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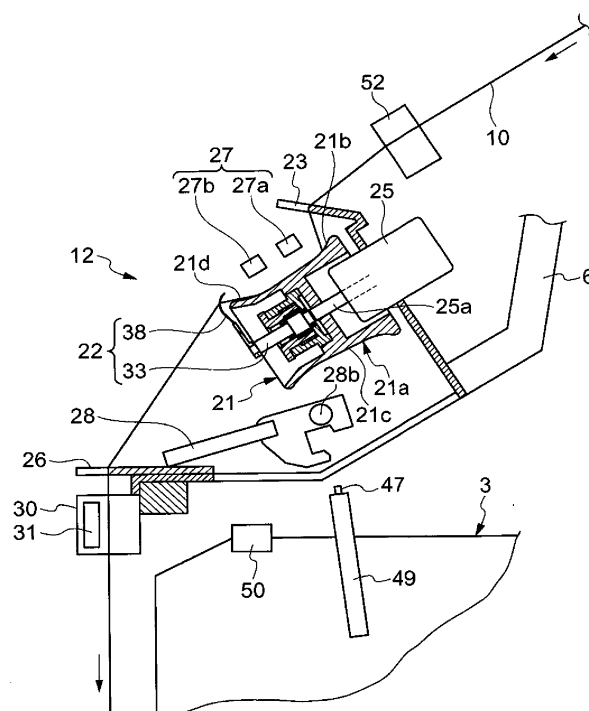
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(54) **Spinning unit, spinning machine and yarn processing method**

(57) A spinning machine includes an air-jet spinning device (9) adapted to produce a spun yarn (10) by twisting a fiber bundle (8), a yarn accumulating roller (21) provided downstream of the air-jet spinning device (9) and adapted to temporarily accumulate the spun yarn (10) by rotating and winding the spun yarn (10) around an outer peripheral surface (21a) thereof, a yarn hooking member (22) provided downstream of the yarn accumulating roller (21) and adapted to wind the spun yarn (10) around the outer peripheral surface (21a) of the yarn accumulating roller (21) by integrally rotating with the yarn accumulating roller (21) while being in contact with the spun yarn (10), a yarn removing lever (28) that can remove the spun yarn (10) from the yarn hooking member (28), and a yarn removal detecting section that detects a removal of the spun yarn (10) from the yarn hooking member (22) by the yarn removing lever (28).

FIG. 4





EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
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The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 20 January 2017	Examiner Wendl, Helen
CATEGORY OF CITED DOCUMENTS 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		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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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

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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: 1-7

Spinning unit comprising a spinning device, a yarn accumulating roller, a yarn hooking member, a yarn removing member and a yarn removal detecting section.

2. claims: 8-11

Yarn processing method during a yarn joining operation in a spinning machine (1) with a spinning device (9), a yarn joining device (43) and a yarn accumulating device (12) whereby the timing of the yarn joining operation is controlled according to specific criteria.

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

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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
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