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EUROPEAN PATENT APPLICATION

⑬ Application number: 90302059.2

⑮ Int. Cl. 5: D01H 1/244, D01H 1/34,
D01H 15/00

⑭ Date of filing: 27.02.90

⑯ Priority: 23.03.89 GB 8906712

⑰ Date of publication of application:
26.09.90 Bulletin 90/39

⑲ Designated Contracting States:
CH DE ES IT LI

⑳ Date of deferred publication of the search report:
02.05.91 Bulletin 91/18

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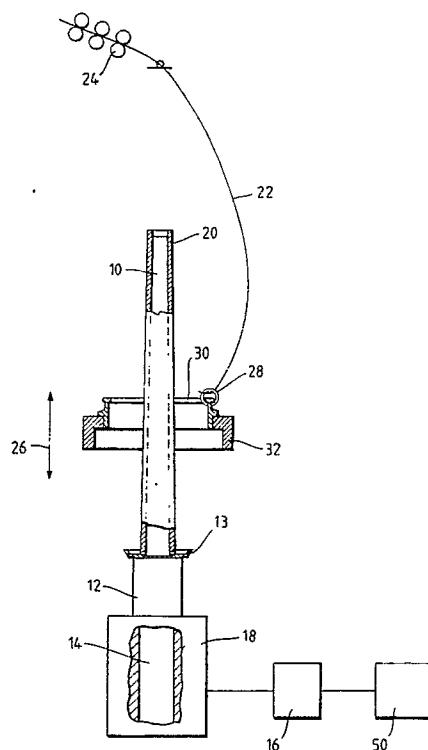
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④ Ring spinning doubling and twisted frames with switched reluctance drive spindle motor.

⑤ A textile machine of the ring spinning type, the ring doubling type or the ring twisting type including a switched reluctance drive motor (18) to drive a spindle (10) onto which a package former (20) for winding yarn (22) is placed. Delivery rollers (24) are provided for feeding yarn (22) to a ring (30) and traveller assembly. At least one control unit (16) is provided for controlling the speed of the motor (18), and the delivery rollers (24), and the axial movement (26) of the ring (30).

An annular member (12) is also provided for transferring the feed of yarn from the package former (20) to the annular member (12) once it has been determined that the package former (20) is full and requires replacement. Completely automatic piecing, and automatic doffing of a loaded package former (20), can be provided.





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number

EP 90 30 2059

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 5)
A	DE-A-3 717 749 (ZUBLER GERÄTEBAU GmbH) * Column 4, lines 30-34; figure 1 * ---	1	D 01 H 1/244 D 01 H 1/34
A	ENGINEERING, vol. 223, no. 4, April 1983, pages 271-274, London, GB; B. RAY: "Iron meets silicon in new motor" * Page 273, column 2, lines 11-19 * ---	1	
A, P	DE-A-3 822 420 (SKF TEXTILMASCHINEN-KOMPONENTEN GmbH) ---		
A	DE-A-2 027 135 (SIEMENS AG) -----		
TECHNICAL FIELDS SEARCHED (Int. Cl. 5)			
D 01 H H 02 K H 02 P			
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search	Examiner	
THE HAGUE	29-01-1991	FAIRBANKS S.A.	
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			