Europäisches Patentamt European Patent Office

Office européen des brevets



(11) **EP 0 863 023 A3**

(12)

EUROPEAN PATENT APPLICATION

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

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

(21) Application number: 97310618.0

(22) Date of filing: 24.12.1997

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

(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:

Designated Extension States:

AL LT LV MK RO SI

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

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

(72) Inventors:

 Mitsuya, Yoshihide, c/o Kotobuki & Co., Ltd. Kawagoe-shi, Saitama-ken (JP)

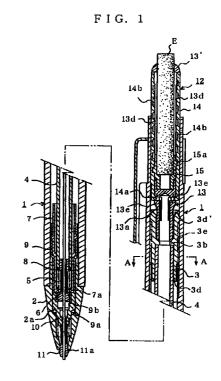
- Anzai, Shouji,
 c/o Kotobuki & Co., Ltd.
 Kawagoe-shi, Saitama-ken (JP)
- Kageyama, Hidehei,
 c/o Kotobuki & Co., Ltd.
 Kawagoe-shi, Saitama-ken (JP)
- (74) Representative:

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

(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).



EP 0 863 023 A3



EUROPEAN SEARCH REPORT

Application Number EP 97 31 0618

(DOCUMENTS CONSIDI	ERED TO BE R	ELEVANT		_
Category	Citation of document with in of relevant passa	dication, where appro		Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.6)
Y	EP 0 715 968 A (KOTO 12 June 1996 (1996- * column 13, line 10 * column 15, line 10 * column 15, line 50 figures 2,9,19,21 *	06-12) 8 - line 25 * 8 - line 28 *		,3,4,11	B43K21/22 B43K21/12 B43K29/02
Y	EP 0 321 581 A (PEN 28 June 1989 (1989— * page 5, line 15 — figures *	06-28)		,3,4,11	
A	US 5 018 891 A (KAG 28 May 1991 (1991-0 * abstract; figures	5-28)	1	,3,11	
A,P	US 5 683 191 A (KAG 4 November 1997 (19 * column 2, line 36 * column 7, line 4	97-11-04) - line 67 *		,3,11	TECHNICAL SELDO
	figures *				TECHNICAL FIELDS SEARCHED (Int.Cl.6)
	The present search report has	been drawn up for all	claims		
_	Piece of search	·	eletion of the search	T _	Examiner
	THE HAGUE	9 May	2000	Per	ney, Y
X:par Y:par doo A:tec O:no	CATEGORY OF CITED DOCUMENTS rticularly relevant if taken alone ticularly relevant if combined with anoi tument of the same category hnological beckground n-written disclosure emediate document		T: theory or principle ui E: earlier patent docum after the filling date D: document cited in th L: document cited for c &: member of the sam- document	nent, but publi ne application other reasons	ahed on, or

2

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	Α	12-06-1996	JP	8207489 A	13-08-19
				DE	69503025 D	23-07-19
				DE	69503025 T	22-10-19
				ES	2119322 T	01-10-19
				US	5947620 A	07-09-19
EP	321581	Α	28-06-1989	DE	3853348 D	20-04-19
				DE	3853348 T	14-12-19
				WO	8810198 A	29-12-19
				KR	9600698 Y	25-01-19
				DE	3856151 D	23-04-19
				DE	3856151 T	29-10-19
				EP	0545917 A	09-06-19
US	5018891	A	28-05-1991	US	5090831 A	25-02-19
US	5683191	Α	04-11-1997	US	5236270 A	17-08-19
				DE	3855420 D	14-08-19
				DE	3855420 T	06-03-19
				DE	3885227 D	02-12-19
				DE	3885227 T	31-03-19
				EP	0311121 A	12-04-19
				EP	0513874 A	19-11-19
				ES	2045054 T	16-01-19
				ES	2089312 T	01-10-19
				MX	173857 B	07-04-1
				US	5700101 A	23-12-19
				US	5022774 A	11-06-19
				US	5062727 A	05-11-19
				US	5207522 A	04-05-19
				US 	5370471 A	06-12-19

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