembly therewith. The handle portion can be integral with the instrument or releasably attached. The handle portion according to at least one version is made from a plastic or other suitable material, permitting disposability and/or single patient use. In one version, the handle portion is flexibly deformable, at least partially, to facilitate release of the portable illuminator.

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Korean Utility models and Applications for Utility models since 1975
Japanese Utility models and Applications for Utility models since 1975

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

e-KOMPASS(KIPO internal) "handle", "diagnostic", "illuminator"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 20070230164 A1 (Robert L. Vivenzio et al.) Oct. 4, 2007 See abstract, claims 1, 3, 25, 32, 33 and Fig. 1-13	1-44
Y	WO 2006050574 A1 (LUBOWSKI, David et al.) May, 18, 2006 See abstract, page 8, claims 1, 2, 9, 18, 19 and Fig. 1, 3	1-44
A	WO 2006121530 A2 (MCMAHON, Michael T. et al.) Nov. 16, 2006 See abstract, claims 1, 3, 5 and Fig. 1-25	1-44

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

* Special categories of cited documents:

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"P" document published prior to the international filing date but later than the priority date claimed

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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Date of the actual completion of the international search

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Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date		
US 2007-0230164 A1	04. 10. 2007	AU 2006-232535 A1	03. 04. 2006		
		CA 2603203 A1	16. 11. 2006		
		CA 2603285 A1	12. 10. 2006		
		CN 101287404 A	15. 10. 2008		
		CN 101217911 A	09. 07. 2008		
		CN 101179982 A	14. 05. 2008		
		CN 101287404 A	15. 10. 2008		
		EP 1865824 A2	19. 12. 2007		
		JP 2009-515561 A	16. 04. 2009		
		JP 2009-501551 A	22. 01. 2009		
		US 2007-0230167 A1	04. 10. 2007		
		US 2008-0228038 A1	18. 09. 2008		
		WO 2006-107878 A2	12. 10. 2006		
		WO 2008-080040 A1	03. 07. 2008		
		WO 2006-121530 A3	16. 11. 2006		
		WO 2006-050574 A1	18. 05. 2006	AU 2005-304285 A1	11. 11. 2005
				EP 1814435 A1	08. 08. 2007
US 2009-0209813 A1	20. 08. 2009				
WO 2006-121530 A2	16. 11. 2006	AU 2006-232534 A1	03. 04. 2006		
		CA 2603203 A1	16. 11. 2006		
		CA 2603285 A1	12. 10. 2006		
		CN 101179982 A	14. 05. 2008		
		CN 101217911 A	09. 07. 2008		
		EP 1865823 A2	19. 12. 2007		
		JP 2009-515561 A	16. 04. 2009		
		JP 2009-501551 A	22. 01. 2009		
		US 2007-0230167 A1	04. 10. 2007		
		US 2008-0269565 A1	30. 10. 2008		
		US 2008-0228038 A1	18. 09. 2008		
		WO 2006-107878 A2	12. 10. 2006		
		WO 2008-080033 A3	03. 07. 2008		