

Publication

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Application

EP 90911441 A 19900725

Priority

- CA 615485 A 19890929
- US 39135089 A 19890809
- US 49991790 A 19900327

Abstract (en)

[origin: WO9102159A1] An air pump (10) particularly suitable for use with bicycles includes a first elongated tube (18) to form a pump chamber and housing, a second elongated tube (20) coupled with a piston in the first tube to reciprocate the piston within the pump chamber. A flexible hose (44) extends from the piston and through the second tube and has at its exposed end an air valve coupling (50). The first and second tubes are releasably secured to permit use of the pump as a seat post. The pump includes a first valve on the outside of the piston between atmosphere and a closed end of the pump chamber and a second valve inside the piston between the closed end of the chamber and the flexible hose. The first valve is configured to provide greater seal effect as pressure builds in the closed end of the pump chamber.

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CPC (source: EP)

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Citation (search report)

- [A] DE 670808 C 19390127 - NIKOLAUS NEUNER
- [A] GB 191317886 A 19140730 - KENNEDY DAVID SHERWOOD [US]
- [A] BE 503449 A
- [A] US 1510830 A 19241007 - ORIPPEN HENRY M
- See references of WO 9102159A1

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Designated contracting state (EPC)

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WO 9102159 A1 19910221; AR 243650 A1 19930831; AU 6144690 A 19910311; AU 648511 B2 19940428; BR 9007583 A 19920630; CS 387790 A3 19920318; EP 0485427 A1 19920520; EP 0485427 A4 19940112; HU 9200353 D0 19920428; HU T63685 A 19930928; IL 95280 A0 19910630; JP H05500400 A 19930128; PL 163499 B1 19940429; PL 286425 A1 19910422; PT 94932 A 19920331

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US 9004172 W 19900725; AR 31757190 A 19900809; AU 6144690 A 19900725; BR 9007583 A 19900725; CS 387790 A 19900806; EP 90911441 A 19900725; HU 35390 A 19900725; IL 9528090 A 19900803; JP 51110190 A 19900725; PL 28642590 A 19900809; PT 9493290 A 19900807