

Title (en)  
SELF-PRIMING PUMPING APPARATUS FOR LIQUIDS

Publication  
**EP 0274739 A3 19900228 (DE)**

Application  
**EP 87119204 A 19871224**

Priority  
CH 13287 A 19870115

Abstract (en)  
[origin: US4875836A] The pump apparatus comprises a pump, suction device and a pressure container. The suction device is constructed as a structural unit and can be inserted coaxially from above into the pressure container. The pump likewise is constructed as a structural unit which can be inserted from above with self-centering and self-sealing connections coaxially into a hollow compartment of the suction device and is connectable therewith. By means of threaded bolts which, upon lowering the suction device, piercingly extend through bores provided at a ring flange of the suction device, the inserted suction device can be connected with the pressure container. If the need exists this can be accomplished by remotely controlled manipulator expedients. In analogous fashion threaded bolts protruding from the upper end of the suction device, during installation of the pump, extend through bores of the pump housing, so that the pump also can be fixed in its mounted position by remotely controlled manipulator expedients and can be released from such mounted position. The assembly and disassembly of the pump apparatus for repair and maintenance purposes can thus be accomplished rapidly and simply also with the aid of remotely controlled manipulator expedients. Any fluid leakage which arises during disassembly of the pump apparatus or because of a defect always remains in the pressure container.

IPC 1-7  
**F04D 29/60**

IPC 8 full level  
**F04D 29/60** (2006.01)

CPC (source: EP US)  
**F04D 29/606** (2013.01 - EP US)

Citation (search report)

- [X] DE 2433054 B1
- [Y] US 2934245 A 19600426 - EMENY GEORGE B
- [Y] GB 883624 A 19611206 - MILES LOWELL EDWARDS
- [A] FR 2166630 A5 19730817 - CRANE CO
- [A] US 2381834 A 19450807 - CHARLES MEREDUEW GEORGE, et al
- [A] FR 1334508 A 19630809 - WAUQUIER SOC NOUV ETS
- [A] FR 1356951 A 19640403 - MATERIEL TELEPHONIQUE

Cited by  
US5542823A; DE29511865U1; EP0690230A1; NL9401097A

Designated contracting state (EPC)  
BE DE FR GB

DOCDB simple family (publication)  
**EP 0274739 A2 19880720; EP 0274739 A3 19900228; CH 671611 A5 19890915; US 4875836 A 19891024**

DOCDB simple family (application)  
**EP 87119204 A 19871224; CH 13287 A 19870115; US 14180788 A 19880111**