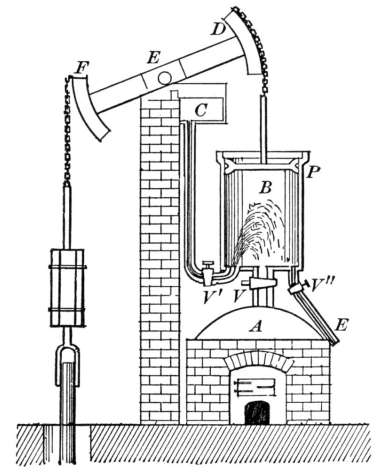


## James Watt

James Watt (1736-1819), was an en-gin-eer and inventor. He was born on 19<sup>th</sup> January in Greenock in Scotland. As a child poor James often had bad headaches. They could go on for days. Other boys in Greenock went to school to learn. James learned at home with his mother. She could teach him when his head was not aching and let him rest when his head hurt. In this way he learned to read, write and do sums. Best of all he learned what was in the Bible. He learned what God was like. He learned that he was a sinner who needed a Saviour.

James wanted to learn. Soon he was reading everything he could. When he was feeling better he went to his father's workshops. Here learned how to use tools. When he grew up James worked at mending science tools for the University of Glasgow. One day he was given a broken model to mend. It was a model of a steam engine. You can see a diagram of one of these engine on the right.

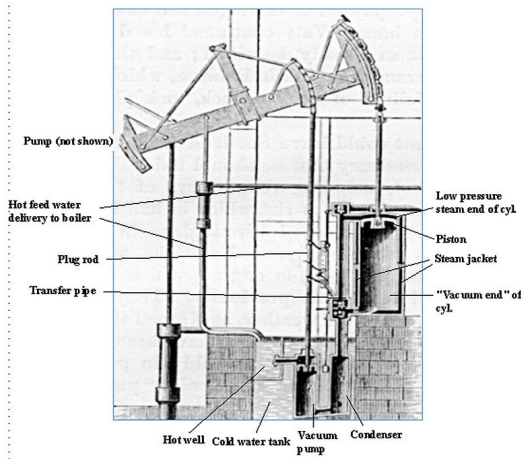


Steam engines were not used to pull trains in those days. The steam engines they had were not strong enough for that. But they were used all over the country for pumping water out of mines. Mines were often flooded with water. The steam engines pumped out the water so the miners could carry on working.

The model worked well when James had mended it. As he looked at it he had an idea. He thought and thought about it. He knew the engine could be made better. He made a model out of all sorts of odds and ends – he even used his wife's thimble. James idea was to add something to the engine that would make it use much less coal and work much better.

But a model was all very well. How could James find enough money to make a real engine? James borrowed money from friends to make an engine like the one

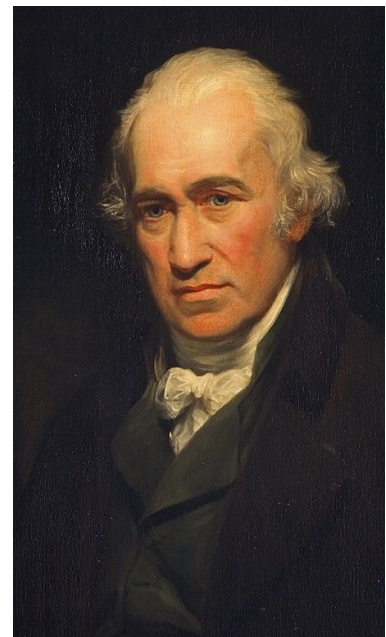
he had modelled. It was hard. He did not have enough money. He still had bad headaches. He could not find workmen who were able to make what he asked for.



Then James met Matthew Bolton from Birmingham. Matthew Bolton made all sorts of things in his factory. He had many clever workmen there. He could see that James's idea would help him. He gave James money to make his engine. He got his clever workmen to help him build it. It looked like the one in the picture here.

James went on to make other kinds of engines. Matthew Bolton helped him with money and men. James's engines were useful in all sorts of places, not just mines. They could drive very big hammers. Factories could use them in making cloth. In coal mines they were used to lift coal to the top. Soon they would be used for pulling trains. James Watt's steam engines changed everything.

Did you know that you are like James? You learn at home. You learn about the Bible. What the Bible says about the world is true. If we learn from the Bible we will understand why the world is as it is. This helped James to do wonderful things.



James never really trusted the Lord Jesus Christ to be his Saviour from sin. He had a Christian education but he wasted the best part of it. What a sad thing! Matthew Bolton and other friends who James made when he grew up did not believe the Bible. James followed their bad example. Do not waste what you have been given as he did.