

Title (en)  
Yarn winding machine

Title (de)  
Garnwicklungsmaschine

Title (fr)  
Machine de renvideur de fil

Publication  
**EP 2354069 B1 20140917 (EN)**

Application  
**EP 11152948 A 20110201**

Priority  
JP 2010021259 A 20100202

Abstract (en)  
[origin: EP2354069A2] A spinning machine (1) includes a winding device (12) and a slack eliminating device (8). The slack eliminating device (8) includes a slack eliminating roller (30) and a yarn detecting sensor (34). The yarn detecting sensor (34) is a reflective photo sensor having a light emitting element (41) and a light receiving element (42). An opening provided for the light emitting element (41) has a prescribed width such that a width of an irradiated range on the slack eliminating roller (30) is substantially equal to a thickness of the yarn (16).

IPC 8 full level  
**B65H 51/22** (2006.01); **B65H 54/26** (2006.01); **B65H 63/06** (2006.01); **D01H 13/10** (2006.01)

CPC (source: EP)  
**B65H 51/22** (2013.01); **B65H 54/26** (2013.01); **B65H 63/06** (2013.01); **D01H 13/10** (2013.01); **B65H 2701/31** (2013.01)

Cited by  
CN114148817A; EP2573225A3; EP2927173A1; CN104944211A; EP2889249A1; US9884739B2; EP2361867B1

Designated contracting state (EPC)  
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DOCDB simple family (publication)  
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CN 104590944 A 20150506; CN 104590944 B 20170711; JP 2011157196 A 20110818

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**EP 11152948 A 20110201**; CN 201110007786 A 20110114; CN 201410710885 A 20110114; JP 2010021259 A 20100202