

Title (en)

Article comprising improved noble metal-based alloys and method for making the same

Title (de)

Artikel mit verbesserten Edelmetallbasislegierungen und Herstellungsverfahren

Title (fr)

Article avec un alliage à base de métaux nobles amélioré et méthode de production

Publication

**EP 1096523 A2 20010502 (EN)**

Application

**EP 00309103 A 20001016**

Priority

- US 16129099 P 19991025
- US 16129199 P 19991025
- US 48462700 A 20000118

Abstract (en)

A device having electrical contacts formed from an alloy having improved wear resistance is provided, the alloy being particularly useful in microrelay devices formed by MEMS technology. In one embodiment, the alloys are chosen to allow sufficient precipitation hardening to improve wear resistance, but keep precipitation below a level that would unacceptably reduce electrical conductivity. This is achieved by using alloying materials that have very limited or no solid solubility in the noble metal matrix, e.g., less than 4 wt.% solid solubility. In a second embodiment, an alloy contains a noble metal matrix and insoluble, dispersoid particles having no solubility in the matrix, these dispersoid particles offering a similar strengthening mechanism. <IMAGE>

IPC 1-7

**H01H 1/02**

IPC 8 full level

**C22C 5/00** (2006.01); **C22C 5/02** (2006.01); **C22C 5/04** (2006.01); **C22C 5/06** (2006.01); **C22F 1/00** (2006.01); **C22F 1/14** (2006.01); **H01H 1/023** (2006.01); **H01H 1/00** (2006.01); **H01H 1/027** (2006.01)

CPC (source: EP KR US)

**C22C 5/00** (2013.01 - KR); **H01H 1/023** (2013.01 - EP US); **H01H 1/0036** (2013.01 - EP US); **H01H 1/027** (2013.01 - EP US); **H01H 2300/036** (2013.01 - EP US)

Cited by

EP1320111A1; CN100385588C; FR2930370A1; DE102006027821A1; EP4020512A4; US7244367B2; US7294028B2; WO03053843A3; WO2012076281A1; WO2007118337A1; WO2004032166A1

Designated contracting state (EPC)

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

DOCDB simple family (publication)

**EP 1096523 A2 20010502**; **EP 1096523 A3 20030618**; CA 2322714 A1 20010425; JP 2001158926 A 20010612; KR 20010040170 A 20010515; US 2001008157 A1 20010719

DOCDB simple family (application)

**EP 00309103 A 20001016**; CA 2322714 A 20001010; JP 2000316101 A 20001017; KR 20000062897 A 20001025; US 73113500 A 20001206