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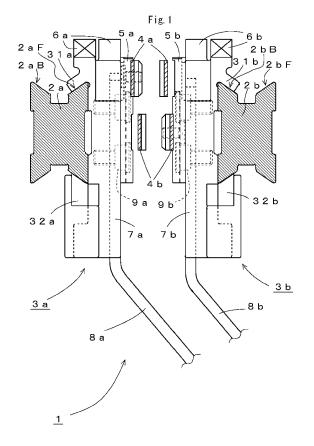
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#### (54) YARN FEEDING DEVICE

(57) Provided is a yarn feeding device capable of easily performing a necessary operation for a process to change or to mix specification among entraining-type and self-running-type running members such as yarn feeders.

Two movement belts 4a, 4b are arranged between adjacent yarn feeder rails 2a, 2b while being divided into upper and lower stages. The upper and lower movement belts 4a, 4b respectively move varn feeders 3a, 3b that are respectively mounted on trucks 2aF, 2bB of the yarn feeder rails 2a, 2b. Movement driving part driving the movement belts 4a, 4b are mounted on end portions of the yarn feeder rails 2a, 2b, so that no configuration supporting the movement belts 4a, 4b and the movement driving part is required for the yarn feeder rails 2a, 2b. The yarn feeder rails 2a, 2b could be shared by the entraining-type and self-running-type running members. The process for the specification change from the entrainment-running type to the self-running type, the mixing of the entrainment-running type and the self-running type, or the like could therefore be performed without detaching the yarn feeder rails 2a, 2b, thereby reducing the labor.



EP 3 636 814 A3



### **EUROPEAN SEARCH REPORT**

Application Number EP 19 20 2855

Category		ndication, where appropriate,	Relevant	CLASSIFICATION OF APPLICATION (IPC)		
Υ	13 March 2001 (2001	rsudakoma ind co Ltd)	to claim	INV. D04B15/56		
Υ	CN 103 614 854 B (S MANUFACTURE CO LTD; 8 July 2015 (2015-6		1-5	D04B15/96		
Υ	US 4 321 807 A (STF 30 March 1982 (1982 * column 11, lines *		1-5			
Y	EP 0 682 133 A1 (SF 15 November 1995 (1 * column 7, lines		1-5			
Υ	JP H02 94282 U (KAT 26 July 1990 (1990- * page 6, paragraph figures 4-6 *	-07-26)	1-5	TECHNICAL FIELDS SEARCHED (IPO D04B		
Y	EP 0 718 427 A1 (SF 26 June 1996 (1996- * column 11, lines		4			
	The present search report has	been drawn up for all claims  Date of completion of the search		Examiner		
	Munich	6 July 2020	Mes	ssai, Sonia		
	ATEGORY OF CITED DOCUMENTS	T : theory or principle E : earlier patent door	underlying the invention ument, but published on, or			
	ticularly relevant if taken alone ticularly relevant if combined with anot		after the filing date D: document cited in the application L: document cited for other reasons &: member of the same patent family, corresponding			

# EP 3 636 814 A3

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

EP 19 20 2855

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06-07-2020

	Patent document cited in search report		Publication date	Patent family member(s)		Publication date
	JP 2001064854	Α	13-03-2001	NONE		
	CN 103614854	В	08-07-2015	NONE		
	US 4321807	A	30-03-1982	DD DD DE DE ES ES IT IT JP JP US	148352 A5 148353 A5 2951332 A1 2951386 A1 8100367 A1 8100369 A1 1127763 B 1127764 B S5593853 A S5593854 A 4321807 A	20-05-1981 20-05-1981 17-07-1980 10-07-1980 01-11-1980 01-11-1980 21-05-1986 21-05-1986 16-07-1980 16-07-1980 30-03-1982
	EP 0682133	A1	15-11-1995	DE EP ES JP JP KR TW US	69503831 T2 0682133 A1 2121285 T3 3452639 B2 H07305254 A 950031842 A 290598 B 5544502 A	08-04-1999 15-11-1995 16-11-1998 29-09-2003 21-11-1995 20-12-1995 11-11-1996 13-08-1996
	JP H0294282	U	26-07-1990	JP JP	H0294282 U H0354150 Y2	26-07-1990 28-11-1991
	EP 0718427	A1	26-06-1996	DE EP JP JP	69508901 T2 0718427 A1 2857840 B2 H08176942 A	16-12-1999 26-06-1996 17-02-1999 09-07-1996
FORM P0459						

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