

Title (en)  
PUMP ACTUATION DEVICE, ESPECIALLY LIQUID DOSING PUMP

Publication  
**EP 0226737 A3 19871021 (DE)**

Application  
**EP 86114115 A 19861011**

Priority  
DE 3537297 A 19851019

Abstract (en)  
[origin: US4753118A] A driving arrangement for a pump, especially a liquid metering pump, includes a pump tappet mounted on a support for displacement in and opposite to a predetermined direction during a pumping and a return stroke thereof, respectively. A restoring spring member urges the pump tappet opposite to the predetermined direction. There is further provided a mechanical energy storage device which includes a storage tappet mounted on the support spaced from the pump tappet for displacement in and opposite to the predetermined direction, and an elastically yieldable storage member urging the storage tappet in the predetermined direction. The tappets are alternately displaced against the forces exerted thereon by the respective spring and storage members by a motor-driven eccentric member interposed between the tappets and having an outer surface which acts on the pump tappet at least during a predetermined part of each of the strokes to displace the pump tappet against the force of the restoring spring member in the predetermined direction, and on the storage tappet to displace the same opposite to the predetermined direction with attendant storage of mechanical energy in the compressible storage member for transmission of such stored mechanical energy to the pump tappet during subsequent movement of the storage tappet in the predetermined direction.

IPC 1-7  
**F04B 13/00**; **F04B 9/04**

IPC 8 full level  
**F04B 9/02** (2006.01); **F04B 9/04** (2006.01); **F04B 9/06** (2006.01); **F04B 13/00** (2006.01)

CPC (source: EP US)  
**F04B 9/045** (2013.01 - EP US); **F04B 9/06** (2013.01 - EP US); **Y10T 74/18056** (2015.01 - EP US); **Y10T 74/2158** (2015.01 - EP US)

Citation (search report)

- [A] GB 1221827 A 19710210 - GIRLING LTD
- [XP] FR 2565653 A1 19851213 - MILTON ROY DOSAPRO [FR]
- [A] GB 881430 A 19611101 - NORTON TOOL COMPANY LTD
- [A] DE 3031067 A1 19810409 - SEEGER CORP [US]
- [A] DE 2826045 A1 19790613 - LEAR SIEGLER INC
- [A] DE 3013146 A1 19801030 - METERING PUMPS LTD

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DE8807203U1

Designated contracting state (EPC)  
AT BE CH DE ES FR GB IT LI LU NL

DOCDB simple family (publication)  
**US 4753118 A 19880628**; AT E47203 T1 19891015; CA 1255153 A 19890606; DE 3537297 A1 19870423; DE 3666267 D1 19891116; EP 0226737 A2 19870701; EP 0226737 A3 19871021; EP 0226737 B1 19891011; JP S62118071 A 19870529

DOCDB simple family (application)  
**US 92027186 A 19861017**; AT 86114115 T 19861011; CA 520658 A 19861016; DE 3537297 A 19851019; DE 3666267 T 19861011; EP 86114115 A 19861011; JP 24431086 A 19861016