

The Industrial Revolution 1

The Invention of Factories

Three hundred years ago most people lived and worked in the countryside. The only really big towns in Britain were London, Bristol and Edinburgh. In Britain today only one family in fifty is involved with farming, but three hundred years ago nearly everyone was. Two big changes came. The first was the invention of machines to make farming easier. One of these machines could do the work of many people, so a lot of people who had worked on farms were made unemployed and replaced on the farms by machines.

There were no social benefits in those days, so people who had no work faced the possibility of homelessness and starvation. All they could hope for was the charity of others more fortunate than themselves. This change in farming has been called 'The Agricultural Revolution'. 'Agriculture' means the production of food, and 'revolution' means a turning around – so The Agricultural Revolution means a turning round in the way our food, particularly the wheat that is made into flour for bread, was grown.

At about the same time that the Agricultural Revolution was taking place, another big change occurred – factories were invented. For thousands of years things had been made by people in their own homes. In 1769 a man called Richard Arkwright had an idea. Why not make big machines, in a specially built huge house, which we would now call a factory, a word meaning a place where things are done. Many such machines could be put in one factory and they could be powered by water wheels. Unlike before, when people lived and worked in their

own homes, nobody would live in his factory, but would just go there to work, to make things. This was then a new idea.

Arkwright tried to build his first factory, to spin cotton thread using a machine he had invented, in what was then a small village called Wigan near Manchester. He chose the area around Manchester because it was on a river. What roads there were then were very bad, mostly mud tracks. Because it was on a river, cotton for his factory could be brought by boats. However, the local people, who worked in their own homes, smashed it up. They realised that in his factory, Arkwright's employees would be able to make things more quickly and more cheaply than they could manage at home. The people working at home would not be able to sell the things they made. They knew that if they let Richard Arkwright open his factory they would eventually have to work for him, rather than for themselves as had been the case for all time previously.

His first factory near Manchester having been destroyed, Arkwright moved south and built the first modern factory in a place called Cromford in Derbyshire in the English midlands. It opened in 1771.

Richard Arkwright's factory machines making cotton thread were at first powered by water wheels. Other people soon copied Arkwright's ideas and factories started to appear all over Britain, but particularly in the north and in the midlands. It was the start of what we now call 'The Industrial Revolution'. Industry means making things, so the Industrial Revolution means a turning round in the way things are made. It was a huge change. In future many things would no longer be made by hand in

small quantities by people in their own homes. Things would be made in huge quantities by people working long hours in factories.

But it was not just a revolution in the way things were made. The Industrial Revolution changed the lives of almost everyone in Europe and many other countries too. No longer could people decide to start and finish work when they wanted, being paid for the amount of work they did. Now they had to start work and finish work when the factory owner told them to. If they were late for work they were not admitted to the factory. So they were not paid and went hungry. For a great many people the Industrial Revolution meant the loss of their freedom to decide for themselves what to do and when to do it. It was the loss of a freedom to live their lives as they wished that the majority of people had enjoyed for over four hundred years.



Quarry Bank Mill, in the village of Styal in Cheshire. Built in 1788, this was one of the first factories in England. It was originally run by waterwheels but later by coal which made the steam for steam engines.

The people found themselves in a sort of slavery. There had been a sort of slavery of the working people in England (but not in Scotland, Wales or Ireland) which had lasted for about three hundred years, but that had ended before the year

1400. This time it was back to stay.

You may now be asking yourself, 'What has this to do with the story of coal?' At the same time that factories were being invented and built, other people were inventing and making increasingly bigger and better engines to power the machines in the factories. These are machines were powered not by water wheels, as Richard Arkwright's first factory was, but by steam, made by boiling water by burning coal.

In 1780 Arkwright returned to Manchester and built another factory. This was to be the first factory powered by a steam engine and this time nobody smashed it up. Factories had become accepted as the way things would be made in the future. Again, it was not long before many others copied Arkwright's ideas and by the year 1800 there were hundreds of factories not just in Manchester but in many villages throughout the North and Midlands of England, and in Central Scotland, with thousands of machines powered by steam engines.

The steam which powered the engines was made in giant boilers, heated by coal. Each machine burning several tons of coal every day, and the demand for coal became huge. Before long, nearly every year saw a new mining village springing up where before there had been green fields. With the Industrial Revolution, the real age of coal had arrived.