

Title (en)  
A ball-point pen

Title (de)  
Kugelschreiber

Title (fr)  
Stylo-pointe-bille

Publication  
**EP 0626276 B1 19981007 (EN)**

Application  
**EP 94104220 A 19940317**

Priority  
• JP 1217193 U 19930318  
• JP 3185693 U 19930524

Abstract (en)  
[origin: EP0626276A1] A ball-point pen pertinent to use of ink having shear viscosity decreasing property has a joint (2). The joint (2) includes a valve chamber (12) which is disposed in an approximately middle portion of the joint with respect to the axial direction thereof for holding a ball (14) therein with play and has a ball seat (13) in the rear part thereof, a tip fitting hole (10) in front of the valve chamber and a conduit communicating with an ink reservoir. In this arrangement, in order to allow the ball to fit on the ball seat (13) to prevent ink from flowing backward when the ball-point pen is oriented upward and in order to surely establish an ink flow when oriented downward, the joint portion is constructed such that: the axis of the ball seat is made eccentric to the axis of the tip end hole and a channel is provided on one side of the valve chamber space; vertical ribs (15a) having different heights are provided in the valve chamber such that the axis of a cylindrical space defined by top surfaces of the ribs is made eccentric to the tip axis, without the axis of the ball seat made eccentric to the axis of the tip end hole; an edge portion defined by the tip rear hole is provided with a recess; or the tip rear end is cut obliquely with respect to the axial direction of the ball-point pen to form a slanted cut end. <IMAGE>

IPC 1-7  
**B43K 7/08**; B43K 7/00; B43K 23/00

IPC 8 full level  
**B43K 7/01** (2006.01); **B43K 7/08** (2006.01); **B43K 23/12** (2006.01)

CPC (source: EP)  
**B43K 7/01** (2013.01); **B43K 7/08** (2013.01); **B43K 23/124** (2013.01)

Cited by  
EP1658999A4; FR2785570A1; GB2281257B; US5711626A; EP0685348A4; EP1462495A1; EP0972654A4; FR2785569A1; KR100764317B1; EP1209004A3; EP0911181A1; US6010269A; FR2730944A1; US6837640B2; WO0027651A1

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