

Title (en)
DIE FORGING METHOD

Title (de)
VERFAHREN ZUM GESENKSCHMIEDEN

Title (fr)
PROCEDE DE FORGEAGE PAR MATRICES

Publication
EP 1123764 A1 20010816 (EN)

Application
EP 99931517 A 19990723

Priority

- JP 9903964 W 19990723
- JP 20917398 A 19980724
- JP 27579298 A 19980929
- JP 28463798 A 19981006
- JP 34556298 A 19981204
- JP 36814998 A 19981224
- JP 7015599 A 19990316
- JP 7015699 A 19990316
- JP 7667299 A 19990319
- JP 12285699 A 19990428
- JP 15729799 A 19990604

Abstract (en)
A die forging method of the present invention is, in the pre-forging step, to form a inserted part 4, a flange part and a stepped inserted part 6 of a spout tip of faucet 3 by an upper outer punch 20 and an upper die 19. In the hole forming step thereafter, a recessed and protruded part 7 is formed by driving an upper inner punch 21 into a forging material while a die pin 13 is in touch with one end surface of the forging material and moving back under applying a back pressure thereto. Since a part of the forging material is filled in a die cavity in the forging step, a shape of the forming part in the forging step can be accurately created. Accordingly, a die forging method having characteristics of high productivity or forming accuracy, etc., can be provided. <IMAGE>

IPC 1-7
B21J 5/02; **B21K 23/04**; **C22C 9/04**

IPC 8 full level
B21C 37/29 (2006.01); **B21J 5/02** (2006.01); **B21J 5/12** (2006.01); **B21J 13/02** (2006.01); **B21K 1/00** (2006.01); **B21K 1/20** (2006.01)

CPC (source: EP US)
B21C 37/29 (2013.01 - EP US); **B21J 5/02** (2013.01 - EP); **B21J 5/12** (2013.01 - EP US); **B21J 9/027** (2013.01 - EP); **B21J 13/02** (2013.01 - EP); **B21K 1/00** (2013.01 - EP); **B21K 1/20** (2013.01 - EP)

Citation (search report)
See references of WO 0005008A1

Cited by
FR2856320A1; US10557505B2; US11162538B2

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 1123764 A1 20010816; AU 4800399 A 20000214; CA 2338376 A1 20000203; CN 1309592 A 20010822; WO 0005008 A1 20000203

DOCDB simple family (application)
EP 99931517 A 19990723; AU 4800399 A 19990723; CA 2338376 A 19990723; CN 99808751 A 19990723; JP 9903964 W 19990723