

INTERNATIONAL SEARCH REPORT

International application No.
PCT/JP2018/033512

A. CLASSIFICATION OF SUBJECT MATTER Int.Cl. G01N31/00 (2006.01) i, G01N21/77 (2006.01) i, G01N21/78 (2006.01) i, G01N31/22 (2006.01) i 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) Int.Cl. G01N31/00, G01N21/77, G01N21/78, G01N31/22 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched <table style="width:100%; border:none;"> <tr> <td style="width:70%;">Published examined utility model applications of Japan</td> <td style="width:30%;">1922-1996</td> </tr> <tr> <td>Published unexamined utility model applications of Japan</td> <td>1971-2018</td> </tr> <tr> <td>Registered utility model specifications of Japan</td> <td>1996-2018</td> </tr> <tr> <td>Published registered utility model applications of Japan</td> <td>1994-2018</td> </tr> </table> Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)			Published examined utility model applications of Japan	1922-1996	Published unexamined utility model applications of Japan	1971-2018	Registered utility model specifications of Japan	1996-2018	Published registered utility model applications of Japan	1994-2018
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Published unexamined utility model applications of Japan	1971-2018									
Registered utility model specifications of Japan	1996-2018									
Published registered utility model applications of Japan	1994-2018									
C. DOCUMENTS CONSIDERED TO BE RELEVANT										
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.								
Y	JP 2015-152341 A (CABINOTIER CO., LTD.) 24 August 2015, claims 1-7, paragraphs [0023]-[0025], fig. 1, 3 (Family: none)	1-2, 4-5, 10								
Y	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 57496/1988 (Laid-open No. 162652/1989) (FUJIMOTO, Yasuyoshi) 13 November 1989, claims, specification, page 6, fig. 1, 2, 4 (Family: none)	1-2, 4-5, 10								
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.										
<table style="width:100%; border:none;"> <tr> <td style="width:50%; vertical-align:top;"> * Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or 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 </td> <td style="width:50%; vertical-align:top;"> "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "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 "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 documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family </td> </tr> </table>			* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or 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	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "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 "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 documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family						
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Date of the actual completion of the international search 20 December 2018 (20.12.2018)		Date of mailing of the international search report 08 January 2019 (08.01.2019)								
Name and mailing address of the ISA/ Japan Patent Office 3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan		Authorized officer Telephone No.								

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 117728/1976 (Laid-open No. 36381/1978) (TATSUMOTO, Jiro, KOBAYASHI, Hitoshi) 30 March 1978, claims, fig. 1, 2 (Family: none)	1-2, 4-5, 10
Y	JP 2014-238381 A (CABINOTIER CO., LTD.) 18 December 2014, claim 1, paragraphs [0019], [0029] & US 2016/0123867 A1, claim 1, paragraphs [0021], [0032] & WO 2014/196521 A1 & EP 3006936 A1	7-9, 11-14
X Y	JP 9-15237 A (HAMA DENSHI KK) 17 January 1997, claim 1, 9, paragraphs [0043]-[0048], [0062]-[0074], fig. 3, 7, 8 (Family: none)	7, 11, 14 8-9, 12-13
Y	JP 3136622 U (THE PILOT INK CO., LTD.) 01 November 2007, claim 1, paragraph [0008] (Family: none)	7-9, 11-14
Y	JP 2011-63914 A (ASAHI FIBER INDUSTRY CO., LTD.) 31 March 2011, claim 1, paragraph [0022], fig. 3 (Family: none)	8-9, 12-13
A	JS 4382380 A (MARTIN, C.) 10 May 1983, fig. 1-6 & GB 2059077 A	1-14