

Title (en)
Locking device for a manhole

Title (de)
Verriegelungsvorrichtung für Schachtrahmen

Title (fr)
Dispositif de verouillage et déverrouillage avec clé d'un tampon sur un cadre

Publication
EP 1593780 B1 20080903 (FR)

Application
EP 05290704 A 20050330

Priority
FR 0403952 A 20040415

Abstract (en)
[origin: EP1593780A1] The device has a bolt (10) whose plate has notches supported on an inner side of base wall of a cavity (5) of a pad (1). Lateral surface of the cavity has two grooves (29), where width of each groove for passing a tang of a key bushing is lower than that of a notch as the grooves overhang the plate. The width difference permits a notch (14) to be inaccessible by a screwdriver in locked position of the pad with a frame.

IPC 8 full level
E02D 29/14 (2006.01); **E03F 5/02** (2006.01); **E05B 11/02** (2006.01); **E05B 35/00** (2006.01); **E05B 65/00** (2006.01); **E05C 3/04** (2006.01)

CPC (source: EP US)
E02D 29/1427 (2013.01 - EP US); **E05B 11/02** (2013.01 - EP US); **E05B 35/008** (2013.01 - EP US); **E05C 3/04** (2013.01 - EP US); **Y10T 70/5589** (2015.04 - EP US); **Y10T 70/7706** (2015.04 - EP US); **Y10T 292/0863** (2015.04 - EP US); **Y10T 292/20** (2015.04 - EP US)

Cited by
FR2925536A1; FR2919001A1; EP2075378A1; FR2925926A1; US8132436B2; WO2017034430A1; WO2009019334A1; EP2363555A1; WO2007119048A1

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AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL LV MK

DOCDB simple family (publication)
EP 1593780 A1 20051109; EP 1593780 B1 20080903; AR 049800 A1 20060906; AT E407266 T1 20080915; AU 2005201524 A1 20051027; AU 2005201524 B2 20080918; BR PI0503006 A 20051206; CA 2503072 A1 20051015; CA 2503072 C 20090113; CN 100491682 C 20090527; CN 1683720 A 20051019; CY 1108624 T1 20140409; DE 602005009426 D1 20081016; DK 1593780 T3 20090105; EC SP055730 A 20060301; EG 24159 A 20080820; ES 2313245 T3 20090301; FR 2869053 A1 20051021; FR 2869053 B1 20060714; HK 1081611 A1 20060519; JP 2005299383 A 20051027; MA 27601 A1 20051101; MX PA05004082 A 20051019; MY 139143 A 20090828; NO 20051693 D0 20050405; NO 20051693 L 20051017; NO 337081 B1 20160118; PL 1593780 T3 20090331; PT 1593780 E 20081209; RU 2005109877 A 20061020; SG 116666 A1 20051128; SI 1593780 T1 20090228; US 2005241349 A1 20051103; US 7320236 B2 20080122; ZA 200503016 B 20051020

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EP 05290704 A 20050330; AR P050101496 A 20050415; AT 05290704 T 20050330; AU 2005201524 A 20050411; BR PI0503006 A 20050415; CA 2503072 A 20050411; CN 200510064348 A 20050414; CY 081101388 T 20081202; DE 602005009426 T 20050330; DK 05290704 T 20050330; EC SP055730 A 20050412; EG 2005040189 A 20050413; ES 05290704 T 20050330; FR 0403952 A 20040415; HK 06101840 A 20060213; JP 2005110100 A 20050406; MA 28217 A 20050413; MX PA05004082 A 20050415; MY PI20051619 A 20050412; NO 20051693 A 20050405; PL 05290704 T 20050330; PT 05290704 T 20050330; RU 2005109877 A 20050406; SG 200502753 A 20050414; SI 200530444 T 20050330; US 10413405 A 20050412; ZA 200503016 A 20050414