

Title (en)  
DISCHARGE NOZZLE FOR NANO FIBER MANUFACTURING DEVICE AND NANO FIBER MANUFACTURING DEVICE PROVIDED WITH DISCHARGE NOZZLE

Title (de)  
AUSSTOSSDÜSE FÜR EINE NANOFASERHERSTELLUNGSVORRICHTUNG UND NANOFASERHERSTELLUNGSVORRICHTUNG MIT EINER AUSSTOSSDÜSE

Title (fr)  
BUSE D'ÉVACUATION DESTINÉE À UN DISPOSITIF DE FABRICATION DE NANO-FIBRES ET DISPOSITIF DE FABRICATION DE NANO-FIBRES COMPORTANT LA BUSE D'ÉVACUATION

Publication  
**EP 3670712 A4 20210728 (EN)**

Application  
**EP 18820101 A 20180620**

Priority  
• JP 2017121050 A 20170621  
• JP 2018023457 W 20180620

Abstract (en)  
[origin: EP3670712A1] A problem to be solved by the present invention is to provide a discharge nozzle for nanofiber production apparatuses that when producing nanofibers, allows for an easy change to a specification of fibers to be produced, such as the diameter, and thus an improvement in apparatus variety or workability and a nanofiber production apparatus including the discharge nozzle. A discharge nozzle 2 mounted on a nanofiber production apparatus 1 includes a division-type nozzle unit 6 that is provided with a molten/dissolved resin outlet 9 from which a molten or dissolved resin is discharged, a molten/dissolved resin flow path 10 through which the molten or dissolved resin is sent to the molten/dissolved resin outlet 9, a hot blast outlet 11 from which a hot blast is discharged, and a hot blast flow path 12 through which the hot blast is sent to the hot blast outlet 11. The division-type nozzle unit 6 can be divided into first to fourth nozzle units 6a to 6d.

IPC 8 full level  
**D01D 4/02** (2006.01); **D01D 5/04** (2006.01); **D01D 5/08** (2006.01); **D01D 5/098** (2006.01); **D01D 5/14** (2006.01); **D01D 13/02** (2006.01)

CPC (source: EP KR US)  
**D01D 4/02** (2013.01 - KR); **D01D 4/025** (2013.01 - EP US); **D01D 5/04** (2013.01 - KR); **D01D 5/098** (2013.01 - KR); **D01D 5/0985** (2013.01 - EP US); **D01D 5/14** (2013.01 - EP US); **D01D 5/32** (2013.01 - KR); **D01D 13/02** (2013.01 - EP US)

Citation (search report)  
• [XY] WO 9634132 A1 19961031 - EXXON CHEMICAL PATENTS INC [US]  
• [XY] US 6422848 B1 20020723 - ALLEN MARTIN A [US], et al  
• [Y] EP 2327817 A1 20110601 - JAPAN VILENE CO LTD [JP]  
• See references of WO 2018235866A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**EP 3670712 A1 20200624; EP 3670712 A4 20210728**; AU 2018289746 A1 20200213; CA 3104610 A1 20181227; CN 111542652 A 20200814; JP WO2018235866 A1 20201022; KR 20200042460 A 20200423; RU 2020102026 A 20210721; RU 2020102026 A3 20211022; SG 11202105386V A 20210629; TW 201920787 A 20190601; US 2021317600 A1 20211014; WO 2018235866 A1 20181227; ZA 201908535 B 20210526

DOCDB simple family (application)  
**EP 18820101 A 20180620**; AU 2018289746 A 20180620; CA 3104610 A 20180620; CN 201880054273 A 20180620; JP 2018023457 W 20180620; JP 2019525662 A 20180620; KR 20207001800 A 20180620; RU 2020102026 A 20180620; SG 11202105386V A 20180620; TW 107121131 A 20180620; US 201816625439 A 20180620; ZA 201908535 A 20191220