

Title (en)  
Yarn supplying system

Title (de)  
Garnbereitstellungssystem

Title (fr)  
Système d'alimentation en fil

Publication  
**EP 2868609 A1 20150506 (EN)**

Application  
**EP 14190798 A 20141029**

Priority  
JP 2013226469 A 20131031

Abstract (en)  
There is provided a yarn supplying system capable of maintaining the tensile force of the yarn in a yarn supply path in an appropriate range, and supplying the yarn from the bobbin without slackening of the yarn with a simple configuration. The yarn supplying system includes a yarn storing device (2) and a control means (1C). The yarn storing device (2) includes a storing unit (10) that stores a yarn (3Y) reeled out from a bobbin (3) in the middle of a yarn supply path, a pull-in piece (20), a filament (30), an elastic body (40), and a displacement detector (50). The pull-in piece (20) pulls in the yarn (3Y) toward the storing unit (10) and linearly reciprocates along a pull-in direction. The filament (30) is connected to the pull-in piece (20) and includes a turn back portion (30t) at the middle, and reciprocates by interlocking with the reciprocate movement of the pull-in piece (20) without substantially stretching or contracting. The elastic body (40) is connected to the filament (30). The displacement detector (50) detects displacement of the filament (30) from an origin position. The control means (1C) controls a supply amount of the yarn (3Y) from the bobbin (3) based on the displacement of the filament (30) from the origin position.

IPC 8 full level  
**B65H 59/36** (2006.01); **B65H 59/38** (2006.01)

CPC (source: EP)  
**B65H 59/36** (2013.01); **B65H 59/387** (2013.01); **D04B 15/52** (2013.01); **B65H 2701/31** (2013.01)

Citation (applicant)  
JP 2006299426 A 20061102 - TORAY INDUSTRIES

Citation (search report)  
• [YA] US 4986316 A 19910122 - MOROHASHI KAZUO [JP], et al  
• [Y] JP H0428671 A 19920131 - BANDO CHEMICAL IND  
• [A] JP S427532 Y1 19670412  
• [A] JP H1045295 A 19980217 - NIKKO KINZOKU KK

Cited by  
CN106521803A; ITUA20162665A1; US9856106B1; US2018002133A1; EP3702305A1; US11616355B2

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

DOCDB simple family (publication)  
**EP 2868609 A1 20150506; EP 2868609 B1 20160330**; CN 104593935 A 20150506; CN 104593935 B 20160518; JP 2015110852 A 20150618; JP 6086882 B2 20170301; KR 101577298 B1 20151214; KR 20150050393 A 20150508

DOCDB simple family (application)  
**EP 14190798 A 20141029**; CN 201410602152 A 20141031; JP 2014166106 A 20140818; KR 20140145729 A 20141027