# Motorhistoria

## *Internal Combustion Engines 1791–1813*

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# Personer och upptäckter I

- John Barber
  - Gas turbine
  - Manufactured coal gas
  - Compression of air/fuel mixture before combustion
  - Internal water cooling to prevent melting
- Robert Street
  - ”10 drops of turpentine per cubic foot air”
  - Work produced by falling piston (gravity, not atmospheric pressure)
  - No compression of air/fuel mixture – fundamental deficiency of almost all early IC engines
- Philippe Lebon – practical engineer using known scientific principles
  - Double acting engine
  - Considered aspects: (probably didn’t build one)
    - fuel(gas)/air ratio control
    - pressurized fuel/air mixture
    - closed combustion chamber
    - electric spark ignition
    - the expansion factor of the combustion gases
    - actuating all valves in the engine mechanically

# Personer och upptäckter II

- Isaac de Rivaz
  - Self propelled wagon (non-stationary engine)
    - $5.2 \times 2.1$ m
    - Bore 36.5 cm, Stroke 97 cm – 16-20 feet/stroke (3 mph)
  - Volta's electric pistol
  - atmospheric work
  - **Distribution of fuel**
- Claude and Joseph-Nicephore Niepce
  - Cycle water jet
  - Expensive fuel (lycopodium)
  - One brother insane and sapped of resources
  - The other made the first known positive image on a photographic plate (1822)
- John Cox Stevens (US)
  - Similar to Street and Rivaz but covered in the upper end with a cylinder head
  - Ran on spirit (ethyl alcohol)
  - Work by compressed air (not ambient)

# Tidslinje 1791–1813