

Scottish Inventions



The Television



The Telephone

Did you know that Scottish inventions pop up in just about every area of our lives on a daily basis?

Scottish inventors come from all walks of life - engineers, doctors, surgeons, ministers, scientists..... and for such a small country, Scotland has produced some of the most important discoveries and inventions ever seen.

Here is a list of some of the Scottish inventions that have had an big impact on our lives - often without us even knowing it.

Scottish Inventions - *Medicine*

Hypnosis - James Braid (1795 - 1860)

Born in Fife. James Braid was a surgeon, physician and founding pioneer of the practice of hypnosis, often regarded as the 'Father of Hypnosis'.

He published an influential book on the subject in 1843 called 'Neurypnology or The Rationale of Nervous Sleep Considered In Relation With Animal Magnetism'. The term 'hypnosis' came from the Greek God of sleep 'Hypnos'.

Penicillin - Sir Alexander Fleming (1881 - 1955)

Born in Ayrshire. Alexander Fleming was a scientist (biologist and pharmacologist) who was heavily involved in scientific medical research particularly in the area of bacteria and antiseptics. In 1928, while working with the flu virus, he 'accidentally' discovered the antibiotic Penicillin - this is not only one of the most important in terms of Scottish inventions, but on an international level.

He was Knighted in 1944, and received the Nobel Prize in 1945. Another of Fleming's discoveries was the vaccine for typhoid.

Anesthesia in Childbirth - Sir James Young Simpson (1811 - 1870)

Born in Bathgate, Linlithgowshire. James Young Simpson was a physician and obstetrician who pioneered the use of anesthetics (especially chloroform) during surgery and childbirth. He faced fierce opposition from others in the field of medicine, religion and politics.

He also introduced several new obstetric techniques and practices which improved care for women both then and now. (As a mom myself, I owe this man a debt of thanks!)

Treatment of Malaria - Sir Patrick Manson (1844 - 1922)

Born in Old Meldrum, Aberdeenshire. Patrick Manson was a doctor and medical pioneer who spent his life studying tropical diseases, and was heavily involved in researching the condition commonly known as 'elephantiasis'.

During his studies, he discovered that malaria was transmitted by mosquitoes. His efforts led to the foundation of the Medical School of Hong Kong, and the London School of Tropical Medicine. He is sometimes called 'the father of tropical medicine'.

Scottish Inventions - Science/Industry/Agriculture

The Television - John Logie Baird (1888 - 1946)

Born in Helensburgh, Dumbarton. John Logie Baird was an engineer who invented the television in 1926 - he was the first to demonstrate a working television set and transmit a recognizable image. This is one of the Scottish inventions that the majority of the world use every day.

During WWII he was involved in the development of RADAR (**R**adio **d**etection **a**nd **r**anging) with fellow Scottish inventor Sir Robert Alexander Watson-Watt, and at one time also took out patent on fiber-optics.

The Telephone - Alexander Graham Bell (1847 - 1922)

Born in Edinburgh. Alexander Graham Bell invented the telephone without really trying to. In fact he was actually simply trying to build a device that would transmit sounds telegraphically so that deaf people could 'hear' them.

He continued to teach the deaf, deaf-mute and blind after inventing the telephone, and the famous Helen Keller was one of his pupils. He also was responsible for a

handful of other significant Scottish inventions, including a phonograph, hydrofoils, and an iron lung.

The Vacuum Flask - Sir James Dewar (1842 - 1923)

Born in Kincardine, Fife. James Dewar was a talented physicist who invented the vacuum flask in 1892, (at first called the 'Dewar Flask' but later renamed the 'thermos flask' from the Greek word *'therme'* which means hot). This is one of the Scottish inventions that I remember from my childhood, but is not seen in everyday life now... due I believe to the delicate nature of the internal glass container.

He also was the co-inventor of cordite (a smokeless gunpowder), developed a machine which could produce large quantities of liquid nitrogen and structural formulas for Benzene. He was Knighted in 1904.

The Percussion Cap - Rev. Alexander John Forsyth (1769 - 1848)

Born in Belhevie, Aberdeenshire. Alexander John Forsyth was a Scottish Minister who was also a pioneer in the development of firearms because he invented, and patented, the 'percussion cap' in 1807.

The percussion method of ignition replaced the the flintlock method which was in use at that time, and although you may not know what it is, this invention is the predecessor of the modern-day bullet.

'Macadamisation' (aka Tarmac) - John McAdam (1756 - 1836)

Born in Ayr. John McAdam was a surveyor and heavily involved in road building and management. He developed the 'macadamisation' process which led to the invention of today's tarmac (aka asphalt in the USA).

The first 'tarmac' road was laid in Paris in 1854.

The MacKintosh (aka raincoat) - Charles Mackintosh (1766 - 1843)

Born in Glasgow. Charles MacKintosh was a scientist/inventor/entrepreneur. He made several inventions relating to the iron and steel industry, but his biggest achievement was developing the waterproof fabric that is used to make raincoats.

He patented this process in 1823 and although there have obviously been other improvements and inventions in this area since his time, in the UK raincoats are often still called 'mackintoshes' (or 'plastic macs').

It seems to be that in terms of Scottish inventions, this may be one of the most appropriate, because with Scotland's wet weather a raincoat is pretty much a necessity of life!

The Threshing Machine - Andrew Meikle (1719 - 1811)

Born in East Lothian. Andrew Meikle was a millwright, mechanical engineer, and the inventor of the threshing machine around 1786. This machine was one of the major developments of the British Agricultural Revolution.

He also invented a type of sail for windmills called 'Spring sails', which helped the windmills to be operated more safely during stormy weather.

The Reaping Machine - Rev. Patrick Bell (1800 - 1869)

Born in rural Auchterhouse, Angus. The Reverend Patrick Bell was a minister who invented the 'reaping machine'. This was basically an early version of the combine harvester.

It was one of the first pieces of mechanical agricultural machinery to ever be developed.

RADAR - Sir Robert Alexander Watson-Watt (1892 - 1973)

Born in Brechin, Angus. Robert Alexander Watson-Watt was the son of scientist and inventor, James Watt. He was also a physicist and meteorologist, who developed a working RADAR (**R**adio **d**etection **a**nd **r**anging) system during WWII.

The principles of RADAR were known earlier than this, but no-one had yet developed a workable system. He was knighted in 1942 for his contributions to the war effort.

'Hot Blast' Oven - James Beaumont Neilson (1792 - 1865)

Born in Shettleston, just outside Glasgow. James Beaumont Neilson was an engineer who invented the 'hot blast oven' for smelting iron. This used a process which utilized a blast of hot air, as opposed to cold air, which was the current method.

His invention was patented in 1828 and it greatly increased efficiency and productivity in the iron industry - particularly in regards to railway and shipbuilding.