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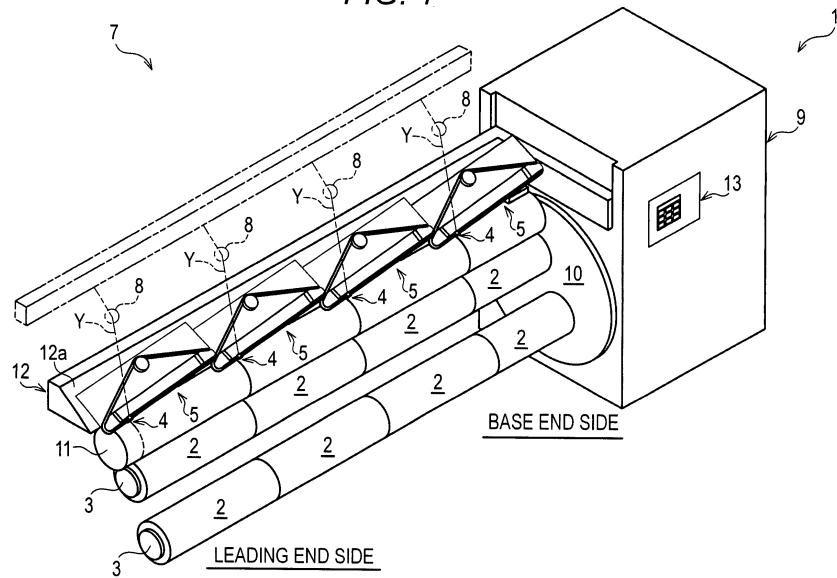
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### (54) Yarn winding apparatus and spinning machine

(57) The present invention provides a yarn winding apparatus which, even when the relative positional relationship between each take-up tube and the corresponding traverse device is deteriorated, enables a package to be formed at the desired position with respect to the corresponding take-up tube. A yarn winding apparatus 1 includes a bobbin holder 3 on which a plurality of take-

up tubes 2 are installed and supported on the same shaft, and a plurality of traverse devices 5 each including a yarn guide 4 and configured to reciprocate the yarn guide 4 to traverse a yarn Y with respect to a corresponding take-up tube 2. Each of the traverse devices 5 allows a reciprocating range of reciprocation of the yarn guide 4 to be varied and is located in association with the corresponding take-up tube 2.

*FIG. 1*





## EUROPEAN SEARCH REPORT

Application Number

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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The present search report has been drawn up for all claims			
Place of search	Date of completion of the search		Examiner
The Hague	25 September 2013		Guisan, Thierry
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone	T : theory or principle underlying the invention		
Y : particularly relevant if combined with another document of the same category	E : earlier patent document, but published on, or after the filing date		
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O : non-written disclosure	L : document cited for other reasons		
P : intermediate document	& : member of the same patent family, corresponding document		



## EUROPEAN SEARCH REPORT

Application Number  
EP 09 01 5548

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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	
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Application Number

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### CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

### LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



**LACK OF UNITY OF INVENTION**  
**SHEET B**

Application Number  
EP 09 01 5548

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

**1. claims: 1-8**

A yarn winding apparatus including a bobbin holder with a plurality of take-up tubes and a plurality of traverse devices each including an endless belt supporting a yarn guide allowing a reciprocating range of reciprocation of the yarn to be varied.

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**2. claims: 9-11**

A traverse device in a winding apparatus device including a yarn guide configured to be able to catch a yarn utilizing tension of the yarn and enabling the yarn guide to reciprocate, a traverse control section and a yarn tension varying means.

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

EP 09 01 5548

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25-09-2013

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