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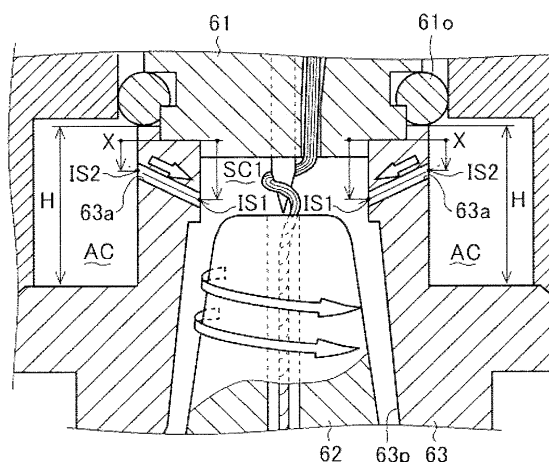
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(54) **Air spinning device, spinning unit, and spinning method using the air spinning device**

(57) An air spinning device (6) includes a nozzle block (63) that includes a through hole (63p) that partially defines a spinning chamber (SC), and an air hole (63a) that is communicable with the spinning chamber (SC); a fiber guide (61) in which a fiber introducing passage (61g) that is communicable with the spinning chamber (SC) is defined; and a spindle (62) in which a fiber passageway (62s) that is communicable with the spinning chamber (SC) is defined. The air spinning device (6) spins a spun

yarn (Y) from a fiber bundle (F) by supplying air from the air hole (63a) into the spinning chamber (SC). The air hole (63a) is located such that a point of intersection (IS1) between a central axis of the air hole (63a) and a wall surface of the through hole (63p) is in a range of greater than or equal to 3 mm to less than or equal to 10 mm from a contact surface between the nozzle block (63) and the fiber guide (61).

FIG. 10





PARTIAL EUROPEAN SEARCH REPORT

Application Number

under Rule 62a and/or 63 of the European Patent Convention.
This report shall be considered, for the purposes of
subsequent proceedings, as the European search report

EP 11 18 7855

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	EP 1 584 715 A1 (RIETER AG MASCHF [CH]) 12 October 2005 (2005-10-12) * paragraph [0015] - paragraph [0016] * * table 1 * * figures 5, 6 *	1,3-5	INV. D01H4/02 D01H1/115
A	EP 1 335 050 A2 (RIETER AG MASCHF [CH]) 13 August 2003 (2003-08-13) * claim 5 * * figure 3 *	1,3-5	
A	WO 2010/034416 A1 (RIETER AG MASCHF [CH]; SCWEIER PETER [DE]) 1 April 2010 (2010-04-01) * page 8, paragraph 2 * * figure 1 *	1,3-5	
A	DE 10 2004 044345 A1 (STAHLECKER GMBH WILHELM [DE]) 16 March 2006 (2006-03-16) * paragraph [0016] - paragraph [0025] * * figures 1, 2 *	1,3-5	
			TECHNICAL FIELDS SEARCHED (IPC)
			D01H
INCOMPLETE SEARCH			
The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC so that only a partial search (R.62a, 63) has been carried out. Claims searched completely : Claims searched incompletely : Claims not searched : Reason for the limitation of the search: see sheet C			
Place of search		Date of completion of the search	Examiner
Munich		29 October 2015	Hausding, Jan
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			

EPO FORM 1503 03.82 (P04E07)

Application Number

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DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (IPC)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
A	CH 696 848 A5 (RIETER AG MASCHF [CH]) 31 December 2007 (2007-12-31) * paragraph [0018] - paragraph [0020] * * figures 1-5 * -----	1,3-5	
			TECHNICAL FIELDS SEARCHED (IPC)

**INCOMPLETE SEARCH
SHEET C**

Application Number

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Claim(s) completely searchable:

1, 3-5

Claim(s) not searched:

2

Reason for the limitation of the search:

Claims 1 and 2 have been drafted as separate independent claims. Under Article 84 in combination with Rule 43(2) EPC, an application may contain more than one independent claim in a particular category only if the subject-matter claimed falls within one or more of the exceptional situations set out in paragraph (a), (b) or (c) of Rule 43(2) EPC. This is not the case in the present application, however, as the subject-matter of claims 1 and 2 does neither describe interrelated products nor alternative solutions. The search has been restricted to the subject-matter indicated by the applicant in his letter of 05-05-2015 filed in reply to the invitation pursuant to Rule 62a(1) EPC.



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
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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, 3, 4

an air spinning device having certain spinning chamber dimensions

2. claim: 5

a method for adjusting the spinning chamber to different fiber lengths

**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
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

29-10-2015

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