



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
20.02.2013 Bulletin 2013/08

(51) Int Cl.:
D05B 19/16 (2006.01) D05B 21/00 (2006.01)

(43) Date of publication A2:
02.04.2008 Bulletin 2008/14

(21) Application number: **07018832.1**

(22) Date of filing: **25.09.2007**

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

- **Hayakawa, Norikazu**
Mizuho-ku
Nagoya-shi
Aichi-ken 467-8562 (JP)
- **Wataya, Takeo**
Mizuho-ku
Nagoya-shi
Aichi-ken 467-8562 (JP)

(30) Priority: **29.09.2006 JP 2006268601**

(71) Applicant: **Brother Kogyo Kabushiki Kaisha**
Nagoya-shi, Aichi-ken 467-8561 (JP)

(74) Representative: **Prüfer & Partner GbR**
European Patent Attorneys
Sohnckestrasse 12
81479 München (DE)

(72) Inventors:
• **Nakano, Motonari**
Mizuho-ku
Nagoya-shi
Aichi-ken 467-8562 (JP)

(54) **Sewing machine and controller therefor**

(57) The present disclosure relates to a sewing machine that sews patterns by moving a cloth holding frame holding a workpiece cloth in an X direction and a Y direction respectively based on sewing data of a pattern selected by a user and a controller therefore.

The controller determines a cloth feed start timing so that an X feed start timing to execute an X directional feed for every feed operation in each sewing operation precedes a Y feed start timing to execute Y directional feed based on the sewing data. The controller allows cloth feed execution without an upper thread being wound on the sewing needle.

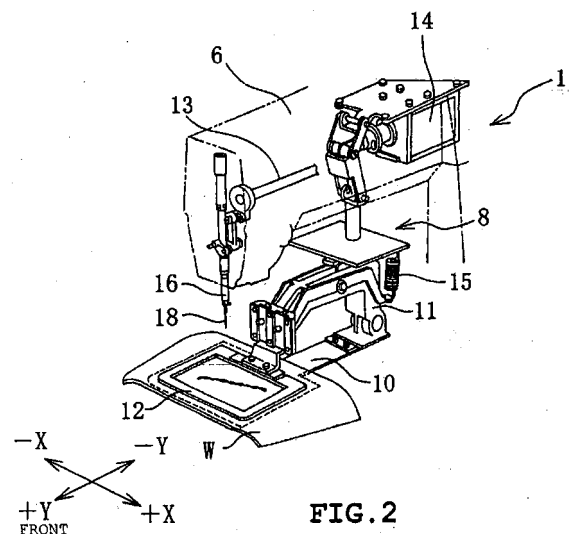


FIG. 2



EUROPEAN SEARCH REPORT

Application Number
EP 07 01 8832

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	GB 2 256 879 A (MITSUBISHI ELECTRIC CORP [JP]) 23 December 1992 (1992-12-23) * page 24, line 20 - page 36, line 13; figures 1, 20-29 * -----	1-12	INV. D05B19/16 D05B21/00
X	US 4 665 847 A (TAKANO KUNIO [JP] ET AL) 19 May 1987 (1987-05-19) * column 8, line 8 - line 46; figure 8 * -----	1,2	
			TECHNICAL FIELDS SEARCHED (IPC)
			D05B
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 16 January 2013	Examiner Zirkler, Stefanie
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	

1
EPO FORM 1503 03.82 (P04C01)

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

EP 07 01 8832

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.

16-01-2013

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
GB 2256879	A	23-12-1992	DE	4220172 A1		24-12-1992
			GB	2256879 A		23-12-1992
			JP	2581343 B2		12-02-1997
			JP	5007675 A		19-01-1993
			US	5372078 A		13-12-1994

US 4665847	A	19-05-1987	DE	3443785 A1		05-06-1985
			US	4665847 A		19-05-1987
