

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2020/011481

| <p>A. CLASSIFICATION OF SUBJECT MATTER Int.Cl. A61L2/18 (2006.01) i FI: A61L2/18</p> <p>According to International Patent Classification (IPC) or to both national classification and IPC</p> | | | | | | | | | | | | | | | | | |
|--|---|--|---|---|--|-----------|---|-----------|--|---|-----|---|---|-----|---|--|-----|
| <p>B. FIELDS SEARCHED</p> <p>Minimum documentation searched (classification system followed by classification symbols) Int.Cl. A61L2/18</p> <p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched</p> <table style="width:100%; border:none;"> <tr> <td style="padding-left: 20px;">Published examined utility model applications of Japan</td> <td style="text-align: right;">1922-1996</td> </tr> <tr> <td style="padding-left: 20px;">Published unexamined utility model applications of Japan</td> <td style="text-align: right;">1971-2020</td> </tr> <tr> <td style="padding-left: 20px;">Registered utility model specifications of Japan</td> <td style="text-align: right;">1996-2020</td> </tr> <tr> <td style="padding-left: 20px;">Published registered utility model applications of Japan</td> <td style="text-align: right;">1994-2020</td> </tr> </table> <p>Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)</p> | | | Published examined utility model applications of Japan | 1922-1996 | Published unexamined utility model applications of Japan | 1971-2020 | Registered utility model specifications of Japan | 1996-2020 | Published registered utility model applications of Japan | 1994-2020 | | | | | | | |
| Published examined utility model applications of Japan | 1922-1996 | | | | | | | | | | | | | | | | |
| Published unexamined utility model applications of Japan | 1971-2020 | | | | | | | | | | | | | | | | |
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| <p>C. DOCUMENTS CONSIDERED TO BE RELEVANT</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:10%;">Category*</th> <th style="width:70%;">Citation of document, with indication, where appropriate, of the relevant passages</th> <th style="width:20%;">Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td align="center">A</td> <td>JP 2004-537345 A (ECOLAB INC.) 16.12.2004 (2004-12-16), entire text</td> <td align="center">1-7</td> </tr> <tr> <td align="center">A</td> <td>Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 75671/1988 (Laid-open No. 178041/1989) (SANDEN CORPORATION) 20.12.1989 (1989-12-20), entire text</td> <td align="center">1-7</td> </tr> <tr> <td align="center">A</td> <td>JP 2006-198120 A (AIREX CO., LTD.) 03.08.2006 (2006-08-03), entire text</td> <td align="center">1-7</td> </tr> <tr> <td align="center">A</td> <td>US 2018/0360077 A1 (FORCE TECHNOLOGY) 20.12.2018 (2018-12-20), entire text</td> <td align="center">1-7</td> </tr> </tbody> </table> | | | Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. | A | JP 2004-537345 A (ECOLAB INC.) 16.12.2004 (2004-12-16), entire text | 1-7 | A | Microfilm of the specification and drawings annexed to the request of Japanese Utility Model Application No. 75671/1988 (Laid-open No. 178041/1989) (SANDEN CORPORATION) 20.12.1989 (1989-12-20), entire text | 1-7 | A | JP 2006-198120 A (AIREX CO., LTD.) 03.08.2006 (2006-08-03), entire text | 1-7 | A | US 2018/0360077 A1 (FORCE TECHNOLOGY) 20.12.2018 (2018-12-20), entire text | 1-7 |
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| <p><input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.</p> | | | | | | | | | | | | | | | | | |
| <p>* Special categories of cited documents:</p> <table style="width:100%; border:none;"> <tr> <td style="width:50%; vertical-align: top;"> <p>“A” document defining the general state of the art which is not considered to be of particular relevance</p> <p>“E” earlier application or patent but published on or after the international filing date</p> <p>“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)</p> <p>“O” document referring to an oral disclosure, use, exhibition or other means</p> <p>“P” document published prior to the international filing date but later than the priority date claimed</p> </td> <td style="width:50%; vertical-align: top;"> <p>“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</p> <p>“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</p> <p>“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</p> <p>“&” document member of the same patent family</p> </td> </tr> </table> | | | <p>“A” document defining the general state of the art which is not considered to be of particular relevance</p> <p>“E” earlier application or patent but published on or after the international filing date</p> <p>“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)</p> <p>“O” document referring to an oral disclosure, use, exhibition or other means</p> <p>“P” document published prior to the international filing date but later than the priority date claimed</p> | <p>“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</p> <p>“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</p> <p>“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</p> <p>“&” document member of the same patent family</p> | | | | | | | | | | | | | |
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| <p>Date of the actual completion of the international search 08.05.2020</p> | | <p>Date of mailing of the international search report 02.06.2020</p> | | | | | | | | | | | | | | | |
| <p>Name and mailing address of the ISA/ Japan Patent Office 3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan</p> | | <p>Authorized officer</p> <p>Telephone No.</p> | | | | | | | | | | | | | | | |

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Information on patent family members

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|--------------------|------------|----------------------|
| JP 2004-537345 A | 16.12.2004 | US 2002/0159917 A1 |
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| | | WO 2002/087635 A1 |
| | | EP 1381398 A1 |
| JP 1-178041 U1 | 20.12.1989 | (Family: none) |
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| US 2018/0360077 A1 | 20.12.2018 | WO 2017/103262 A1 |
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| | | EP 3389398 A1 |
| | | CN 108601376 A |
| | | KR 10-2018-0104621 A |