

Title (en)  
GAS VALVE PIN MECHANISM

Title (de)  
GASVENTILSTIFTMECHANISMUS

Title (fr)  
MECANISME A AIGUILLE D'OBTURATION A GAZ

Publication  
**EP 1337389 A4 20060308 (EN)**

Application  
**EP 01988651 A 20011023**

Priority  
• US 0146060 W 20011023  
• US 69353300 A 20001023

Abstract (en)  
[origin: WO0234496A2] A valve-gate mechanism for use with gas-assisted plastic injection molding systems. A moveable pin mechanism is positioned in a bushing or machine nozzle to regulate the injection of plastic material into a mold cavity. The pin mechanism has an outer pin member and an inner pin member. Movement of the inner pin member relative to the outer pin member allows gas to be injected into the plastic in the mold cavity. A spring member, such as a Belleville washer, biases the inner pin member to a closed position relative to the outer pin member. Gas pressure from the gas source overcomes the force of the spring member allowing gas to enter into the mold cavity.

IPC 8 full level  
**B29C 45/17** (2006.01); **B29C 45/20** (2006.01); **B29C 45/23** (2006.01); **B29C 45/26** (2006.01); **B29C 45/28** (2006.01)

IPC 8 main group level  
**B29C** (2006.01)

CPC (source: EP KR)  
**B29C 45/1735** (2013.01 - EP); **B29C 45/20** (2013.01 - KR)

Citation (search report)  
• [X] US 4474717 A 19841002 - HENDRY JAMES W [US]  
• [X] US 2940123 A 19600614 - HANS BECK, et al  
• [Y] EP 0360189 A2 19900328 - ENGEL GMBH MASCHBAU [AT]  
• [Y] US 4106887 A 19780815 - YASUIKE AKIO, et al  
• [A] US 5295801 A 19940322 - SUGIYAMA KENJI [JP], et al  
• [A] US 3941540 A 19760302 - DRISCOLL JAMES ROBERT, et al  
• [X] PATENT ABSTRACTS OF JAPAN vol. 1995, no. 08 29 September 1995 (1995-09-29)  
• [X] PATENT ABSTRACTS OF JAPAN vol. 1996, no. 04 30 April 1996 (1996-04-30)  
• See references of WO 0234496A2

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

DOCDB simple family (publication)  
**WO 0234496 A2 20020502; WO 0234496 A3 20020620; WO 0234496 B1 20020822**; AU 2002232474 B2 20070809; AU 3247402 A 20020506; CA 2426858 A1 20020502; CA 2426858 C 20070925; EP 1337389 A2 20030827; EP 1337389 A4 20060308; IL 155530 A0 20031123; IL 155530 A 20060801; JP 2004512196 A 20040422; JP 4170755 B2 20081022; KR 100777378 B1 20071119; KR 20030045133 A 20030609; MX PA03003514 A 20040504

DOCDB simple family (application)  
**US 0146060 W 20011023**; AU 2002232474 A 20011023; AU 3247402 A 20011023; CA 2426858 A 20011023; EP 01988651 A 20011023; IL 15553001 A 20011023; IL 15553003 A 20030421; JP 2002537519 A 20011023; KR 20037005636 A 20030423; MX PA03003514 A 20011023