

Generations of STEM:

Garrett Morgan

Inventor of the Traffic Signal

With only an elementary education, Garrett Morgan began working at a sewing machine factory. Fascinated by the machine, he learned to fix them and earned a patent for an improved sewing machine design.

In an unlikely twist, the sewing machine would lead to his next patent for a hair product. Noting that fabric would often be marred when the needles moved too fast while sewing, he came up with a solution to reduce that friction. The cloth material seemed straighter, and when trying it on himself, he created the G.A. Morgan Hair Refining Company cream!

Next, he developed a breathing device that became the prototype for the gas masks used in World War I. Despite using the mask to save lives in a tunnel explosion, many would not purchase the product as he was an African American.

His inventions earned Morgan enough money to be the first black man in Cleveland to own a car. In 1923, Morgan developed a new traffic signal. This one had three lights, adding the now familiar yellow warning light. He eventually sold his patents for the traffic signal to General Electric.



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