

Title (en)

DEVICE FOR STIRRING A LIQUID AND INJECTING A GAS INTO SAID LIQUID WITH LIMITED CLOGGING

Title (de)

VORRICHTUNG ZUM RÜHREN EINER FLÜSSIGKEIT UND ZUM EINSPRITZEN EINES GASES IN DIESE FLÜSSIGKEIT MIT EINER BESCHRÄNKTEN SPERRUNG

Title (fr)

DISPOSITIF D'AGITATION D'UN LIQUIDE ET D'INJECTION D'UN GAZ DANS CE LIQUIDE A ENGORGEMENT LIMITE

Publication

EP 1594598 A1 20051116 (FR)

Application

EP 03799707 A 20031204

Priority

- FR 0350151 W 20031204
- FR 0215733 A 20021212

Abstract (en)

[origin: US2006151897A1] An apparatus for stirring and injecting a gas into a liquid. A drive device, located above a container containing a liquid, is connected to a vertical output shaft. The shaft has a self-suction turbine at its. The turbine is made of two stacked disks where the surface area of the lower disk is less than the surface area of the upper disk.

IPC 1-7

B01F 3/04; **B01F 15/00**

IPC 8 full level

B01F 27/91 (2022.01)

CPC (source: EP US)

B01F 23/23342 (2022.01 - EP US); **B01F 27/192** (2022.01 - EP US); **B01F 27/111** (2022.01 - EP US); **B01F 27/113** (2022.01 - EP US)

Citation (search report)

See references of WO 2004054694A1

Designated contracting state (EPC)

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

DOCDB simple family (publication)

US 2006151897 A1 20060713; **US 7431272 B2 20081007**; AT E376875 T1 20071115; AU 2003299411 A1 20040709; AU 2003299411 B2 20090129; BR 0317264 A 20060117; BR 0317264 B1 20101130; CA 2508429 A1 20040701; CA 2508429 C 20110510; CN 100344355 C 20071024; CN 1729045 A 20060201; DE 60317241 D1 20071213; DE 60317241 T2 20080814; DK 1594598 T3 20080211; EP 1594598 A1 20051116; EP 1594598 B1 20071031; ES 2295689 T3 20080416; FR 2848472 A1 20040618; FR 2848472 B1 20050218; JP 2006509625 A 20060323; JP 4373336 B2 20091125; PT 1594598 E 20080124; WO 2004054694 A1 20040701

DOCDB simple family (application)

US 53870605 A 20051121; AT 03799707 T 20031204; AU 2003299411 A 20031204; BR 0317264 A 20031204; CA 2508429 A 20031204; CN 200380105973 A 20031204; DE 60317241 T 20031204; DK 03799707 T 20031204; EP 03799707 A 20031204; ES 03799707 T 20031204; FR 0215733 A 20021212; FR 0350151 W 20031204; JP 2004559841 A 20031204; PT 03799707 T 20031204