

*The New England*

Spring 2023



# *Fireguard*

The Official Bulletin of the New England Museum of Firefighting

## NEW ENGLAND INGENUITY



*The Fire Museum of Maryland has in its collection this 1908 Hayes aerial ladder truck that is equipped with a Dahill pneumatic aerial hoist. It was motorized with a 1918 Mack AC tractor. The Dahill pneumatic aerial hoist used compressed air to raise the aerial ladder. It was invented by Edward F. Dahill, who was the Fire Chief in New Bedford, Massachusetts. Dahill was a progressive and innovative Fire Chief, who held several patents. He is one of the examples of "Yankee ingenuity" featured in this issue.*



# ***The New England Fireguard***

**Spring 2023**

**Published by the New England  
Museum of Firefighting, Inc.  
Post Office Box 252  
Adams, Massachusetts 01220**

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## **MISSION STATEMENT**

The New England Museum of Firefighting is a nonprofit educational organization that preserves, promotes, researches and shares the significant historical contributions of the people of New England to the American fire service. The Museum aspires to provide the public with engaging and interactive experiences that are relevant, accessible and meaningful to all people, through the preservation of fire apparatus and artifacts that illustrate the rich history of firefighting and the fire service in New England.

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## **President's Message**

Dear Friends,

Welcome to the third installment of the Museum's newsletter, or should I say magazine. The *Fireguard* has turned out better than we expected. More importantly, the support that the Museum has received has been wonderful.

Since our last newsletter the museum has been gathering many historical artifacts and equipment for preservation. These are wonderful gifts that we truly appreciate. It is not just apparatus that we aim to preserve. The Museum is dedicated to all aspects of the fire service and its impact on New England history.

As you read the issue, you will realize how important certain individuals have been to the fire service. These inventors pioneered and led the way with advances in technology that we still use today to save lives and property. The fire service must move forward and embrace change. But we should never forget where we have come from. At the Museum, it is our goal to share that history. In this issue we show how advancements in technology from New Englanders has made the job of firefighting safer and more efficient.

This summer we will be making many improvements to the Museum's building. We hope to have some open house dates for this fall. In the meantime, please visit the Virtual Museum on our website. We will have the Mobile Museum at the national SPAAMFAA convention in July. I hope that you can join us for that special event.

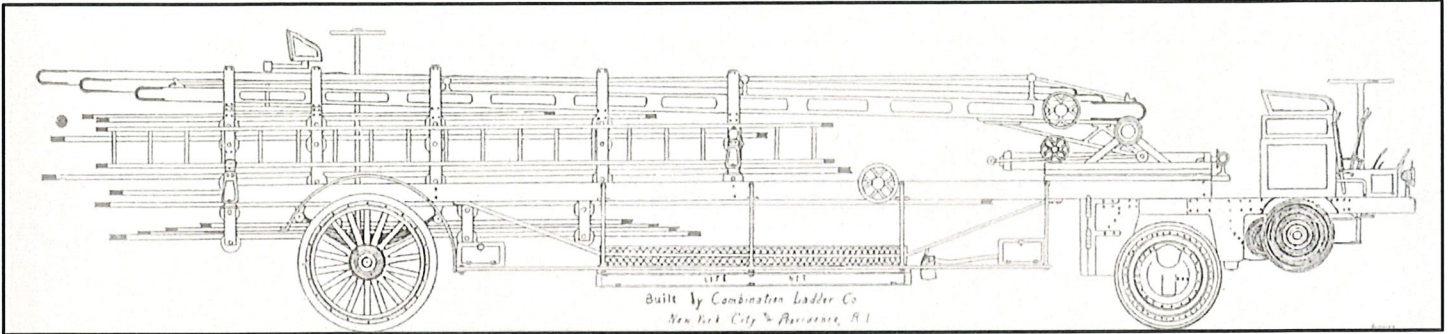
Best Wishes,



Michael Nugai



# New England Ingenuity



*The first three-section wooden aerial ladders were invented by Charles N. Richardson, who was the owner of the Combination Ladder Company of Providence, Rhode Island. Richardson's ingenious design reduced the overall length of a ladder truck by about one-third.*

The stereotype of inventiveness, self-reliance, individual enterprise and technical solutions to practical problems, has long been associated with New Englanders. This "Yankee ingenuity" helped drive the Industrial Revolution during 19th Century and helped make New England the first industrialized section of America. Yankee ingenuity has played a prominent role in the evolution of New England's fire service.

Beyond the fire service, there have been many great inventors from New England who epitomized Yankee ingenuity. These include men with little or no formal education whose inventions have impacted everyday life. They include Charles Goodyear (1800-1860), a self-taught chemist from Connecticut who invented vulcanized rubber, Percy L. Spencer (1894-1970), a Maine native who did not finish grammar school who invented the microwave oven, and Earl S. Tupper (1907-1983), a self-taught inventor from New Hampshire who invented an airtight plastic lid that spawned the eponymous Tupperware.

Yankee ingenuity has come to refer broadly to a typically pragmatic American approach to problem solving. However, New England ingenuity remains very relevant to the prosperity of the region and the nation.

Today, New England is home to many inventors. Among the states, Vermont and Massachusetts have the second and third highest per capita rates of invention. Connecticut is eighth on this list. This bodes very well for New England since studies have found that inventions, as measured by patents, drive long term regional economic performance.

New England also has some of the most well-educated communities. Massachusetts is the most educated state with 52.4 percent of residents with two or more years of college. Connecticut, New Hampshire and Vermont are the seventh, eighth and ninth most educated states respectively. About 47 percent of the residents of these states has at least two years of college.

New England also leads America in education. Massachusetts has the second highest number of colleges per capita of any state. New Hampshire, Massachusetts and Rhode Island all rank among the top ten states for college students as a percentage of their populations. Boston has the greatest concentration of colleges per capita of any American city. Three times as many by population than Los Angeles and Chicago, and eight times as many as New York City.



# Edward Dahill: New Bedford's Inventive and Indefatigable Fire Chief

Edward Dahill was one of the most important fire chiefs in the history of New England. He had a distinguished career with the Fire Department in New Bedford, Massachusetts, which spanned six decades. He was very active in the Massachusetts State Fire Chiefs' Association as well as in the International Association of Chief Engineers, now the International Association of Fire Chiefs. Dahill was more than a progressive chief, he was a self-taught inventor, who used his Yankee ingenuity to develop a very successful lift system for aerial ladders.

Edward F. Dahill was born in New Bedford, Massachusetts, in 1862. He was the younger of two sons of Irish immigrants Peter Dahill (1819-1877), a laborer, and Bridget Dahill (1829-1893). He attended public school until the eighth grade. In the early 1880s he became the proprietor of a shoe store. In September 1888, Dahill was appointed to the New Bedford Fire Department as a "call man" and was assigned to the newly organized Hook and Ladder No. 2. At that time, the Department consisted about 18 permanent members and about 130 call men. Call men were firefighters who had regular jobs and who would turn out to fight fires when they were summoned, or called. New Bedford at that time had about 40,000 residents and the fire department answered only about 100 alarms each year.

In 1890, Dahill was appointed as Lieutenant of Hook and Ladder No. 2. Two years later he was promoted to Captain. In 1896, Dahill was appointed as the Second Assistant Engineer of the Department. This is the equivalent to the modern rank of an assistant chief. In 1902, he became the First Assistant Engineer, with an annual salary of \$600. Then, in June 1904, Dahill was appointed as the Chief of the Department at a salary of \$1500.

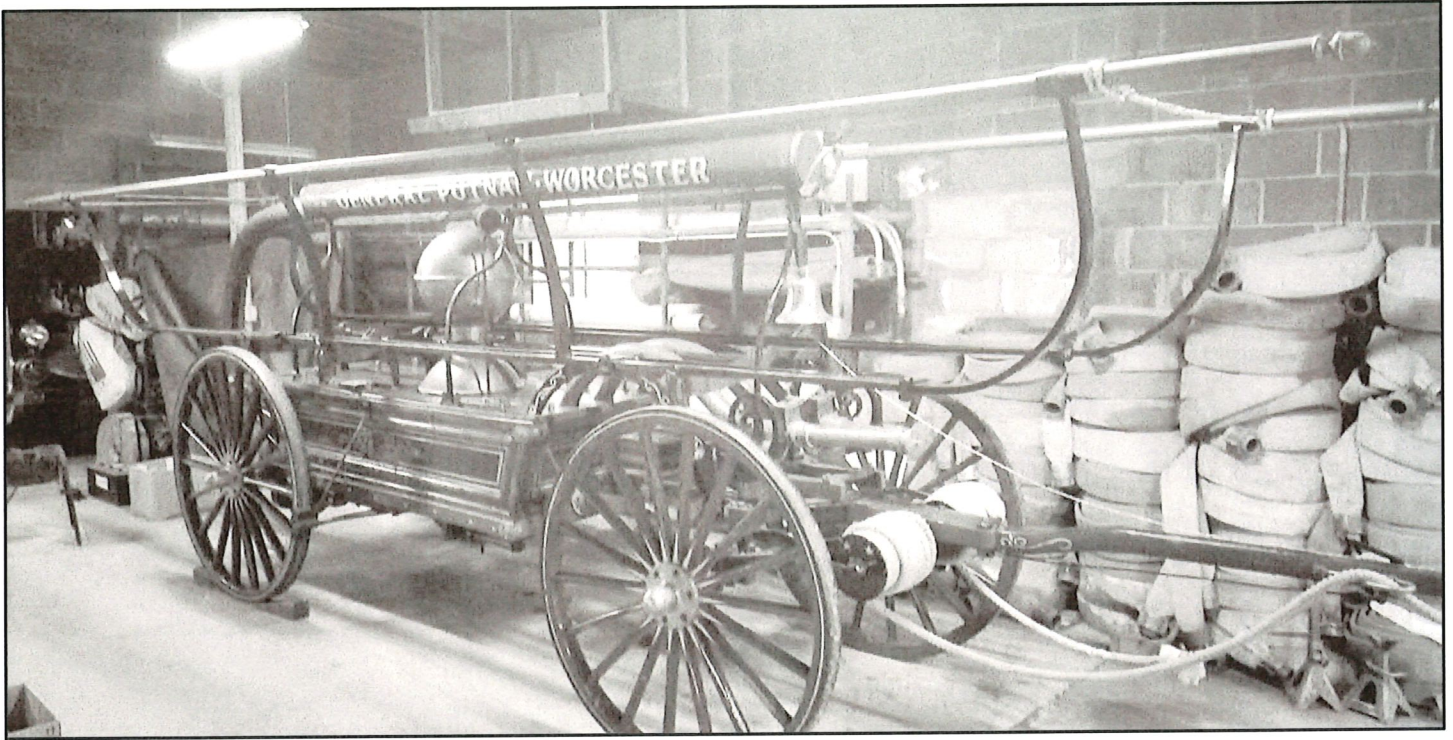


*Edward Dahill is seen in this photo soon after his appointment as Chief Engineer of the New Bedford Fire Department in 1904.*

At this time New Bedford was growing rapidly. It experienced successive population increases of more than 50 percent in the 1880s and 1890s. It experienced a 55 percent population increase between 1900 and 1910. Dahill increased the size of the department by adding more permanent members as well as by building additional firehouses with new companies. As early as 1909 he was advocating for an all-permanent force. Despite the city's decades of rapid growth, and the significant risk of a conflagration this created, New Bedford did not suffer a conflagration while Dahill was Chief.



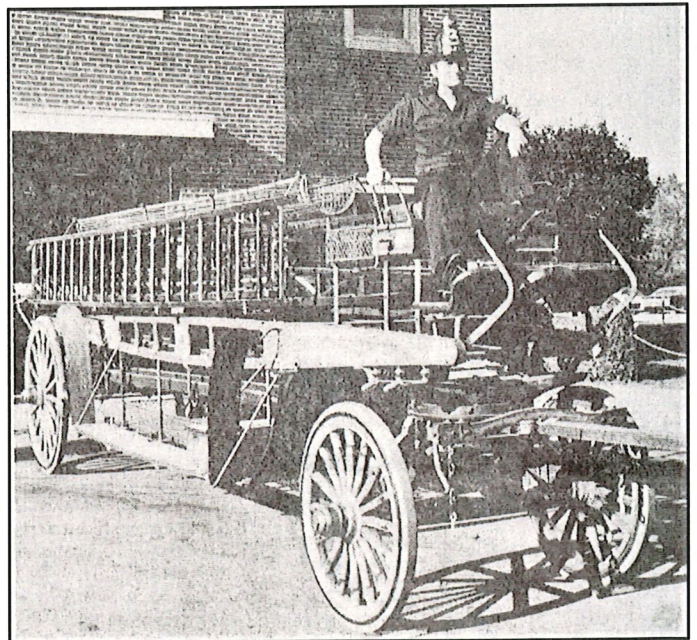
# Recent Additions



There have been some recent additions to the Museum's apparatus collection that have added some unique pieces for the Museum to share and interpret.

The Museum has received on loan from the Worcester Fire Museum and Educational Center two pieces of apparatus as well as many small artifacts. The first is "The General Putnam," an 1871 crane-neck side-stroke fire engine that was built by Button and Son of Waterford, New York. This engine was delivered to Danvers, Massachusetts, where it was named after General Israel Putnam, who was born in Danvers and was one of the Patriot commanders at the Battle of Bunker Hill. In 1878, this engine was sold to Weymouth, Massachusetts. In 1891, it was sold to the Worcester Veteran Fireman's Association. It was exhibited at the Cape Cod Fire Museum in Brewster, Massachusetts, in the 1990s. When that museum closed, the General Putnam was returned to Worcester.

The second piece on loan from Worcester is an 1894 Seagrave horse-drawn city service ladder truck. It served in Worcester as Ladder 6 through 1923. It spent the next 52 years in a barn before it was donated back to Worcester, as seen in the 1975 newspaper photo below.





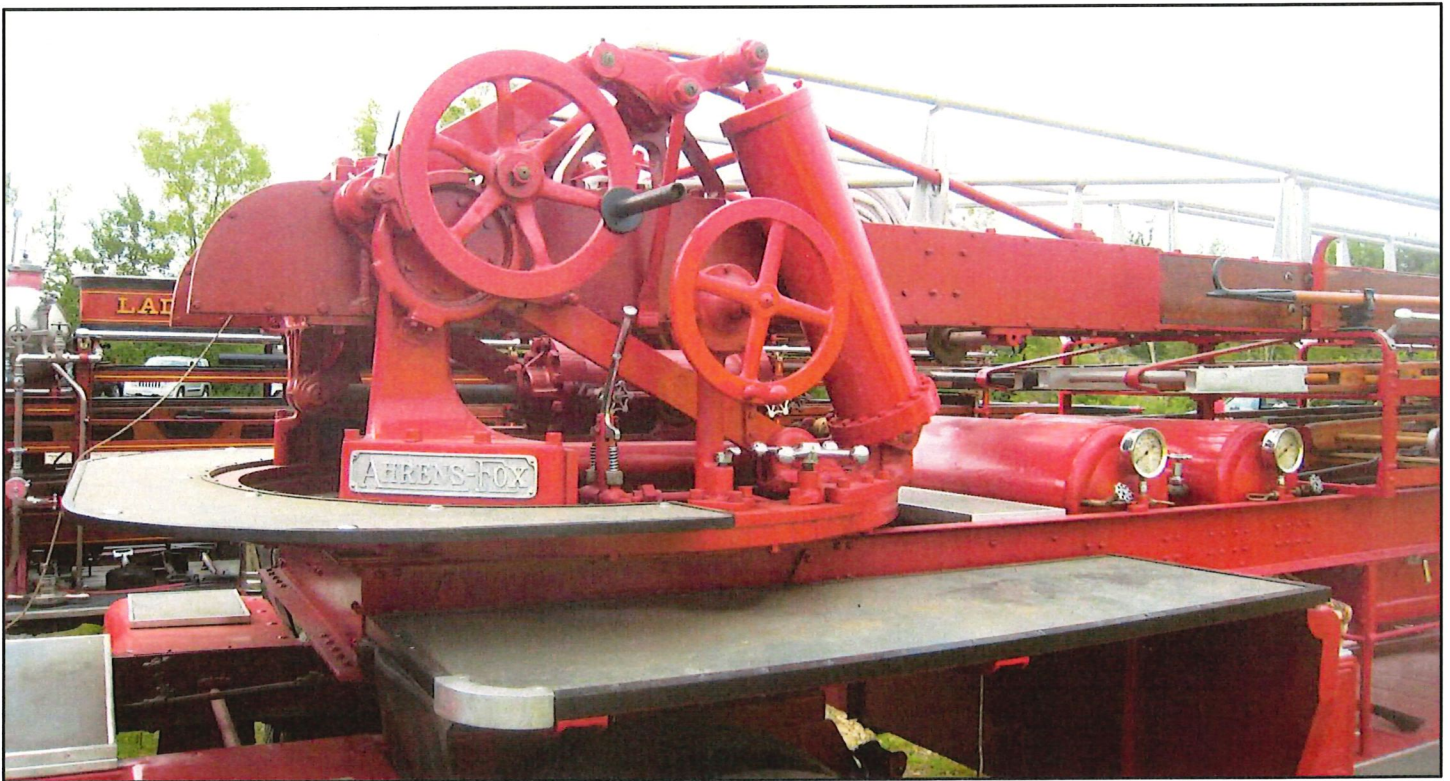
## The New England Museum of Firefighting

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*Brockton, Massachusetts, operated this 1931 Ahrens-Fox Model 85-6-1 tractor-drawn aerial ladder truck as Ladder 2. Ladder 1 operated an identical 1930 model. Remarkably, both trucks survive. Both are owned by Andy Leider of New York. Both have a Dahill pneumatic hoist system for the aerial ladder. This system was invented by New Bedford Fire Chief Edward Dahill. The story of Chief Dahill's ingenuity is featured in this issue.*



*This is a close up view of the Dahill hoist on a 1927 Ahrens-Fox tractor-drawn aerial ladder truck that served in Kansas City, Missouri. The original Dahill design used one air tank on the turntable. Chief Dahill improved his design but putting two tanks on the frame of the ladder trailer, making the ladder easier to climb and creating a redundant system for safety.*