

19th Century Telescopes

A Mystery of Provenance

And an intriguing story that lends credence to its usage

by Carrie Crane



Freeman L Fuller's telescope and a reproduction of his Civil War Service Record

Includes Regiment, dates served, battles fought and images of Union military leaders.

When we think of a telescope, we are likely to think of the instrument used by serious stargazers or astronomers used to observe planets or stars in faraway galaxies. Throughout history, however, many more telescopes have been used for terrestrial applications, primarily military and nautical purposes, and in more recent years, recreational activities including wildlife and bird watching. The telescopes featured in this article are ones likely used by the military during the Civil War.

In the mid-1700s, optical glass technology, first developed in the early 1600s, was paired with newly available precision tooling that made possible the brass tubing that held in place the telescope's optical lenses. The tubing needed to be exacting and strong and brass served well. Most telescopes from this period consisted of anywhere from two to five sections, one sliding inside another to make the instrument's size more manageable when not in use. The brass tubes were called *draws* because they

were drawn out of the main barrel. The main barrel, often made of wood, was designed to be rigid and protected the draws when closed.



Telescope in both its closed and open position

Gift to the Boylston Historical Society and Museum by Marie Wirt

In the collection of the Boylston Historical Society and Museum, there are two handheld telescopes. These instruments are sometimes referred to as spyglasses, a term which describes a telescope of lesser magnification power but here we will refer to them as telescopes. Both of the Historical Society's instruments date back to the early half of the 19th century. The first is a small telescope (c. 1840), about 1.5" in diameter, 6" long when closed, and 21" when fully extended. It has a wooden barrel and 3 brass draws. This telescope was a gift to the Museum in 1986 by Marie Wirt, who along with her husband, were two of the founding members of the Boylston Historical Society. We are actively seeking any information to determine its original owner or purpose.



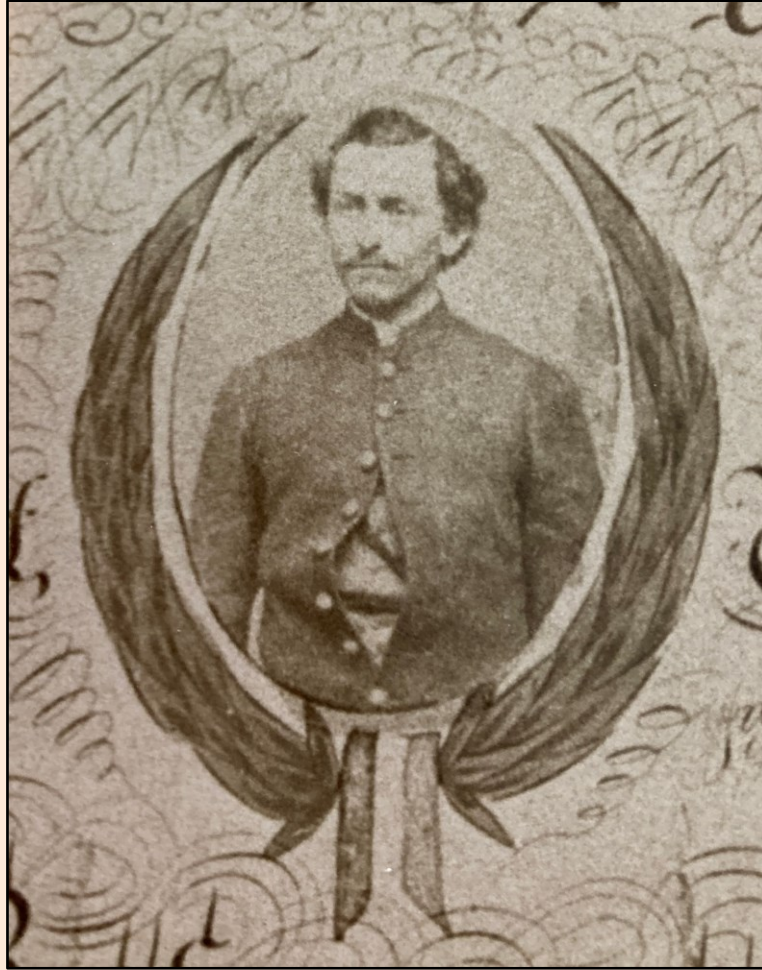
Telescope of Freeman L. Fuller

*Gift to Boylston Historical Society and Museum by Russell Fuller
Great-grandson of Freeman L Fuller*

The second is a larger telescope (c. 1830), which measures 2.5" in diameter, 21" long closed and 40" with the draw extended. It is made of a single brass draw and wood barrels. This item was given to the Museum in 1999 by Russell E Fuller, a lifelong resident of Boylston and ardent supporter of the town and the Boylston Historical Society and Museum. This larger telescope had belonged to his great grandfather, Freeman L Fuller.

Freeman Loren Fuller, born in Sutton, Massachusetts on June 9, 1840, at the age of 21 enlisted with the 1st Rhode Island Cavalry from 1861 to 1865 where he experienced a fascinating and difficult service to his country. He entered as a Private and was discharged at the end of the war four years later as a Sergeant. During his service was had suffered casualties twice and was taken captive at the Battle of Middleburg where the 1st Rhode Island sustained 225 casualties. For seven months, from June 18, 1863 through January 15, 1864, he was held prisoner of war in Middleburg, Virginia. Sgt. Fuller mustered out August 3, 1865 in Baltimore Maryland. In August of 1866 with the disruption of the war behind him and now settled back at home, he married Almira Metcalf and they went on to raise three children. The middle child was Willis Asa Fuller. Willis then went on to have five children and his middle son was Ernest M. Fuller who was the father of Russell Fuller. And hence the Boylston connection is made.

While we do not have records of this, it is possible that during his time in the infantry, Freeman Fuller served as a signalman which would explain his possession of the telescope. A signalman was a member of the Signal Corp. In the mid-19th century, military weaponry became more powerful, increasing the size of the battlefield. This in turn required a communication system that was rapid and effective over longer distances. Drums, beacon fires, pigeons, and runners would no longer be sufficient. Telegraphy played an important role but was still new, having been developed in the 1830s and 40s, and had its limitations. In answer to this communication challenge, the US Army established the Signal Corp.



Detail of Freedman L Fuller from his record of service certificate

Albert Meyer is credited with the creation of the Corp. When he was serving as a medical officer in Texas in the 1850s, he developed a communication system of visual signals using flags or torches. A flag or torch was waved in a precise manner to indicate the number 1 or 2. Each letter of the alphabet was assigned a series of 1s and 2s. For example A = 22, B = 2112, C = 121, etc. Signalmen were stationed in elevated locations, either hilltops, tall buildings, or staging installed on site. This allowed signals to be received on average 8-15 miles away (depending on terrain and weather conditions) by a trained signalman with a telescope. That signal might then be sent on to the next relay miles away. The information would be passed on like this until it reached a point with access to a telegraph, where it could then be sent to the decision-makers in Washington DC or elsewhere.

This system, which was first tested in the late 1850s, was not fully adopted by the US Army until June 21, 1860. It was an additional three years before the Army actually provided personnel for the Corp. Up until that time, a regiment would assign particularly well-suited infantrymen to be trained for the position. If Freedman Fuller had been selected for that assignment he would have been supplied with a “signal kit” which included flags, torches, fuel, and quite possibly this telescope.

Acknowledgments

Ancestry.com

Birth Records, Sutton, Massachusetts, 1840

Editor, Nancy A. Filgate, Boylston Historical Society and Museum, Director

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Signal Corps ... Signal Regiment ... Signal Corps Regimental

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U.S. Veterans Census for Grafton, Massachusetts, 1890, ancestry.com, digital image