

Title (en)
Method and apparatus for spreading fiber strands

Title (de)
Verfahren und Vorrichtung zur Ausbreitung von Fasersträngen

Title (fr)
Procédé et appareil pour étaler des brins de fibres

Publication
EP 2377978 A1 20111019 (EN)

Application
EP 10160270 A 20100419

Priority
EP 10160270 A 20100419

Abstract (en)
The present invention provides a spreader assembly (2) suitable for opening and spreading a fiber strand into smaller strands or individual filaments. The spreader assembly (2) comprises at least one passageway (21) having an inlet opening (211) for receiving said fiber strand and having an outlet opening (232) through which said fiber strand exits said passageway (21), a divergent zone (23) within the passageway (21) having an entrance end (231) and an exit end (232), and at least one through hole (242) connected to the passageway (21) at an angle and suitable for introducing the air flow thereto. In order to increase the efficacy of opening a fiber strand, the angle of through hole (242) is substantially perpendicular with respect to the longitudinal direction of the passageway (21). In order to increase efficacy of spreading the opened fibers, the divergent zone has a flat cross-section and the area of said exit end (232) is larger than the one of the entrance end (231).

IPC 8 full level
B65H 51/005 (2006.01); **D01D 11/02** (2006.01); **D02J 1/18** (2006.01)

CPC (source: EP)
B65H 51/005 (2013.01); **D01D 11/02** (2013.01); **D02J 1/18** (2013.01)

Citation (applicant)
• US 4799985 A 19890124 - MCMAHON PAUL E [US], et al
• US 6032342 A 20000307 - KAWABE KAZUMASA [JP], et al
• US 3873389 A 19750325 - DANIELS CLARE G

Citation (search report)
• [XY] GB 2340136 A 20000216 - PLASTIC DEV LTD [GB]
• [XDYI] US 3873389 A 19750325 - DANIELS CLARE G
• [XAI] JP 2008255529 A 20081023 - DAICEL CHEM
• [XY] EP 1096047 A1 20010502 - CELANESE ACETATE LLC [US]
• [XA] US 2657433 A 19531103 - MERRIMAN HORACE B
• [XA] WO 0065134 A1 20001102 - ICBT PERFOJET SA [FR], et al
• [XA] DE 102008003369 A1 20090709 - HAUNI MASCHINENBAU AG [DE]
• [YA] US 3535745 A 19701027 - ZEIDMAN GORDON G

Cited by
DE102015010012A1; CN114000263A; CN102505242A; CN114395834A; EP3124661A1

Designated contracting state (EPC)
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 SE SI SK SM TR

Designated extension state (EPC)
AL BA ME RS

DOCDB simple family (publication)
EP 2377978 A1 20111019

DOCDB simple family (application)
EP 10160270 A 20100419