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Abstract (en)
[origin: WO9318297A1] A fuel injection device works according to the solid energy accumulator principle. A reciprocating piston (10, 14) guided in the cylinder of a reciprocating piston pump (1) driven by an electromagnet (9) delivers portions of the fuel to be injected to the pump area during a practically resistance-free acceleration phase that precedes injection and during which the reciprocating piston (10, 14) accumulates kinetic energy. Fuel delivery is then suddenly stopped by delivery interrupting means (6), so that a pressure shock is generated in the fuel located in a closed pressure chamber, by direct transmission of the accumulated kinetic energy of the reciprocating piston (10, 14) to the fuel located in the pressure chamber. The pressure shock is used to inject fuel through an inection nozzle device (3). The pressure shock generating means that interrupt fuel delivery are located out of the guiding, liquid-tight contact area between the reciprocating piston (10, 14) and the cylinder of the reciprocating piston pump (1).

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