



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
11.02.2004 Bulletin 2004/07

(51) Int Cl.7: **A44B 19/10**, A44B 19/12,
A44B 19/06, A44B 19/54,
A44B 19/56, A44B 19/00

(43) Date of publication A2:
04.07.2001 Bulletin 2001/27

(21) Application number: **00128146.8**

(22) Date of filing: **21.12.2000**

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

(72) Inventors:
• **Nagata, Kazuo**
Kurobe-shi, Toyama-ken (JP)
• **Tanaka, Shigenobu**
Kurobe-shi, Toyama-ken (JP)

(30) Priority: **27.12.1999 JP 36907099**

(74) Representative: **Patentanwälte
Leinweber & Zimmermann
Rosental 7,
II Aufgang
80331 München (DE)**

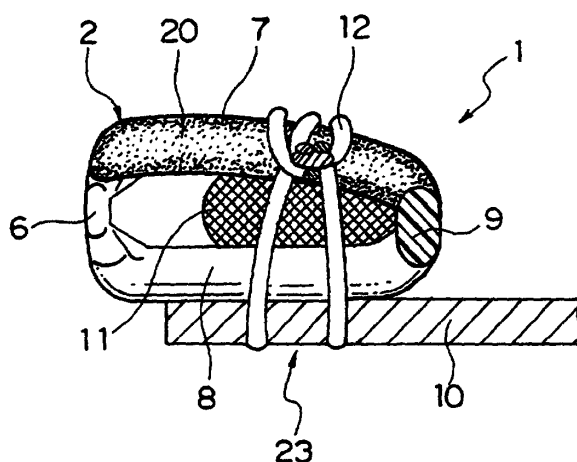
(71) Applicant: **YKK CORPORATION**
Chiyoda-ku, Tokyo (JP)

(54) **Slide fastener**

(57) The invention provides a slide fastener comprising a fastener element in which a metallic coating layer is formed, the metallic coating layer being never scraped by a sliding of a slider. In a coil-shaped fastener element (1) made of synthetic resin, a metallic coating layer (20) is formed on the surface of a leg portion (7) except an inverted portion (9) and a coupling head (6) with which a guide flange and a guide post of a slider come into contact. Therefore, no metallic coating layer

(20) is formed on a portion with which the guide flange and guide post of the slider come into contact. As a result, such an event that the metallic coating layer (20) is scraped and that metallic powder is scattered is prevented, so that a fastener element having a beautiful metallic gloss can be used for a long term and a cheap, fashionable slide fastener is obtained. This invention can be applied to zigzag type, injection molded type and metal type fastener elements.

FIG. 4





European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 00 12 8146

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.7)
Y	EP 0 387 905 A (YOSHIDA KOGYO K. K.) 19 September 1990 (1990-09-19) * column 5, line 45 - column 7, line 19 *	1-5,7,8, 10	A44B19/10 A44B19/12 A44B19/06
A	* column 10, paragraph 1 * * column 13, paragraph 2 - column 15, paragraph 1; figures 1-15C *	12	A44B19/54 A44B19/56 A44B19/00
Y	EP 0 299 500 A (YOSHIDA KOGYO K. K.) 18 January 1989 (1989-01-18)	1-5,7,8, 10	
A	* column 2, line 31 - column 4, line 36; claims 1,3,4; figures 1-14 *	6,9,12	
A	EP 0 384 318 A (YOSHIDA KOGYO K. K.) 29 August 1990 (1990-08-29) * claims 1-3; figures 1-7 *	1	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			A44B
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		19 December 2003	Garnier, F
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 B2 (P04C01)

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

EP 00 12 8146

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.

19-12-2003

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 387905 A	19-09-1990	JP 2241401 A	26-09-1990
		JP 2613802 B2	28-05-1997
		JP 2092015 C	18-09-1996
		JP 3012103 A	21-01-1991
		JP 7110245 B	29-11-1995
		AU 629616 B2	08-10-1992
		AU 5144490 A	20-09-1990
		BR 9001430 A	09-04-1991
		CA 2011944 A1	16-09-1990
		DE 69020196 D1	27-07-1995
		DE 69020196 T2	07-03-1996
		EP 0387905 A2	19-09-1990
		ES 2074489 T3	16-09-1995
		HK 128997 A	19-09-1997
		KR 9201862 B1	06-03-1992
		KR 9201862 Y1	21-03-1992
		US 5035029 A	30-07-1991
EP 299500 A	18-01-1989	JP 1020805 A	24-01-1989
		JP 1791566 C	14-10-1993
		JP 4079242 B	15-12-1992
		AU 586956 B2	27-07-1989
		BR 8803915 A	28-02-1989
		CA 1309844 C	10-11-1992
		DE 3879302 D1	22-04-1993
		DE 3879302 T2	01-07-1993
		EP 0299500 A1	18-01-1989
		ES 2039012 T3	16-08-1993
		HK 191695 A	29-12-1995
		KR 9006023 B1	20-08-1990
		US 4922585 A	08-05-1990
EP 384318 A	29-08-1990	JP 2075056 C	25-07-1996
		JP 2218303 A	31-08-1990
		JP 7100041 B	01-11-1995
		AU 624477 B2	11-06-1992
		AU 4998290 A	30-08-1990
		BR 9000892 A	13-02-1991
		CA 2009865 A1	20-08-1990
		DE 69013029 D1	10-11-1994
		EP 0384318 A1	29-08-1990
		ES 2064502 T3	01-02-1995
		HK 104597 A	15-08-1997
		KR 9201863 B1	06-03-1992
		US 4987658 A	29-01-1991

EPO FORM P0459

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