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

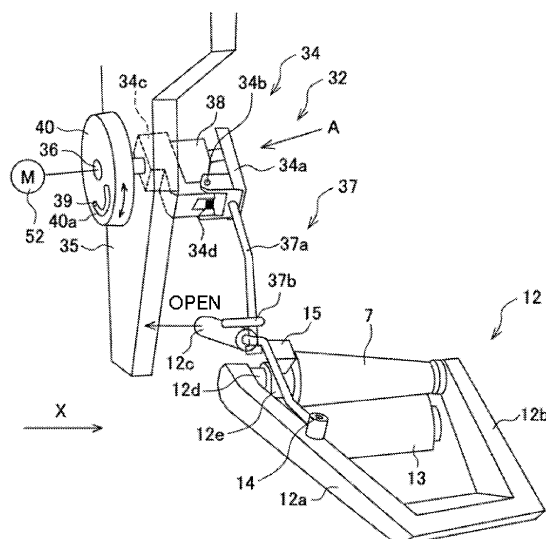
(72) Inventors:
• **Inoue, Takuya**
Kyoto Kyoto 612-8686 (JP)
• **Sawanoi, Kaname**
Kyoto Kyoto 612-8686 (JP)
• **Murayama, Kenichi**
Kyoto Kyoto 612-8686 (JP)
• **Shiota, Takeshi**
Kyoto Kyoto 612-8686 (JP)

(74) Representative: **Weickmann & Weickmann**
Maximilianstrasse 4b
82319 Starnberg (DE)

(54) **Doffing apparatus**

(57) A textile machine represented by an automatic winder (1, 103) including multiple winding units (2, 112) arranged in a row and a doffing apparatus (3, 103) capable of running in an arrangement direction of the winding units. The winding units wind on a winding tube (7, 133) a spun yarn that is unwound from multiple yarn supplying bobbins (5) while performing yarn joining thereby creating a fully-wound package of a specific yarn amount. The doffing apparatus (3, 103) of the automatic winder (1, 103) includes, for example, a cradle opener (32, 140) that performs opening/closing operation and raising/lowering operation of a cradle (12, 132), and a yarn catching unit (60, 145) that catches a yarn end on the yarn supplying bobbin side and guides the yarn end to a winding tube (7, 133). The cradle opener (32, 140) is raised or lowered by a fluid pressure cylinder (38, 158) and opened or closed by a driving motor (52, 152, 156). The yarn catching unit (60, 145) is driven by a driving source (62, 171, 182).

FIG. 3





EUROPEAN SEARCH REPORT

Application Number
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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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			TECHNICAL FIELDS SEARCHED (IPC)
			B65H D01H
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 6 February 2015	Examiner Pussemier, Bart
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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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82