

Title (en)  
Yarn winding unit and yarn winding machine

Title (de)  
Garnwickel­einheit und Garnwickelmaschine

Title (fr)  
Unité de bobinage de fil et machine de bobinage de fil

Publication  
**EP 2570375 B1 20170322 (EN)**

Application  
**EP 12177666 A 20120724**

Priority  
JP 2011202122 A 20110915

Abstract (en)  
[origin: EP2570375A2] A spinning machine (1) is a yarn winding unit including a frame (6), and a cradle device (100) including a cradle arm (71) adapted to rotatably hold a package (45) around which a spun yarn (10) is wound, an air cylinder (60, 160) adapted to drive the cradle arm (71), and an electromagnetic valve (63a, 64a, 68a) of a male connector section (103) adapted to control the air cylinder (60, 160), the cradle device (100) being a module provided detachably to the frame.

IPC 8 full level  
**B65H 54/42** (2006.01); **B65H 54/52** (2006.01); **B65H 54/553** (2006.01); **B65H 54/72** (2006.01)

CPC (source: EP)  
**B65H 54/42** (2013.01); **B65H 54/52** (2013.01); **B65H 54/553** (2013.01); **B65H 54/72** (2013.01); **B65H 2701/31** (2013.01)

Cited by  
EP2862825A1; EP2862826A1; CN107840199A

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

DOCDB simple family (publication)  
**EP 2570375 A2 20130320; EP 2570375 A3 20151125; EP 2570375 B1 20170322**; CN 102995175 A 20130327; CN 102995175 B 20170616; IN 1696DE2012 A 20150925; JP 2013063809 A 20130411

DOCDB simple family (application)  
**EP 12177666 A 20120724**; CN 201210197109 A 20120614; IN 1696DE2012 A 20120601; JP 2011202122 A 20110915