



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
16.03.2016 Bulletin 2016/11

(51) Int Cl.:
D01H 5/14 (2006.01) D01G 19/10 (2006.01)

(43) Date of publication A2:
30.09.2015 Bulletin 2015/40

(21) Application number: **15159559.2**

(22) Date of filing: **18.03.2015**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME
Designated Validation States:
MA

(71) Applicant: **KABUSHIKI KAISHA TOYOTA JIDOSHOKKI**
Kariya-shi, Aichi 448-8671 (JP)

(72) Inventor: **Shimbara, Masami**
Kariya-shi, Aichi 448-8671 (JP)

(74) Representative: **TBK**
Bavariaring 4-6
80336 München (DE)

(30) Priority: **24.03.2014 JP 2014060445**

(54) **Top comb device of comber**

(57) There is provided a top comb device (10) of a comber, including a top comb holder (11) that is moveable in synchronization with a nipper frame (21) and a top comb (12) that is detachably fixed to the top comb holder. The top comb includes a comb body (14) that is fixed to the top comb holder and a comb teeth member (15) that is formed separately from and combined with the comb body at a tip end of the comb body. The comb body includes a base portion (14B) that is in contact with the top comb holder, a comb teeth combining portion (14A) combined with the comb teeth member at the tip end of the comb body, and a thickness increasing portion (14C) extending between the base portion and the comb teeth combining portion and having a thickness that is increased toward the base portion.

FIG. 1A

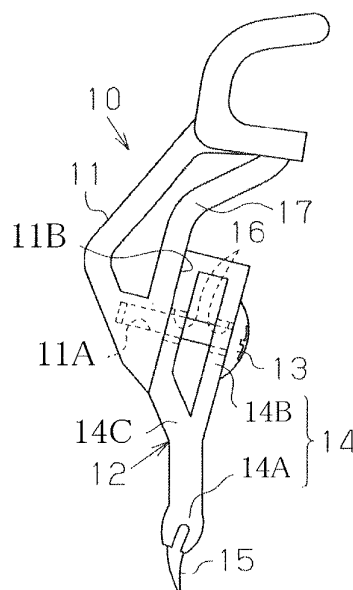


FIG. 1B

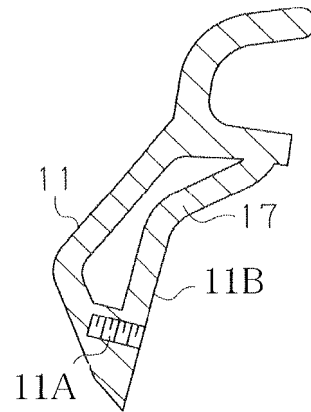
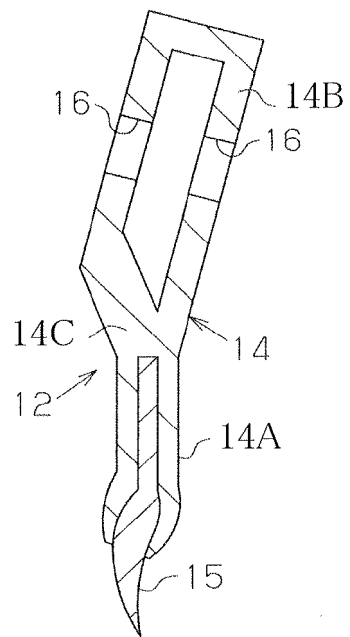


FIG. 1C





EUROPEAN SEARCH REPORT

Application Number
EP 15 15 9559

5

10

15

20

25

30

35

40

45

50

55

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	GB 09346 A A.D. 1910 (SCHLUMBERGER ROBERT [DE]) 22 December 1910 (1910-12-22) * page 2, lines 10,11; figure 1 *	1,4	INV. D01H5/14 D01G19/10
Y	----- CN 203 295 687 U (ZHEJIANG XINMIAN TEXTILE CO LTD) 20 November 2013 (2013-11-20) * paragraph [0013]; figures 1,2 * * abstract *	1,4	
Y	----- JP S49 127509 U (.) 1 November 1974 (1974-11-01) * figures 1,3 *	1,4	
X	----- WO 2008/037437 A1 (DREI S WERK PRAEZ SWERKZEUGE G [DE]; SCHMAUSER TILL M [DE]) 3 April 2008 (2008-04-03) * page 1, lines 6,7 * * page 3, lines 11,12; claim 5; figures 1,2,4 *	1,2	
A	----- EP 0 580 549 A1 (RIETER AG MASCHF [CH]) 26 January 1994 (1994-01-26)	1	TECHNICAL FIELDS SEARCHED (IPC)
E	----- WO 2015/154840 A1 (TRÜTZSCHLER GMBH & CO KG [DE]) 15 October 2015 (2015-10-15) * the whole document *	1	D01G
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 4 February 2016	Examiner Uhlig, Robert
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	

EPO FORM 1503 03.02 (P04C01)

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

EP 15 15 9559

5

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.

04-02-2016

10

15

20

25

30

35

40

45

50

55

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 191009346 A	22-12-1910	NONE	
CN 203295687 U	20-11-2013	NONE	
JP S49127509 U	01-11-1974	NONE	
WO 2008037437 A1	03-04-2008	EP 2069563 A1 US 2009241294 A1 WO 2008037437 A1	17-06-2009 01-10-2009 03-04-2008
EP 0580549 A1	26-01-1994	CN 1086553 A DE 59300482 D1 EP 0580549 A1	11-05-1994 21-09-1995 26-01-1994
WO 2015154840 A1	15-10-2015	DE 102014105175 A1 WO 2015154840 A1	29-10-2015 15-10-2015

EPO FORM P0459

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