

(19)



Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

EP 1 510 605 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
05.10.2005 Bulletin 2005/40

(51) Int Cl. 7: D02H 13/00, D02H 3/00,
D02H 7/00

(43) Date of publication A2:
02.03.2005 Bulletin 2005/09

(21) Application number: 04018015.0

(22) Date of filing: 29.07.2004

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IT LI LU MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL HR LT LV MK

(30) Priority: 19.08.2003 JP 2003294848

(71) Applicant: MURATA KIKAI KABUSHIKI KAISHA
Kyoto 601 (JP)

(72) Inventor: Mima, Hiroshi
Joyo-shi Kyoto (JP)

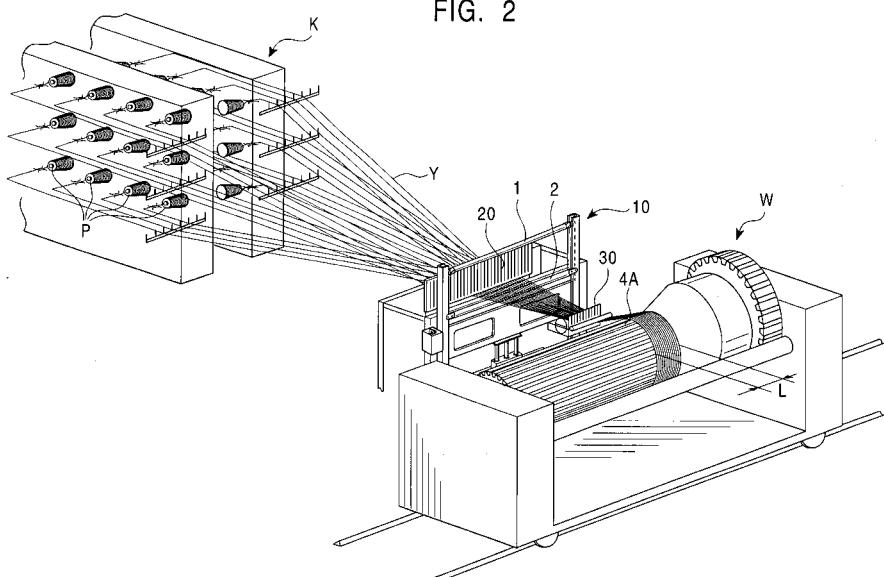
(74) Representative: Liedl, Christine et al
c/o Hansmann & Vogeser,
Albert-Rosshaupter-Strasse 65
81369 München (DE)

(54) Warping machine having knot aligning device

(57) The present invention provides a warping machine having a knot aligning device that can set yarns from a large number of yarn supplying packages at mutually consistent respective winding start positions, each of the yarn supplying packages being obtained by tying predetermined lengths of yarns of various colors or types together and then winding the resulting yarn into the yarn supplying package, in association with small lot machining in many kind production or the manufacture of sample fabrics. When yarns Y are drawn out from a

large number of yarn supplying packages P and then wound around a beam 4, they are passed through a slit S that can be freely formed by paired rollers including a moving roller 1 and a fixed roller 2. When the yarns Y drawn out from the respective yarn supplying packages P are set at the mutually consistent respective winding start positions, a slit S is formed which is wider than the thickness of each yarn Y but is narrower than the thickness of a knot YN in the yarn Y. When the aligned yarns Y are taken up all together, the moving roller 1 is separated from the fixed roller 2 to open the slit S.

FIG. 2





DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
A	DE 100 29 492 A1 (KARL MAYER TEXTILMASCHINENFABRIK GMBH) 3 January 2002 (2002-01-03) * paragraphs [0003] - [0006] * * paragraphs [0030] - [0039] * * figures 1-5 * -----	1-6	D02H13/00 D02H3/00 D02H7/00
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			D02H
2	The present search report has been drawn up for all claims		
Place of search		Date of completion of the search	Examiner
Munich		4 August 2005	Louter, P
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			

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

EP 04 01 8015

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.

04-08-2005

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 10029492 A1	03-01-2002	EP 1209264 A2 JP 3492335 B2 JP 2002030537 A	29-05-2002 03-02-2004 31-01-2002