

# The History of the **B O U R K E** Safety Eye Shield



Inspiration for the Cairns Defender Visor



*Historical Perspectives from MSA*



## *Tradition: The Bourke Safety Eye Shield*

In the early 1960s, eye protection was not widely used among firefighters. That would change after a New York City firefighter was hit in the face with a piece of angle iron during a fire.

That firefighter was Lester (Les) Bourke, and he worked at FDNY Engine Company 231 in Brooklyn. Les was working the hose line inside a burning auto repair garage, when the hose spray hit a piece of angle iron that was attached to the ceiling with a single bolt. The angle iron started swinging, and the end of it hit Les in the forehead—right under the brim of his Cairns® New Yorker N5A® leather fire helmet.

The force of the hit knocked Les to the ground and left him momentarily blinded by the blood gushing from his forehead. Although the cut healed over time, Les was left with a desire to find a way to protect his eyes from dangerous objects he encountered while firefighting.

### *Looking for eye protection*

Army goggles were the first thing that Les tried. This idea quickly passed, as the goggles fogged up almost immediately. Les continued to think about the problem and began to try out different ideas for helmet-mounted eye protection.

Inspiration struck one day when a mechanic at the fire house was working on the fire engine's speedometer. As Les watched the mechanic discard the old speedometer cable, he realized that the cable could be used in his eye protection device. That cable just might work, to allow two independent lenses to be moved up and down together.

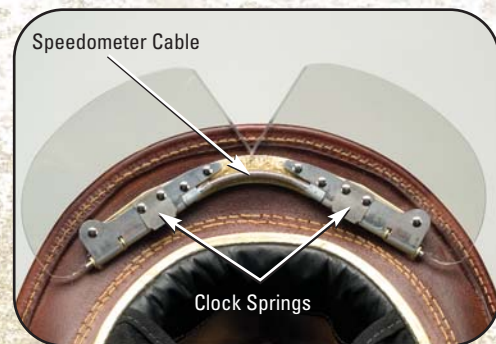
### *Developing a solution*

After that, Les experimented with different thicknesses and types of speedometer cable until he found exactly the right type that allowed both lenses of the eye protection to go up and down together.

Next, Les found a clever way to keep the eye shields in place, both up and down. He obtained flat clock springs from local clockmakers and attached them to his invention. After experimenting with springs of different strengths, Les finally settled on a spring that had enough force to keep the eye protection in position, either stowed or deployed.

With his homemade invention pretty well complete, Les applied for a patent in February 1965.

He then began wearing his eye protection device on his helmet. Some of his fellow firefighters thought the eye protection looked ridiculous, but Les didn't care—his eyes were worth protecting.



## *Protection for all*

One day, while he was training at the FDNY Fire Academy on Randall's Island, a training lieutenant noticed Les's helmet and asked him about it. Upon hearing Les's story, the lieutenant remarked that he wished something like that had been available a few years earlier, before he had lost his eye in an accident.

After this encounter, and with the urging of some of his house's brothers, Les showed his invention to their chief of safety, who immediately recognized the value of this innovation. He arranged a meeting between Les and Pete Coombs, Sr., who was the president of Cairns and Brother, Inc. Mr. Coombs tried the helmet on and decided at once to sell the device as an accessory for his line of Cairns Fire Helmets.



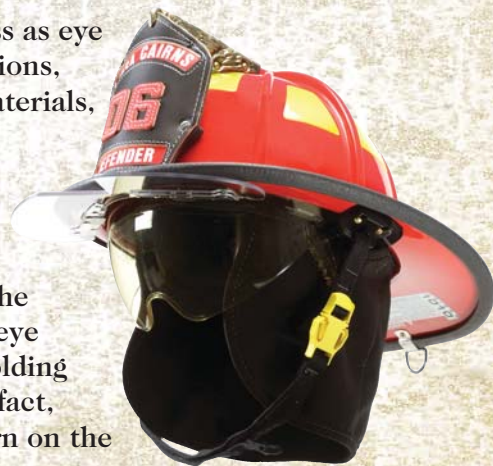
Cairns and Brother began selling the Bourke Safety Eye Shield in 1966, and U.S. Patent Number 3,383,155 was officially granted to Lester T. Bourke on May 14, 1968.

Lester Bourke's invention represented a major development in firefighters' eye protection. During the over 40-years that the Bourke Safety Eye Shield has been in service, it has undoubtedly contributed to saving the vision of countless firefighters.

## *Inspiring New Innovation: The Defender® Visor*

As the years passed, "Bourkes" became a part of firefighting tradition. However, their effectiveness as eye protection has been surpassed by recent innovations, made possible through modern technology in materials, design, and manufacturing.

At the forefront of this innovation is the Defender Visor for Cairns Fire Helmets, available only from MSA. Inspired by the Bourke Safety Eye Shield, the patent-pending design of the Defender Visor offers close-fitting, full-coverage eye protection that is always ready to go, while upholding the traditional appearance of the fire helmet. In fact, both the Defender Visor and Bourkes can be worn on the same fire helmet.



The Defender Visor gives firefighters many advantages over conventional eye protection, such as:

- **Remains clean.** The Defender Visor is retractable inside the helmet shell, keeping it clean and protected when not in use.
- **Rapidly deployable.** With a gloved hand, a firefighter can easily rotate the Defender Visor into position.
- **Lowest profile.** Nothing protrudes from the helmet to get caught or tangled when the firefighter works in tight spaces.
- **Easy maintenance.** The Defender Visor can be removed from the helmet with no tools for cleaning, replacement, or changing among the multiple shades available.
- **Ultimate Protection.** The Defender Visor complies with the applicable requirements of both NFPA 1971, 2007 Edition and ANSI Z87.1 standards. It's close-fitting and optically correct with full coverage, like the design of modern safety spectacles.

Curious about how the father of innovative eye protection for fire helmets would respond to MSA's Defender Visor, we asked Les and he commented:

*"When I was working on my eye shields over 40 years ago, my main goal was to provide a greater degree of protection and safety to myself and my fellow firefighters. I am pleased to see MSA carrying on this spirit by developing products like the Defender Visor for Cairns Fire Helmets.*

*"Back then we didn't have anything. It would have been great to have a product like the Defender Visor available, because we would have been better protected. Cairns embraced my innovation back then, and it is great to see them continuing that tradition with the Defender Visor. I am glad to see that the firefighters today get to have the safety advantages that modern technology can offer."*



And finally...

MSA thanks Les Bourke for turning his passion for firefighter safety into the "Bourkes" eye protection, a tradition since 1966. We thank Pete Coombs, Sr., who opened the door to manufacturing this wonderful eyewear. And we're proud that his son, MSA sales manager Pete Coombs, Jr., continues the tradition of promoting greater protection for all firefighters today.

*At MSA, your safety is our tradition.*

**Note:** This Bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and care of these products.



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