

MUSMAN François

(1883 - 1947)

Luxembourg-city

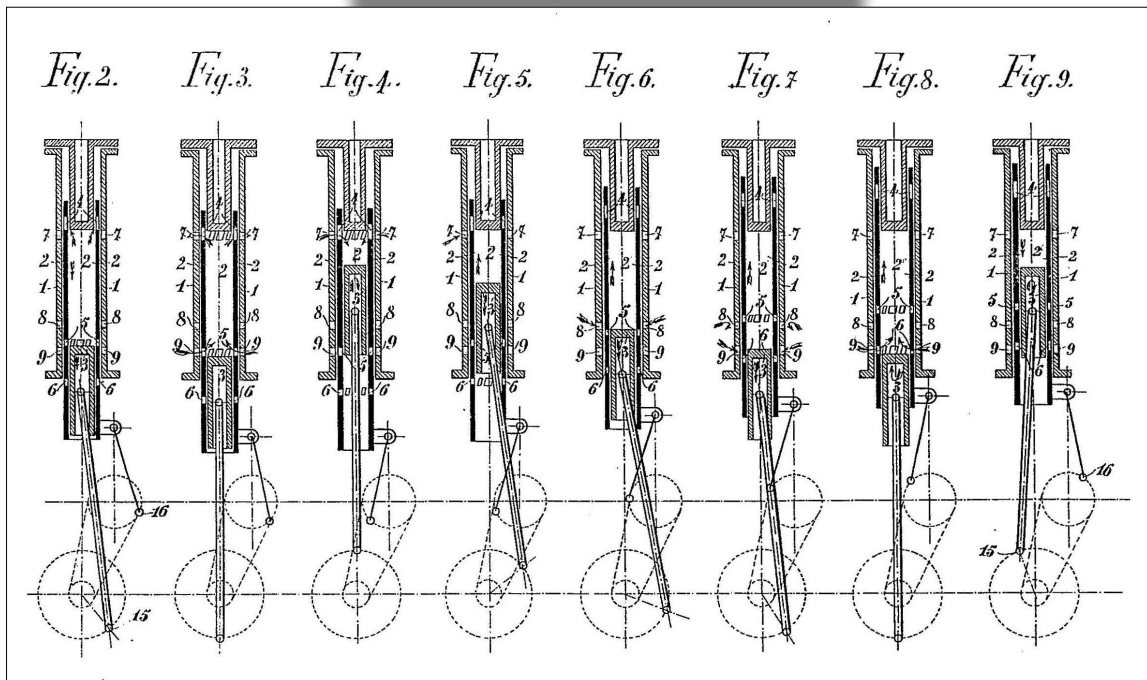
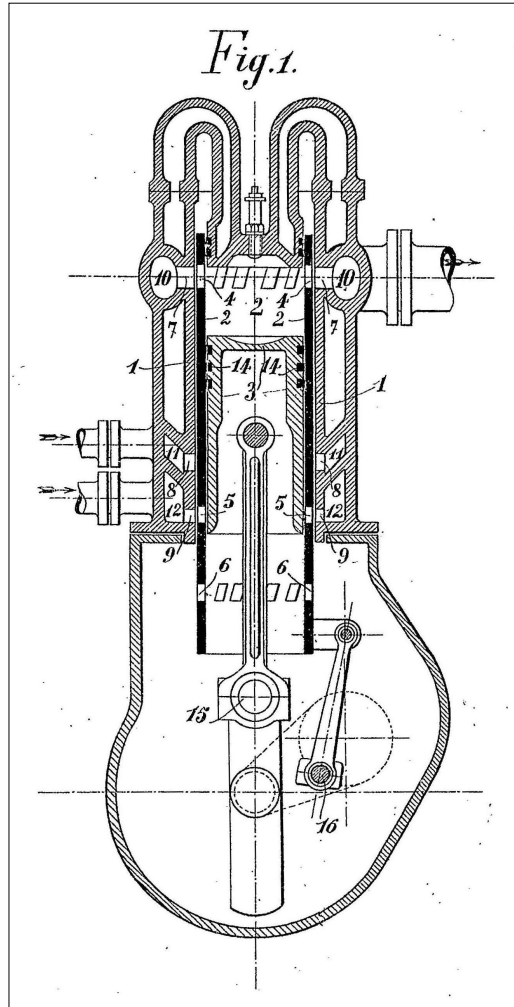
Patents (details)

1 - Improvements in four stroke cycle internal combustion engines with cylindrical sleeve valves

GB patent	139721
Application date	3 February 1919
Co-inventor	GRETEN Auguste

The present invention relates to a four stroke cycle internal combustion engine with cylindrical sleeve valve and the characteristic feature of the invention consists in that the ring of exhaust ports, the ring of inlet ports for the vaporised mineral oil, or the like, and the ring of inlet ports for compressed air provided on the cylinder, and corresponding rings of ports provided on the sleeve valve, are arranged in such a manner that, during a four stroke cycle beginning after the expansion period.

- a) the exhaust gases flow from the cylinder into the exhaust duct through the registering rings of exhaust ports provided on sleeve valve and cylinder;*
- b) the fraction of combustion gases remaining in the cylinder and combustion chamber are wholly expelled by compressed air entering through the lower ring of inlet ports provided on the cylinder and the intermediate ring of ports of the slide valve, which rings of ports are registering ;*
- c) the cylinder and the combustion chamber are wholly filled with fresh air;*
- d) the said fresh air with the exception of the fraction contained in the combustion chamber, is expelled by the piston through the registering upper exhaust ports on sleeve and cylinder, during the upward stroke of the piston.*
- e) a small amount of fresh air is again sucked by the piston into the cylinder through the exhaust ports during the beginning of the downward stroke of the piston.*
- f) a vacuum is formed in the cylinder during a further downward motion of the piston, all ports being closed.*
- g) hydrocarbon gas or vapour from the vaporizer is fed to the cylinder through the registering intermediate ring of ports of both cylinder and sleeve valve.*
- h) compressed air enters the cylinder through the lower registering rings of ports of cylinder and sleeve valve.*



Corresponding patents

DE, FR