

**Title:** Garrett Morgan: inventor hero  
**Author(s):** [Paula Morrow](#)  
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Full Text:

[ILLUSTRATION OMITTED]

On July 24, 1916, a natural gas explosion trapped 32 men working in a tunnel 250 feet below Lake Erie. The first would-be rescuers who dashed into the tunnel were overcome by gas, and for hours no one else dared to enter the suffocating, poisonous deathtrap. Then, late that night, someone had an idea: Send for Garrett Morgan and his new invention.

Garrett Morgan was a successful factory owner in Cleveland. The son of freed slaves and the seventh of 11 children, he had grown up on a farm in Kentucky but left home at 14. By age 30 the mechanically minded Morgan had opened his own sewing machine shop, which he soon expanded to a tailoring factory with 32 employees.

In the early 1900s, factory buildings were crowded and cluttered. They were often made of wood, with no fire escapes. Fires were devastating.

[ILLUSTRATION OMITTED]

Concerned about his employees, Morgan experimented with a "safety hood" that would allow the wearer to breathe despite a fire's toxic smoke. Morgan knew smoke rises during a fire, so he created a heat-resistant hood with a long tube reaching to the floor. Wearing Morgan's hood, a firefighter could breathe the cleaner air near the ground. Morgan lined the breathing tube with a sponge-like material that was moistened before use to cool and filter the air. A second tube released exhaled air.

[ILLUSTRATION OMITTED]

Roused from home on the night of the tunnel explosion, Garrett rushed to the disaster site with samples of his safety hood.

Still in their pajamas, he and his brother Frank put on hoods and bravely entered the tunnel. It was a dangerous test of the invention, but they saved two lives and recovered four bodies before officials closed the site. Morgan knew that more lives might have been saved if he had been called sooner.

The daring rescue made Morgan famous and brought requests for safety hoods from fire departments around the country. But his greatest reward was knowing that his invention would now save more people.

Over the years, Morgan patented many ideas that saved lives or made life easier. In those days, city streets were crowded with horses, carriages, bicycles, and pedestrians. One day, Morgan--the first African American in Cleveland to buy an automobile--was driving his new car when he witnessed a terrible collision between another car and a horse-drawn carriage. Morgan decided that traffic-control signals could prevent such tragedies.

Other inventors had experimented with this idea, but their mechanical signals had to be operated by hand and were not visible at night. In addition, existing

signals had no caution sign between stop and go, so a driver going one direction might start across an intersection before an oncoming driver had time to stop. To solve these problems, Morgan invented an electric traffic signal with three positions: stop, go, and an all-directional stop for vehicles to let pedestrians cross in safety. His signals could operate 24 hours a day, with a spotlight for nighttime use. After patenting his design, Morgan sold the rights to General Electric Corporation for \$40,000. His signals were used across the country and set the standard for the red-yellow-green traffic lights we use today.

[ILLUSTRATION OMITTED]

Once in a while, someone comes along who actively looks for ways to keep others safe. Such a person was Garrett Morgan who, in addition to his inventive genius, was blessed with genuine concern for the well-being of other people.

[ILLUSTRATION OMITTED]

### **Morrow, Paula**

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