



EP 2 388 226 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
14.11.2012 Bulletin 2012/46

(51) Int Cl.:
B65H 57/18 (2006.01) **B65H 63/00** (2006.01)
B65H 67/02 (2006.01) **B65H 69/06** (2006.01)

(43) Date of publication A2:
23.11.2011 Bulletin 2011/47

(21) Application number: 11165313.5

(22) Date of filing: 09.05.2011

(84) Designated Contracting States:
**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 States:
BA ME

(30) Priority: 17.05.2010 JP 2010113588

(71) Applicant: **Murata Machinery, Ltd.**
Minami-ku
Kyoto-shi
Kyoto 601-8326 (JP)

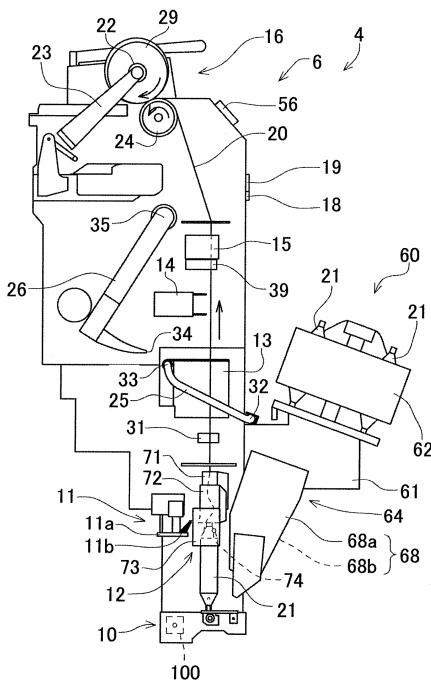
(72) Inventor: **Kawamoto, Kenji**
Kyoto Kyoto 612-8686 (JP)

(74) Representative: **Beck, Alexander**
Hansmann & Vogeser
Patent- und Rechtsanwälte
Maximilianstrasse 4b
82319 Starnberg (DE)

(54) **Winding unit and yarn winding machine equipped with the same**

(57) The present invention aims to provide a winding unit having a configuration in which a yarn feeding bobbin is replaced while suppressing rise in manufacturing cost and lowering in quality of a package. As means for achieving such an object, a winder unit (4) of the present invention includes a bobbin holding portion (110), a bobbin supply device (60), a winding section (16), a yarn splicing device (14), a chase portion detection sensor (74), and a determination section (51). The bobbin holding portion (110) holds a yarn feeding bobbin. The bobbin supply device (60) performs a supplying operation of the yarn feeding bobbin to the bobbin holding portion (110). The winding section (16) performs a winding operation of winding a yarn of the yarn feeding bobbin held by the bobbin holding portion (110) to form a package. The yarn splicing device (14) performs a yarn splicing operation of splicing a yarn end of the package and a yarn end of the yarn feeding bobbin when the yarn is cut. The chase portion detection sensor (74) detects presence/absence of the yarn feeding bobbin at the bobbin holding portion (110). The determination section (51) determines whether or not supply of the yarn feeding bobbin is successful based on a detection result of the chase portion detection sensor (74) after the bobbin supply device (60) performs the supplying operation of the yarn feeding bobbin and until the yarn splicing device (14) starts the yarn splicing operation.

FIG. 2





EUROPEAN SEARCH REPORT

Application Number
EP 11 16 5313

DOCUMENTS CONSIDERED TO BE RELEVANT		Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages		
A,D	JP 2009 018930 A (MURATA MACHINERY LTD) 29 January 2009 (2009-01-29) * abstract; figures 9,10 * -----	1-14	INV. B65H57/18 B65H63/00 B65H67/02 B65H69/06
A	US 5 082 194 A (GRECKSCH HANS [DE] ET AL) 21 January 1992 (1992-01-21) * column 10, line 49 - column 11, line 7; figure 1 * -----	1,4	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
2	Place of search	Date of completion of the search	Examiner
	The Hague	4 October 2012	Pussemier, Bart
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 11 16 5313

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on. The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

04-10-2012

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
JP 2009018930	A	29-01-2009	CN EP JP JP	101343003 A 2014596 A2 4492650 B2 2009018930 A		14-01-2009 14-01-2009 30-06-2010 29-01-2009
<hr/>						
US 5082194	A	21-01-1992	EP JP JP US	0427990 A2 2929502 B2 3223073 A 5082194 A		22-05-1991 03-08-1999 02-10-1991 21-01-1992
<hr/>						