

Title (en)
HYDRAULIC SYRINGE DRIVE.

Title (de)
HYDRAULISCHER EINSPRITZNADELANTRIEB.

Title (fr)
DISPOSITIF DE SERINGUE HYDRAULIQUE.

Publication
EP 0169838 A4 19871019 (EN)

Application
EP 84900924 A 19840125

Priority
US 8400119 W 19840125

Abstract (en)
[origin: WO8503232A1] A syringe driving unit comprising free pistons (16, 25) in interconnected cylindrical chambers (12, 13), one of the pistons carrying a syringe plunger driver (31) and being biased, directly or indirectly, in the driving direction, and one piston (16) being movable to force both pistons into primed or loaded positions, the connections between the chambers including a pressure regulator (39), flow regulator (111) and a needle valve (110) to regulate adjustably the return flow or hydraulic fluid corresponding to the movement of the driving piston. The priming piston (16) may be moved mechanically or pneumatically, and a fail-safe mechanism may be provided, if needed, to become effective in case of leakage. Bolus delivery, to augment optionally the adjusted flow, is also provided for.

IPC 1-7
A61M 5/20

IPC 8 full level
A61M 5/145 (2006.01)

CPC (source: EP)
A61M 5/14526 (2013.01); **A61M 5/1456** (2013.01); **A61M 2005/14264** (2013.01); **A61M 2005/14506** (2013.01); **A61M 2005/14513** (2013.01)

Citation (search report)

- [AD] US 2605765 A 19520805 - PAUL KOLLSMAN
- [A] FR 1006249 A 19520421
- See references of WO 8503232A1

Designated contracting state (EPC)
AT CH DE FR GB LI SE

DOCDB simple family (publication)
WO 8503232 A1 19850801; AU 2574584 A 19850809; AU 564699 B2 19870820; EP 0169838 A1 19860205; EP 0169838 A4 19871019; JP S61501128 A 19860612

DOCDB simple family (application)
US 8400119 W 19840125; AU 2574584 A 19840125; EP 84900924 A 19840125; JP 50092184 A 19840125