

# 4 MOST IMPORTANT INVENTIONS BY WOMEN DURING THE INDUSTRIAL REVOLUTION

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# LADY MARY WORTLEY MONTAGY

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Lady Mary Wortley Montagu was born in England in 1689. She was a well-recognized writer and poet in the late 1600's, early 1700's. She was also a feminist who loved to travel. As a young woman, she contracted and was scarred by smallpox. The smallpox virus was an infectious disease that impacted millions of people and killed one third of the people that suffered from it. If you were one of the lucky ones who did survive, the virus left your skin covered with permanent pox mark scars. It was extremely contagious and could be transmitted by merely coming into contact with an infected person. While Lady Mary was living in Turkey with her husband Edward, who was an ambassador to Turkey, she noticed how effective the preventive vaccines were and brought the idea back to England. She married Edward Wortley Montagu, after walking away from an arranged marriage her father had set up, which was unheard-of in those days.

Because Lady Mary brought the idea of preventative vaccines back to England, eventually a doctor by the name of Edward Jenner developed a preventative vaccine for smallpox that is still the basis of what's used today.



# HENRIETTA VANSITTART

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Henrietta Vansittart is one of Britain's first significant female inventors. Henrietta was born in Ewell, England in 1833. Her parents were James and Mary Lowe and they had 9 kids, including Henrietta. Henrietta and her father James invented the Lowe-Vansittart Screw Propeller, which was the original vision of James. Unfortunately, he passed away in 1866 but Henrietta carried on fine tuning the invention. The Screw Propeller was used to make the power required to drive steam-propellers. She made their invention better by changing the flat blades on the propellers to curved blades. Henrietta named the new and improved steam- propeller after her father and in his memory. The improved propeller blades were a huge success and Henrietta was granted patents in both Britain and the United States.



# ELEANOR COADE

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Eleanor Coade was born in England in 1733. She invented an artificial stone in 1770 which was used to build statues and building facades. It was originally called lithodipura, but is now known as Coadestone. Coadestone was an important invention because it stood up well to extreme weather much better than regular stone. After her product became more and more popular, she began working with some of the most important architects of her time like Robert Adam, James and Samuel Wyatt, William Chambers, John Nash and John Soane. Eventually her product became one of the most widely used materials in the 18<sup>th</sup> century. There are still approximately 650 coadestone sculptures (mainly faces above door frames) that remain today. But unfortunately, most of the statues and building facades no longer exist.



# MARGARET E. KNIGHT

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Margaret E. Knight was an inventor from York, Maine who was born in 1838. She became an inventor at a very young age by making small products, like toys for her younger brother and foot warmers for her mother. After years of working in factories and building small products, Margaret thought of a machine to make flat bottom paper bags. The machine cut, folded and glued the paper into a flat-bottom bag. The name of the bag was originally called the “Plate Knife Holder,” but eventually it was changed to “Paper Bag”. Today, paper bags are used all over the world and in many different retail stores such as grocery stores, clothing stores, hardware stores, and bakeries. They are used daily and many stores have gone back to them because of the environmental concerns with plastic. Margaret worked very hard (sometimes up to 20 hours a day) for most of her life and invented 89 inventions and filed 28 patents.



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# GAS LIGHTING

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# WHY WAS IT INVENTED

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The purpose of the gas light invention was to illuminate houses, businesses and streets after dark so people could still be productive once the sun went down and to try and keep the streets safer for people at night. Prior to gas lighting, oil lamps were used in houses and businesses. The oil lamps weren't very effective because they didn't provide enough light. Not only were oil lamps not very bright but the oil turned bad if it was stored for too long. People wanted a better solution. Once gas lighting was invented homeowners, businesses and cities started to install all over.



# PROBLEMS THAT GAS LIGHTING HAS FACED SINCE IT WAS INVENTED

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Even though there were some huge advantages to gas lighting it did also come with some downfalls. Gas lighting gives off very toxic and dangerous carbon dioxide gas. It could also be very dangerous for workers during renovations in poorly ventilated houses and buildings. Also, gas lighting give off greenhouse gases (like what cars give off), which is really bad for the environment. One other downfall to gaslighting is that the gas burns off and must be refilled on a regular basis.



# WHAT HAS HELPED IMPROVE THE INNOVATION

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In 1879, the invention of the electric lightbulb by Thomas Edison replaced gas lighting because it was a better and more effective alternative. Electricity is a safer and more efficient way to provide lighting to streets, houses and businesses around the world. Also, people no longer needed to continuously refill their lanterns and lights with more gas. Electricity is a safer alternative and it's better for our environment because it doesn't give off harmful carbon dioxide gas or greenhouse gases.



# HOW COULD THIS INNOVATION IMPROVE IN 50 YEARS FROM NOW

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I don't think that much will change in 50 years with lighting, but I believe they will continue advances with technology. Things like longer lasting lightbulbs and ways to improve efficiencies. For instance, using less water and dams to create the electricity we need for lighting and other things. Plus, we could change back the land currently used for dams back into farmland or other uses. Also, using less water is better for our environment. But solar and wind electricity are the areas I believe we'll see real innovation and advances. They are still at an early stage and we have a lot of the renewable resources needed (sunshine and wind).



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