

Title (en)

Pencil of which the rubber collar part is attached by ultrasonic welding and specially adapted collar part

Title (de)

Stift dessen Gummihülse durch Ultraschallschweissen fixiert ist und dafür geeignete Gummihülse

Title (fr)

Crayon dont la virole support de gomme est fixée par soudure ultra-sons et virole spécialement adaptée

Publication

EP 0756946 A1 19970205 (FR)

Application

EP 96490027 A 19960627

Priority

FR 9508831 A 19950717

Abstract (en)

A lead pencil (8) with a rubber (6) mounted on its end in a ferrule (18) fixed to the body of the pencil has the outer body (7) and the ferrule (18) made of compatible thermoplastic materials. The base of the ferrule (21) is fixed to the end of the pencil by localised inter-penetration of the thermoplastic materials on at least one zone of ultrasonic melding.

IPC 1-7

B43K 29/02

IPC 8 full level

B43K 29/02 (2006.01); **B43L 19/00** (2006.01)

CPC (source: EP US)

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Citation (search report)

- [A] US 3262425 A 19660726 - WAUGH LAWRENCE M
- [A] US 2785100 A 19570312 - YAW ROBERT E
- [A] DE 1958391 A1 19710527 - BLEISTIFTMASCHINENFABRIK FR EH
- [A] DE 1106207 B 19610504 - MUREO FURUKAWA
- [AD] GB 2264676 A 19930908 - SAKURA COLOR PROD CORP [JP]
- [AD] EP 0505262 A1 19920923 - CONTE SA [FR]
- [A] US 4003665 A 19770118 - DREYER HANS, et al

Cited by

EP2216186A3; CN104181342A; US6011084A

Designated contracting state (EPC)

AT BE CH DE DK ES FI GB GR IE IT LI LU NL PT SE

DOCDB simple family (publication)

EP 0756946 A1 19970205; EP 0756946 B1 19971001; AR 002847 A1 19980429; AT E158760 T1 19971015; BR 9603098 A 19980505; CA 2180778 A1 19970118; CA 2180778 C 20020917; DE 69600070 D1 19971106; DE 69600070 T2 19980402; DK 0756946 T3 19980427; EG 21474 A 20011128; ES 2112671 T3 19980401; FR 2736868 A1 19970124; FR 2736868 B1 19971010; GR 3025688 T3 19980331; JP 3398284 B2 20030421; JP H0930190 A 19970204; MA 23938 A1 19970401; MX 9602816 A 19970628; US 5774931 A 19980707

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