



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:  
**28.06.2000 Bulletin 2000/26**

(51) Int. Cl.<sup>7</sup>: **B43K 21/22**, B43K 21/12,  
B43K 29/02

(43) Date of publication A2:  
**09.09.1998 Bulletin 1998/37**

(21) Application number: **97310618.0**

(22) Date of filing: **24.12.1997**

(84) Designated Contracting States:  
**AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC  
NL PT SE**  
Designated Extension States:  
**AL LT LV MK RO SI**

- **Anzai, Shouji,**  
**c/o Kotobuki & Co., Ltd.**  
**Kawagoe-shi, Saitama-ken (JP)**
- **Kageyama, Hidehei,**  
**c/o Kotobuki & Co., Ltd.**  
**Kawagoe-shi, Saitama-ken (JP)**

(30) Priority: **03.03.1997 JP 6175497**

(71) Applicant: **KOTOBUKI & CO., LTD.**  
**Kyoto-shi Kyoto (JP)**

(74) Representative:  
**Votier, Sidney David**  
**CARPMAELS & RANSFORD**  
**43, Bloomsbury Square**  
**London WC1A 2RA (GB)**

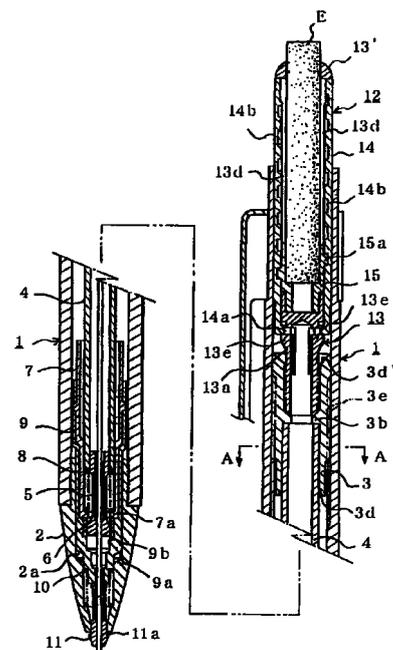
(72) Inventors:  
• **Mitsuya, Yoshihide,**  
**c/o Kotobuki & Co., Ltd.**  
**Kawagoe-shi, Saitama-ken (JP)**

(54) **Double-chuck mechanical pencil**

(57) The invention is intended to prevent, in a double-chuck mechanical pencil provided with an eraser, the torsional breakage of a lead gripped by a front lead chuck and a back lead chuck due to the turning of a lead tank caused when an eraser is used, and to eliminate inconvenience to a lead supplying operation caused by the abrasion of the eraser.

A double-chuck mechanical pencil having a front lead chuck (11) for holding a lead and a back lead chuck (5) for advancing a lead, comprises a barrel (1), a lead tank (4) connected to the back lead chuck (5), an adapter (3) fixedly put on a back portion of the lead tank (4), restrained from rotation relative to the barrel (1) and axially movable, and a rotary eraser projecting mechanism (12) provided with a support member (13) or an eraser support structure (16) provided with a support member (17) restrained from rotation relative to the adapter (3) and detachably connected to a back portion of the adapter (3).

FIG. 1





European Patent  
Office

EUROPEAN SEARCH REPORT

Application Number  
EP 97 31 0618

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
Y	EP 0 715 968 A (KOTOBUKI & CO) 12 June 1996 (1996-06-12) * column 13, line 18 - line 25 * * column 15, line 18 - line 28 * * column 15, line 56 - column 16, line 4; figures 2,9,19,21 * -----	1,3,4,11	B43K21/22 B43K21/12 B43K29/02
Y	EP 0 321 581 A (PENDEL ) 28 June 1989 (1989-06-28) * page 5, line 15 - page 13, last line; figures *	1,3,4,11	
A	US 5 018 891 A (KAGEYAMA ET AL.) 28 May 1991 (1991-05-28) * abstract; figures *	1,3,11	
A,P	US 5 683 191 A (KAGEYAMA ET AL.) 4 November 1997 (1997-11-04) * column 2, line 36 - line 67 * * column 7, line 4 - column 18, line 30; figures *	1,3,11	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			B43K
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		9 May 2000	Perney, Y
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 1508 03/02 (F04C01)

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

EP 97 31 0618

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.

09-05-2000

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 715968	A	12-06-1996	JP 8207489 A	13-08-1996
			DE 69503025 D	23-07-1998
			DE 69503025 T	22-10-1998
			ES 2119322 T	01-10-1998
			US 5947620 A	07-09-1999
EP 321581	A	28-06-1989	DE 3853348 D	20-04-1995
			DE 3853348 T	14-12-1995
			WO 8810198 A	29-12-1988
			KR 9600698 Y	25-01-1996
			DE 3856151 D	23-04-1998
			DE 3856151 T	29-10-1998
			EP 0545917 A	09-06-1993
US 5018891	A	28-05-1991	US 5090831 A	25-02-1992
US 5683191	A	04-11-1997	US 5236270 A	17-08-1993
			DE 3855420 D	14-08-1996
			DE 3855420 T	06-03-1997
			DE 3885227 D	02-12-1993
			DE 3885227 T	31-03-1994
			EP 0311121 A	12-04-1989
			EP 0513874 A	19-11-1992
			ES 2045054 T	16-01-1994
			ES 2089312 T	01-10-1996
			MX 173857 B	07-04-1994
			US 5700101 A	23-12-1997
			US 5022774 A	11-06-1991
			US 5062727 A	05-11-1991
			US 5207522 A	04-05-1993
US 5370471 A	06-12-1994			

EPO FORM P0459

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