

Photographs (daguerreotype)

1838

Louis Daguerre

made by polishing a sheet of silver-plated copper, treating it with fumes that made its surface light-sensitive and then exposing it to a bright light. The daguerreotype was the first type of photograph that could be sold because the image lasted. Daguerreotypes were accurate but they were stiff and heavy. The image was fragile so daguerreotypes had to be kept

Named after the inventor, Louis Daguerre, daguerreotypes were



Victorian Inventions

Christmas cards

1843 John Calcott Horsley

Sir Henry Cole was a rich, British businessman who wanted a card to send to people that he knew, to wish them a merry Christmas. In 1843, his friend, John Calcott Horsley, printed the first Christmas card and sent it to him. The card had a

picture of a typical family enjoying the holiday and giving to charity, which was an important part of a Victorian Christmas.



Victorian Inventions

Sewing machine

behind protective casing.

Elias Howe 1846

Elias Howe was an American inventor whose lockstitch sewing machine helped to completely change the way that clothes were made. It took Howe five years to develop his machine and then he moved to England to sell it. While a seamstress could stitch a gentleman's shirt in around 15 hours, the same shirt could be made by machine in

less than two hours. By 1900, sewing machines were not only making clothing but tents, sails, bags, book bindings, umbrellas and flags.

Penny Black stamp

1840

The Penny Black was the first sticky postage stamp in the world. It had a picture of Queen Victoria on it and was worth one penny. Before stamps, people had to pay for the delivery of a letter when it arrived at their door.

The Penny Black lasted less than a year, because the black colour made it hard to see when the letter had been stamped. The Penny Red was used from 1841.



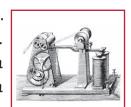
Victorian Inventions

Electric telegraph (Morse code)

1844 Samuel Morse

The telegraph was a way to communicate over long distances, by sending electrical signals through wires between stations. Samuel Morse created a code that gave each letter of the alphabet a special pattern of dots and dashes. This is called Morse code.

Morse sent his first telegraph message in 1844. The message was sent from Washington, D.C. to Baltimore, Maryland. By 1866, a telegraph line had been placed across the Atlantic Ocean from America to Europe.



Victorian Inventions

Railway network

1800s

London Euston opened in 1837 and was the first inter-city railway station in London. It stretched from London to Birmingham. By 1854, railways connected almost every major town in England, and a lot in Wales.

The railway was the most popular way to transport goods and people in Victorian times and for a long while afterwards. It is one of the key developments that helped the Industrial Revolution.



Victorian Inventions

Rubber tyres

1845 Robert William Thomson

In 1845, Scottish inventor Robert William Thomson patented the pneumatic tyre, or 'aerial wheel'. Due to a lack of demand for the tyres – motorcars had not yet been invented – they were not developed further.

43 years later, another Scottish inventor, John Boyd Dunlop, re-invented the pneumatic tyres for his child's tricycle. Eventually, his company was making tyres for bicycles and motorcars. The company is still making rubber tyres today!



Victorian Inventions

Telephone

Alexander Graham Bell 1876

Scottish inventor Alexander Graham Bell invented the telephone by discovering that sounds could travel along the wires used by telegram machines. Until then, they had only sent electrical signals in Morse code along wires. The first words ever sent over a telephone were Bell's instructions to his assistant: "Mr Watson, come here. I want to see you."

Other British inventors had shown that electric lighting was

X-ray

1895 Wilhelm Conrad Röntgen

can pass through the body. They pass through different parts of the body at different speeds and a detector picks up the areas where the radiation has been slower to pass through, e.g. bone. Before x-ray machines were invented, broken bones and other things had to be diagnosed by a doctor's best guess when looking at a patient. Thanks to x-rays, doctors were able to 'see' inside the body! Röntgen received

the first Nobel Prize for physics in 1901 for his work.

X-rays are a type of radiation that can't be seen or felt but that



Victorian Inventions

Electric bulb

Thomas Edison 1879

possible with something called an 'arc lamp', but the light was too bright and did not last for very long. Thomas Edison created a lamp which could last up to 1200 hours, and designed the screw fitting that we use today. Thomas Edison also developed the electric meter, to track how much electricity each person was using.



Victorian Inventions

Petrol motor car

1885 Karl Benz

The first petrol car was called the Benz Patent-Motorwagen. It was the first vehicle designed to be powered by an internal combustion engine. The Benz Patent-Motorwagen was a three-

wheeled carriage with two seats and an engine on the back. It had large spoked wheels like an early bicycle, no roof or windows, and a top speed of about 10mph.



Underground railway (London)

Marc Brunel 1863

The world's first underground railway opened in January 1863 between Paddington and Farringdon. It used wooden carriages and was hauled by steam locomotives and lit by gas lamps. It was a huge success and had 38,000 passengers on the opening day.



The use of steam trains underground led to some health complaints and when electric vehicles, such as trams, began to be built in the early 1900s, the underground was modernised. Today, the 11 lines of the underground handle up to five million passengers a day!

Wireless radio

1895 Guglielmo Marconi

Guglielmo Marconi sent and received the first radio signal in Italy in 1895. This was the first time that signals had been sent or received without wires to connect devices. By 1899,

he had sent the first wireless signal across the English Channel. In 1901, Marconi had managed to receive a radio signal all the way from Newfoundland.



Victorian Inventions

Pillar post boxes (Britain)

1852

A pillar post box is a tall box which stands in the street and is designed for the public to deposit their outgoing mail.

The first pillar post boxes were built in Guernsey in 1852. Some countries had used post boxes before this time. In 1853, the first pillar box in the United Kingdom was installed at Botchergate, Carlisle. Early Victorian post boxes were green; the first boxes to be painted red were in London in 1874, and it took nearly ten years for all other post boxes to be repainted.



Victorian Inventions

Public flushing toilet

George Jennings 1852

George Jennings was a plumber who invented the first public flushing toilets. At the Great Exhibition of 1851, Jennings revealed his 'Monkey Closets'. They were the first public toilets

that anyone had ever seen and, during the exhibition, 827,280 visitors paid one penny each to use them. This is where the phrase 'spending a penny' comes from. For 'spending a penny', visitors would have a clean seat, a towel, a comb and a shoe shine.



Bicycle

1872 James Starley

Bicycles had been built around the world since about 1817, but between James Starley and a French man called Eugène Meyer, the penny-farthing was created. It had two wheels but one was much larger than the other (like a penny and a farthing coin).

The bicycles were fast but unsafe. It was very easy to be thrown over the front of the bike. Queen Victoria owned one of Starley's tricycles but there is no evidence that she ever rode it.



Typewriter

1873 Christopher Latham Sholes

A typewriter is a mechanical machine used for printing letters, numbers and symbols onto paper, like a computer does. It works using a ribbon coated in dried ink, and each key on

the typewriter moves a stamp which presses ink onto the paper. Scholes and his associates created a typewriter which could be sold. It looked like a cross between a piano and a kitchen table!

