

Building on the work of engineer-inventors Thomas Newcomen and John Smeaton, who designed small steam engines for pumping water out of mines, James Watt (1736-1819) developed the first efficient steam engines.

Watt's engines were used in factories and mills but due to the supposed danger that the boilers would burst if pressure went too high, they were designed as low pressure engines. Richard Trevethick in Britain and Oliver Evans in the United States challenged this assumption to build the first high pressure engines. Trevethick designed a mobile steam road carriage in 1801.

Trevethick's engine designs probably influenced George Stephenson's work in the coal fields. In 1812 Stephenson altered an engine that was used for pumping water from the mine to have it move coal.

This development led to railroads, and this technology allows Engineers to build railroads through farms, plains, deserts, and forests.