

Title (en)
Air-jet spinning machine

Title (de)
Luftdüsen Spinnmaschine

Title (fr)
Machine à filer à jets d'air

Publication
EP 2009150 A1 20081231 (EN)

Application
EP 08010201 A 20080604

Priority

- JP 2007148338 A 20070604
- JP 2007148339 A 20070604
- JP 2007164202 A 20070621

Abstract (en)
The present invention provides a spinning machine which can prevent reversed twine fibers in swirling from entwining each other without setting a diameter of a space part of a nozzle block to be an unnecessarily large size. It is assumed that the diameter of a cylindrical space part 43 is T, an inclination angle of an air nozzle 34 with respect to a plane surface orthogonal to an axis direction of the cylindrical space part 43 is α , and a length from a nipping point P at which the twine fibers 46 nipped by the front roller pair 22 are released to a center R of the entrance of a yarn passage hole 39 is L. And, when a relation of $T \neq L \cos \alpha / \dot{A}$, is assumed, the twine fibers 46 reversed by a swirling airflow almost go around along the periphery wall of the cylindrical space part 43, that is, the inner periphery wall 44 of the nozzle block 33 in being reversed and in a planer view seen from the axis direction of the cylindrical space part 43. Therefore, the twine fibers 46 in swirling can be hardly entwined each other (Fig 2).

IPC 8 full level
D01H 1/115 (2006.01); **D01H 4/02** (2006.01)

CPC (source: EP)
D01H 1/115 (2013.01); **D01H 4/02** (2013.01)

Citation (applicant)

- JP 2003198837 A 20030711 - KOFAX IMAGE PRODUCTS INC
- US 5263310 A 19931123 - MORI SHIGEKI [JP]
- "Seni binran process", 20 January 1986, MARUZEN CO., LTD, article "Standard teat method", pages: 1093 - 1094

Citation (search report)

- [X] WO 03014443 A1 20030220 - RIETER AG MASCHF [CH], et al
- [X] EP 1347085 A2 20030924 - MURATA MACHINERY LTD [JP]
- [AP] EP 1826299 A2 20070829 - MURATA MACHINERY LTD [JP]
- [AD] JP 2003193337 A 20030709 - MURATA MACHINERY LTD

Cited by
EP2369044A3; US11155939B2; EP3243941A1; CN107338518A; US10597799B2; WO2011006270A3; WO2011006270A2; US8464510B2

Designated contracting state (EPC)
CH DE LI

Designated extension state (EPC)
AL BA MK RS AL BA MK RS

DOCDB simple family (publication)
EP 2009150 A1 20081231; EP 2009150 B1 20140305; EP 2009150 B2 20180110; CN 102304788 A 20120104; CN 102304788 B 20140730

DOCDB simple family (application)
EP 08010201 A 20080604; CN 201110208125 A 20080521