

Title (en)
Automatic mechanical pencil.

Title (de)
Automatischer Füllminenstift.

Title (fr)
Porte-mine automatique.

Publication
EP 0213275 A1 19870311 (EN)

Application
EP 86106534 A 19860514

Priority
JP 17499285 A 19850810

Abstract (en)
An automatic mechanical pencil provided with a chuck (13) which will grip a lead (5) to allow the advance of the same, wherein the lead is kept prevented from retraction when it is pushed back by writing pressure, while the advance movement of the lead is allowed when it is to be advanced. On the tip portion of a mouth piece (2), a slider (4) provided with an elastic piece (6) to hold the lead by a frictional action is shiftably inserted. The chuck is provided on the rear portion of the mouth piece. Between the chuck and the slider, a spring (27) is provided so as to urge the slider forward as well as to urge the chuck backward. The advance of the lead is effected by the forward movement of the slider owing to the spring.

IPC 1-7
B43K 21/02

IPC 8 full level
B43K 21/027 (2006.01); **B43K 21/033** (2006.01); **B43K 21/22** (2006.01)

CPC (source: EP KR)
B43K 21/027 (2013.01 - EP); **B43K 21/22** (2013.01 - KR)

Citation (search report)

- [X] DE 3229498 A1 19840209 - STAEDTLER FA J S [DE]
- [Y] DE 2821625 A1 19781130 - ANCOS CO LTD
- [X] US 3424535 A 19690128 - SCHISCHKOW KONSTANTIN F
- [X] US 3864046 A 19750204 - BUTKA KEMAL
- [X] DE 2153400 A1 19730503 - BUTKA KEMAL DIPL ING
- [A] US 4411543 A 19831025 - HASHIMOTO JUNICHI [JP], et al
- [A] DE 2447431 A1 19760408 - FABER CASTELL A W
- [A] US 3544228 A 19701201 - WITTROCK LUDWIG

Designated contracting state (EPC)
CH DE FR GB IT LI

DOCDB simple family (publication)
EP 0213275 A1 19870311; **EP 0213275 B1 19900307**; DE 3669281 D1 19900412; JP H0460440 B2 19920928; JP S6235896 A 19870216; KR 870001945 A 19870328; KR 890001645 B1 19890512

DOCDB simple family (application)
EP 86106534 A 19860514; DE 3669281 T 19860514; JP 17499285 A 19850810; KR 860002856 A 19860415