

**SUPPLEMENTARY EUROPEAN SEARCH
REPORT**Application number:
EP 20 84 73 55Classification of the application (IPC):
D01F 8/12, D02G 3/02, D01D 5/34, D01D 5/22, D02G 1/02Technical fields searched (IPC):
D02G

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X	JP 2018003190 A (TORAY INDUSTRIES) 11 January 2018 (2018-01-11) * paragraphs [0008], [0012], [0019], [0023], [0028], [0032], [0049]; claims 1-3; figure 1 *	1-7
A	US 2012184166 A1 (KURIHARA HIDESHI [JP] ET AL) 19 July 2012 (2012-07-19) * paragraphs [0111], [0162], [0167], [0168], [0170], [0173], [0192], [0586], [0625]; figure 1; example 39 *	1-7
A	US 2010137527 A1 (IWAMOTO HAYATO [JP] ET AL) 03 June 2010 (2010-06-03) * paragraphs [0009], [0010], [0013], [0017], [0033], [0034] *	1-7

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search The Hague	Date of completion of the search 06 February 2024	Examiner Van Beurden-Hopkins
------------------------------	--	---------------------------------

CATEGORY OF CITED DOCUMENTS

- | | |
|---|--|
| X: particularly relevant if taken alone | P: intermediate document |
| Y: particularly relevant if combined with another document of the same category | T: theory or principle underlying the invention |
| A: technological background | E: earlier patent document, but published on, or after the filing date |
| O: non-written disclosure | D: document cited in the application |
| & : member of the same patent family, corresponding document | L: document cited for other reasons |

Disclaimer: this document has been automatically generated using data structured in accordance with WIPO standard ST.36 from the database of search reports of the European Patent Office. For technical reasons, its content and layout may differ from that of the original publication. Only the original published information is legally binding.



ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 20 84 73 55

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on 06-02-2024.
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 2018003190 A	11-01-2018	JP 6699403 B2 JP 2018003190 A	27-05-2020 11-01-2018
US 2012184166 A1	19-07-2012	BR 112012005904 A2 CN 102597344 A EP 2479320 A1 ES 2537129 T3 KR 20120064705 A RU 2012114588 A TW 201129739 A US 2012184166 A1 WO 2011034113 A1	24-09-2019 18-07-2012 25-07-2012 02-06-2015 19-06-2012 27-10-2013 01-09-2011 19-07-2012 24-03-2011
US 2010137527 A1	03-06-2010	CN 101646812 A KR 20100016009 A US 2010137527 A1 WO 2008129678 A1	10-02-2010 12-02-2010 03-06-2010 30-10-2008