

Europäisches Patentamt European Patent Office Office européen des brevets



(11) **EP 1 270 102 A3**

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3: **07.04.2004 Bulletin 2004/15**

(51) Int CI.⁷: **B21C 47/32**, B21C 47/28, B65H 75/28

(43) Date of publication A2: 02.01.2003 Bulletin 2003/01

(21) Application number: 02445084.3

(22) Date of filing: 24.06.2002

(84) Designated Contracting States:

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

Designated Extension States:

AL LT LV MK RO SI

(30) Priority: 25.06.2001 SE 0102241

(71) Applicant: Kapman AB 811 81 Sandviken (SE)

(72) Inventor: Wahlen, Bo 82830 Edsbyn (SE)

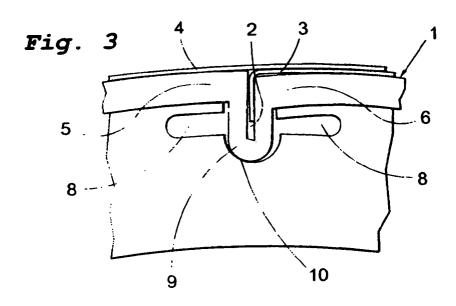
(74) Representative:

Johansson Webjörn, Ingmari et al L.A. Groth & Co KB Patentbyra, P.O. Box 6107 102 32 Stockholm (SE)

(54) Bobbin for the winding of band material

(57) The present invention relates to a bobbin for the winding of band material (3, 4), which bobbin comprises a surface (1) following the circumference on which surface (1) the band material (3, 4) is wound in the direction of circumference, and which comprises at least one essentially radial, transversal slot (2) in said surface (1)

following the circumference, which slot (2) is formed for the fixing of an end of said band material (3, 4) at the beginning of a winding. The bobbin is provided with at least one resilient portion (5, 6) along the circumference thereof and said slot (2) is arranged in said resilient portion (5, 6) of the bobbin.





EUROPEAN SEARCH REPORT

Application Number EP 02 44 5084

Category	Citation of document with in	ndication, where appropriate,	Relevant	CLASSIFICATION OF THE
Calegory	of relevant pass		to claim	APPLICATION (Int.CI.7)
X	DE 35 03 786 A (PAH 7 August 1986 (1986 * page 5, line 19 - * page 6, line 21 - * page 11, line 21 figures *	-08-07) line 23 * line 27 *	1-3	B21C47/32 B21C47/28 B65H75/28
X	22 June 1995 (1995- * column 1, line 38 * column 2, line 8 * column 2, line 45	- line 48 * - line 14 * - line 56 * - column 4, line 3;	1,4	
X	PATENT ABSTRACTS OF vol. 1997, no. 05, 30 May 1997 (1997-0 & JP 9 010834 A (SU 14 January 1997 (19 * abstract *	5-30) MITOMO METAL IND LTD),	1	TECHNICAL FIELDS SEARCHED (Int.Cl.7)
X	US 5 785 272 A (HEQ 28 July 1998 (1998- * claim 1; figure 1		1	B21C B65H
X	US 3 593 938 A (WAT 20 July 1971 (1971- * column 2, line 1		1,2	
Α	PATENT ABSTRACTS OF vol. 1999, no. 04, 30 April 1999 (1999 & JP 11 019723 A (K 26 January 1999 (19 * abstract; figures	-04-30) AWASAKI STEEL CORP), 99-01-26)	1,2	
	The present search report has t	peen drawn up for all claims		
	Place of search	Date of completion of the search	L	Examiner
	The Hague	12 February 2004	Bar	row, J
X : part Y : part docu A : tech O : non	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone cularly relevant if combined with anotiment of the same category nological background written disclosure mediate document	T : theory or principle E : earlier patent doc after the filing dat D : document cited in L : document cited of	e underlying the cument, but publi e n the application or other reasons	invention ished on, or

EPO FORM 1503 03.82 (P04C01)

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

EP 02 44 5084

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.

12-02-2004

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
DE 3503786	Α	07-08-1986	DE	3503786 A1	07-08-198
DE 4410308	Α	22-06-1995	DE	4410308 A1	22-06-199
JP 9010834	Α	14-01-1997	NONE		
US 5785272	А	28-07-1998	NONE		
US 3593938	Α	20-07-1971	NONE		
JP 11019723	Α	26-01-1999	JP	3271746 B2	08-04-200
				ı.	
				9	

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