

10 Irish inventions that changed the world

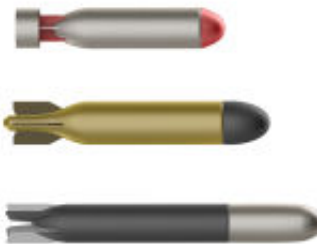
When it comes to world-changing inventions, the little island of Ireland has created its fair share. Here are ten amazing Irish inventions that had a global impact.

1: Colour photography, invented by John Joly in 1894



Modern day photographers owe a debt of gratitude to a man from the Irish midlands. John Joly was born near the village of Bracknagh in Co. Offaly and was an engineering graduate from Trinity College. In 1894, Joly invented a system of colour photography that was based on taking viewing plates with many narrow lines in three colours. Joly would mark the viewing plate with thin coloured lines and would then place the glass in the camera in front of the picture; the photograph could then be taken. This process was much simpler than anything that had come before. It is now widely accepted that he was responsible for the first practical method of colour photography.

2. The Guided Torpedo, invented by Louis Brennan in 1877



Would you believe that the world's first guided missile originated from Castlebar? Louis Brennan, a talented engineer from Castlebar, created a directable torpedo that could be controlled by guide wires. The first design of the torpedo was produced when Brennan was 25. He received funding

from the British Navy. In 1887, a government factory began producing “Brennan's” in Kent. The “Brennan” would go on to be used as a defence mechanism by the British Coastal Defence Forces until the early 20th century. However, so far as is known, it was never fired in anger.

3. The Hypodermic Syringe, invented by Francis Rynd in 1844



Francis Rynd, a Dublin doctor, performed the world's first subcutaneous injection with his homemade hypodermic syringe. Rynd had been treating a woman who had pain in her face for years and was taking morphine pills without relief. Rynd decided to place the morphine directly under her skin and near the nerves. He created a narrow tube and a cutting implement known as a trocar. Four punctures holes were made, the morphine flowed through the tubes and the rest, as they say, is history.

4. The Binaural Stethoscope, invented by Arthur Leared in 1851



One of the most important tools in modern medicine, the binaural stethoscope, was invented by a man from the South-East of Ireland. The stethoscope was originally invented in 1819 by a Frenchman, namely, Rene Laennec. Arthur Leared, a Wexford native, realised that Laennec's

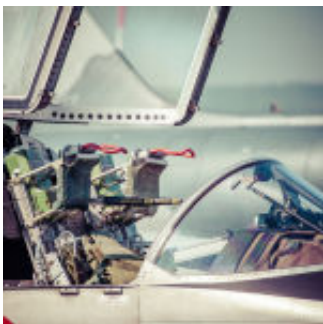
instrument could be more effective, so he connected two earpieces to the listening cylinder with rubber tubes. Leared went on to display the stethoscope at the Great Exhibition in London in 1851 and received critical acclaim. The binaural stethoscope paved the way for the development of the modern stethoscope.

5. The Induction Coil, invented by Rev. Nicholas Callan in 1836



Believe it or not, the induction coil was invented by a priest. Rev Nicholas Callan, a professor of science at St. Patrick's College Maynooth. Rev Callan was one of Ireland's greatest inventors. For the induction coil, Callan wound two long wires around the end of an electromagnet and connected the ends of one wire to a battery. When he interfered with or interrupted the current from the battery he received a spectacular spark from the end of the second unconnected coil and consequently the induction coil was born. Funnily enough, the Reverend managed to knock a future archbishop of Dublin unconscious while carrying out tests for his induction coil. Callan's creation, which is over 170 years old, is still used in car ignitions today.

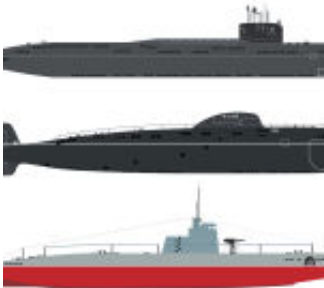
6. The Ejector Seat, invented by Sir James Martin in 1946



Bond fans might be surprised to learn that the inventor of the ejector seat was an Irishman. In July 1946, the first live test of an ejector seat took place. The test proved to be a success when an explosion blew away the pilot's cockpit and a second explosion propelled the pilot out of the plane that enabled him to parachute to safety. As a result, the RAF approved Martin's idea and within 12 months the entire RAF fleet had been fitted with ejector seats. It is believed that Martin's invention

saved over 5,000 lives by the time of his death in 1981.

7. The Submarine, invented by John Philip Holland in 1878



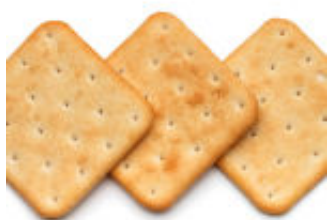
It was a rebel from Liscannor, Co. Clare, who completely changed the way war could be conducted at sea, as well as deep sea exploration. Holland, a school teacher, emigrated to Boston in 1872. His first prototype sank on its launch. However, in 1881 Holland launched the 'Fenian Ram', funded by the Fenian Brotherhood. It proved to be a success. In the following years, Holland won three competitions run by the US Naval Department to design and build submarines. However, political factors meant that this was an unsuccessful venture. Finally, after successful trials, the US Navy purchased the 'Holland VII', its first submarine, and proceeded to order six more. The submarine was now a must-have in naval warfare.

8. The Bacon Rasher, invented by Henry Denny in 1820



An essential part of the 'full Irish', the bacon rasher, was invented by Henry Denny, a Waterford butcher. Denny patented several bacon-curing techniques and completely re-invented the process of how to cure bacon. Before this, bacon was cured by soaking large chunks of meat in brine. Denny decided to use long flat pieces of meat instead of chunks and substituted the brine for dry salt. Soon after, Denny began exporting to mainland Europe, the Americas and as far afield as India. The overall quality and shelf-life of the bacon was dramatically increased. It was an ingenious but simple innovation for its time.

9. The Cream Cracker, invented by William and Robert Jacob in 1885



Like the bacon rasher, the cream cracker was also invented by a Waterford family in the 1800s. In 1885, the Jacob Family produced this biscuit from yeast dough that was left to ferment for 24 hours. It was flattened and then folded numerous times to create a layered biscuit. Jacob's Cream Crackers that have been a family favourite since their inception are now produced by machines that can create approximately one million crackers an hour. They are also available to buy in over 35 countries worldwide.

10. Flavoured Potato Crisps, invented by Joseph 'Spud' Murphy in 1954



Luckily for us, Joseph 'Spud' Murphy had an enormous distaste for plain crisps. It was the 1950s that saw the introduction of the flavoured potato crisp. Murphy, the founder of Tayto, developed a cheese and onion flavoured crisp in 1954 which would prove to be a success, both at home and abroad. By the 1960s, 'Spud' had become a millionaire and was described by Sean Lemass as the very acme of Irish entrepreneurial spirit. Gratefully, we still have manufacturers experimenting with flavours, something that we have 'Spud' Murphy to thank for.

This article was compiled with the help of Mary Mulvihill's wonderful book [Ingenious Ireland](#),

published by Town House, Dublin.

Main image courtesy of MGM. James Bond may have made the ejector seat famous in the classic GoldFinger but it was invented by an Irish man for the use in RAF planes during WWII. Other images from Shutterstock.