

Title (en)
INJECTION DEVICE

Title (de)
INJEKTIONSGERÄT

Title (fr)
APPAREIL D'INJECTION

Publication
EP 2480272 A2 20120801 (DE)

Application
EP 10757045 A 20100921

Priority

- DE 102009048497 A 20090926
- EP 2010005762 W 20100921

Abstract (en)
[origin: CA2773605A1] The invention relates to an injection device comprises a housing (34), and a carpule container (44) for accommodating a carpule (50) having a fluid (52) to be injected, and a piston (48) displaceable in said carpule (50). The device further comprises a piston rod (38) for displacing the piston (48) of a carpule (50) inserted in the carpule container (44) during an injection, thus pressing fluid (52) out of the carpule (50). The piston rod (38) has an external thread (40), which engages with the internal thread of a component (150) arranged in the housing (34). The device further comprises a gear unit (98) provided with a first component (68), which is arranged rotatably relative to the housing (34), but axially non-displaceably, and a second component (92), which is connected in a non-rotatable but axially displaceable manner to the piston rod (38), so that the first component (68), the second component (92), and the piston rod (38) can jointly rotate relative to the housing (34) as long as an axial displacement of the piston rod (38) is not obstructed. In the event that the piston rod (38) is prevented by the piston (48) of a carpule (58) from further displacement in the direction of said piston (48), the first component (68) and the second component (92) move relative to one another, thus displacing the second component (92) in a position in which said second component and the piston rod (38) non-rotatably connected thereto are prevented from a rotation relative to the housing (34).

IPC 8 full level
A61M 5/24 (2006.01); **A61M 5/31** (2006.01); **A61M 5/315** (2006.01)

CPC (source: EP US)
A61M 5/24 (2013.01 - EP US); **A61M 5/3129** (2013.01 - EP US); **A61M 5/3146** (2013.01 - EP US); **A61M 5/31551** (2013.01 - EP US);
A61M 2005/2407 (2013.01 - EP US); **A61M 2005/2488** (2013.01 - EP US)

Citation (search report)
See references of WO 2011035877A2

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)
DE 102009048497 A1 20110331; CA 2773605 A1 20110331; EP 2480272 A2 20120801; JP 2013505748 A 20130221;
US 2013030383 A1 20130131; WO 2011035877 A2 20110331; WO 2011035877 A3 20110623

DOCDB simple family (application)
DE 102009048497 A 20090926; CA 2773605 A 20100921; EP 10757045 A 20100921; EP 2010005762 W 20100921;
JP 2012530158 A 20100921; US 201013393359 A 20100921