

Title (en)  
MULTIFUNCTIONAL NOZZLE FOR A SPINNING MACHINE

Title (de)  
MULTIFUNKTIONSDÜSE FÜR EINE SPINNMASCHINE

Title (fr)  
BUSE MULTIFONCTIONNELLE DESTINÉE À UN MÉTIER À FILER

Publication  
**EP 4259867 A1 20231018 (DE)**

Application  
**EP 21836348 A 20211202**

Priority  
• DE 102020133359 A 20201214  
• EP 2021083941 W 20211202

Abstract (en)  
[origin: WO2022128504A1] The invention relates to a multifunctional nozzle for a spinning machine, said nozzle being used to produce at least one improved real twist yarn. The multifunctional nozzle additionally facilitates the production of a real twist yarn with which the advantages of an open-end yarn can be at least partly combined with those of a ring yarn. For this purpose, the multifunctional nozzle comprises a nozzle channel which is provided in a nozzle housing, is open on one side, and in which a vortex flow can be generated. Furthermore, a nozzle body which is designed to be shorter than the nozzle channel is provided with a through-channel for the passage of a thread or fiber band, wherein an annular gap with at least one narrow point is formed within the nozzle channel, said annular gap tapering on both sides at the narrow point. The narrow point is arranged downstream of a fluid inlet which leads to the nozzle channel. Furthermore, a hollow body-type flow conducting body is provided between the annular gap and the open end of the nozzle channel for guiding the thread or fiber band together with a fluid, said annular gap being formed between the nozzle body and the nozzle housing and/or the flow conducting body.

IPC 8 full level  
**D01H 1/115** (2006.01); **D01H 4/38** (2006.01)

CPC (source: EP US)  
**D01H 1/115** (2013.01 - EP US); **D01H 4/02** (2013.01 - US); **D01H 4/38** (2013.01 - EP US); **D01H 4/34** (2013.01 - US)

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

Designated extension state (EPC)  
BA ME

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**WO 2022128504 A1 20220623**; CN 116710604 A 20230905; DE 102020133359 A1 20220615; EP 4259867 A1 20231018; JP 2023552867 A 20231219; MX 2023007018 A 20230627; TW 202229673 A 20220801; US 2024026576 A1 20240125

DOCDB simple family (application)  
**EP 2021083941 W 20211202**; CN 202180083229 A 20211202; DE 102020133359 A 20201214; EP 21836348 A 20211202; JP 2023535841 A 20211202; MX 2023007018 A 20211202; TW 110146368 A 20211210; US 202118254717 A 20211202