

Title (en)
Yarn tension sensor with repeated adjustment

Title (de)
Fadenspannungssensor mit wiederholtem Abgleich

Title (fr)
Capteur de tension de fil à ajustement répété

Publication
EP 0943713 B1 20061122 (DE)

Application
EP 99104418 A 19990305

Priority
DE 19811241 A 19980314

Abstract (en)
[origin: EP0943713A2] The tension in the yarn (7) is measured by the force exerted on a guide peg (21). An actuator can move two further pegs (42,43) into the yarn path to lift the yarn off the measuring peg (21) to calibrate the zero position on the transducer. Independent claims are also included for the following: a) A yarn feeder for knitting machines with strongly variable yarn requirements, having a yarn delivery wheel (4) driven by a motor controlled by the claimed yarn tension sensor to provide constant feed tension. b) Analyzing the tension signal to detect periods when the tension can vary from the set value (e.g. during the carriage return on the knitting machine) and initiating the actuator to lift the yarn off the measuring peg, reset the zero and replace the yarn on the peg.

IPC 8 full level
D04B 15/44 (2006.01); **D04B 15/50** (2006.01); **B65H 59/00** (2006.01); **B65H 59/38** (2006.01); **B65H 59/40** (2006.01); **D04B 15/46** (2006.01); **D04B 15/48** (2006.01); **D04B 27/12** (2006.01); **D04B 35/12** (2006.01)

CPC (source: EP KR US)
B65H 59/40 (2013.01 - EP US); **D04B 15/46** (2013.01 - EP US); **D04B 15/50** (2013.01 - EP KR US); **B65H 2553/22** (2013.01 - EP US); **B65H 2557/61** (2013.01 - EP US); **B65H 2601/524** (2013.01 - EP US); **B65H 2701/319** (2013.01 - EP US)

Cited by
DE102012111784B3; EP2573026A4; EP3967801A1; BE1028558B1; FR2797857A1; DE102015120264B3; WO2015188883A1; WO2022053321A1; WO2009052846A1; EP3170779A1; WO03085183A1; TWI427202B

Designated contracting state (EPC)
BE CH DE ES FR GB GR IT LI NL SE

DOCDB simple family (publication)
EP 0943713 A2 19990922; EP 0943713 A3 20000503; EP 0943713 B1 20061122; BR 9901005 A 20000308; BR 9901005 B1 20081118; CA 2265383 A1 19990914; CN 1182376 C 20041229; CN 1238450 A 19991215; CO 4810244 A1 19990630; CZ 299690 B6 20081022; CZ 87099 A3 19990915; DE 19811241 A1 19990930; DE 59913989 D1 20070104; HK 1024298 A1 20001005; ID 22192 A 19990916; IL 128883 A0 20000131; IL 128883 A 20021110; JP 3113241 B2 20001127; JP H11286855 A 19991019; KR 100292421 B1 20010601; KR 19990077812 A 19991025; RU 2154128 C1 20000810; TR 199900566 A2 19991021; TR 199900566 A3 19991021; TW 436542 B 20010528; UA 49911 C2 20021015; US 6105895 A 20000822; UY 25425 A1 19990719

DOCDB simple family (application)
EP 99104418 A 19990305; BR 9901005 A 19990312; CA 2265383 A 19990312; CN 99103984 A 19990312; CO 99015396 A 19990312; CZ 87099 A 19990312; DE 19811241 A 19980314; DE 59913989 T 19990305; HK 00103544 A 20000613; ID 990200 D 19990310; IL 12888399 A 19990308; JP 5986499 A 19990308; KR 19990008226 A 19990312; RU 99105561 A 19990312; TR 9900566 A 19990312; TW 88103996 A 19990312; UA 99031331 A 19990311; US 26885499 A 19990315; UY 25425 A 19990311