

(19) World Intellectual Property
Organization
International Bureau



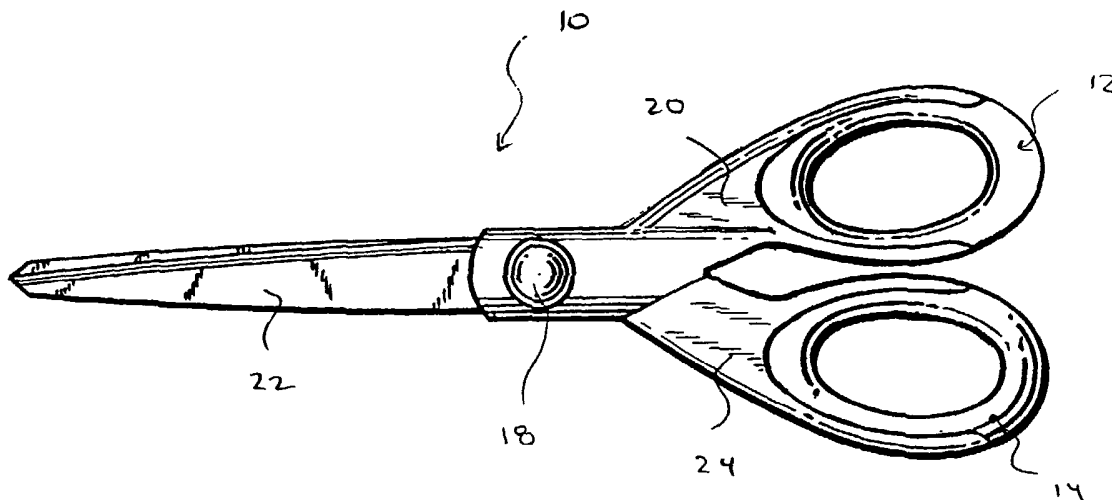
(43) International Publication Date
22 May 2003 (22.05.2003)

PCT

(10) International Publication Number
WO 2003/041919 A3

- (51) International Patent Classification⁷: **B26B 9/00**
- (21) International Application Number:
PCT/US2002/036314
- (22) International Filing Date:
13 November 2002 (13.11.2002)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/338,575 13 November 2001 (13.11.2001) US
- (71) Applicant (for all designated States except US): **ACME UNITED CORPORATION** [US/US]; 1931 Black Rock Turnpike, Fairfield, CT 06432 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **BUCHTMANN, Larry** [US/US]; 116 Leafwood Drive, Goldsboro, NC 27534 (US). **PIA, Gary** [US/US]; 165 Forest Road, Stratford, CT 06614 (US).
- (74) Agent: **RUGGIERO, Charles, N, J.**; Ohlandt, Greeley, Ruggiero & Perle, L.L.P., 1 Landmark Square, 10th Floor, Stamford, CT 06901-2682 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
- (88) Date of publication of the international search report:
19 February 2004
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: COATING FOR STATIONERY CUTTING IMPLEMENTS



(57) Abstract: A cutting implement (10) having a pair of cutting blades (22,26) and a coating (32) is provided. The coating (32) has titanium chromium nitride and provides the cutting blades (22,26) with a satin silver appearance. In some embodiments, the titanium chromium nitride coating (32) has a thickness in a range between about 0.3 microns and 0.5 microns, a surface roughness in a range of about 15 to 25 10⁻⁶ inch/inch, and a hardness in a range of about 5.7 to about 9.1 gigapascals.

WO 2003/041919 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US02/36314

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : B26B 9/00
 US CL : 30/346, 350; 428/457

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 U.S. : 30/346, 350; 428/457

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
 none

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 APS, search terms: titanium chromium nitride, titanium nitride, chromium nitride, blades, cutting, scissors, coating.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,436,830 A (ANDREEV et al.) 13 March 1984 (13,03,1984), see Abstract and column 1 to column 2.	1 and 9-12
Y	US 4,981,756 A (RHANDHAWA) 01 January 1991 (01,01,1991), see Abstract, columns 1-3 and claim 19.	1 and 9-12
A	US 5,152,774 A (SCHROEDER) 06 October 1992 (06,10,1992), see Abstract and columns 1-4.	1-19
A	US 6,076,264 A (MECKEL) 20 June 2000 (20,06,2000), Abstract and column 2 to column 3, lines 1-29.	1-19

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:	
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search

28 January 2003 (28.01.2003)

Date of mailing of the international search report

13 FEB 2003

Name and mailing address of the ISA/US
 Commissioner of Patents and Trademarks
 Box PCT
 Washington, D.C. 20231

Facsimile No. (703)305-3230

Authorized officer
 Hwei-Siu C. Payer

Telephone No. 703-308-1148

Sheila Veney
 Paralegal Specialist
 Group 3700