

Luis Felipe Bendezu
Speaking Stones REL 167
December 10, 2014

Engineer Joseph Nelson Tubbs and Rochester's first water supply system.
Project 2: Mt. Hope Epitaphs



ABSTRACT: The life and work of Engineer and head of water works for the city of Rochester, Joseph Nelson Tubbs. Details about his family, career, military service during the Civil War and public work for the city.

Keywords: *City of Rochester, American water works, engineering, Joseph Nelson Tubbs, conduits, water supply, Rochester Water Works Department.*

At the right side of the north gate entrance of Mount Hope Cemetery flanked by the 1874 gatehouse and the 1872 gazebo, lays lot D, which is known for being one of the oldest sections and for having the gravestones of some of the most successful and influential people in Rochester. There are many large monuments here, including statues and obelisks honoring these people and their legacy, such as Hiram Sibley. Surrounded by these eye-catching monuments sits the group of simpler, unpolished granite stones of the Tubbs family. Despite the simplicity of his stone, the engineer Joseph Nelson Tubbs greatly influenced Rochester because of his public works for Rochester's water supply system.



Figure 1. Engineer Joseph Nelson Tubbs

Joseph Nelson Tubbs, of English and Scotch descent, was born in September 24, 1832 in the village of Esperance at Schoharie County, New York State. After studying in public schools at Esperance and Albany, he graduated from the State Normal College in October, 1850 at Albany. He worked as a teacher for the next four years while pursuing mathematical studies with George R. Perkins, author of a series of mathematical text books (Rochester Trades Assembly and Building Trades Council, 130).

In 1854, Tubbs started working for the State Engineer Surveyor as an engineer on the enlargement project of the Erie Canal at Little Falls. In 1860, he moved to Rochester with his wife Elithea “Eckie” Mandell Wooster and their first child William N. Tubbs (born in 1858). However, a year later he enlisted in the Union Army during the Civil War, leaving home from 1861 to 1863. Once he returned, he kept working in the Eastern and Western divisions of the company’s water works, as assistant and resident engineer respectively, for a total of 18 years until 1872 (Devoy, 230). His job included repairs and extensions of various canals including the Erie Canal and the Genesee Valley Canal, which allowed him to gain experience on the way the water supply system works in the state of New York.

DEAD				
NAME OF SOLDIER: <i>Tubbs Nelson J.</i>				
SERVICE: <i>Late rank, Co. B, 28 Regt N.Y. Inf.</i>				
TERM OF SERVICE: <i>Enlisted May 6, 1861. Discharged June 2, 1863.</i>				
DATE OF FILING:	CLASS.	APPLICATION NO.	LAW.	CERTIFICATE NO.
<i>1871 Oct. 27</i>	<i>Invalid,</i>	<i>1,067,413</i>	<i>J</i>	<i>807,679</i>
	<i>Widow,</i>	<i>852,078</i>	<i>J</i>	<i>632,657</i>
	<i>Minor,</i>			
ADDITIONAL SERVICES:				
REMARKS:				
<i>Died in 1891</i>				
<i>Died 1896 at</i>				

Figure 2. J. Nelson Tubbs’ Civil War Enlistment file.

In May of 1872, he was appointed as chief engineer of Rochester Water Works (State Engineer and Surveyor, 89) and started working on the design of the first city’s water supply project at Hemlock Lake until 1876. Along with this project, he worked in various other constructions including the Almira Reformatory as a superintendent and engineer for a year from 1872 to 1873 (Devoy, 230). Tubbs continued in this position until June, 1890.

One of his most important projects during these years was at the Hemlock Lake. At that time, wells and cisterns were commonly used to provide of drinking water to the citizens of Rochester area, and the only source of water to extinguish fires was obtained from the Erie

Canal. But several problems caused the citizens to organize a group in order to find a way to provide better drinking water to Rochester. On April 27, 1872 “*An act to supply the city of Rochester with pure wholesome water*” was presented by “The Pure Water Supply Company” to the City Council as a passage of law in order to solve the unsanitary conditions of the water coming from wells and cisterns that caused the spread of cholera, dysentery and typhoid, and to provide firefighters with a more reliable source of water during freezing winters, and droughts. As a result, a board of water commissioners was appointed to examine this case and all the matters related to the new water supply project.

The board then appointed Joseph Nelson Tubbs to analyze the possibilities, and he stated that the best option for a source was the Hemlock Lake saying: “*for that for greater economy and operation expense, permanency in construction of works, greater purity and softness of water and its steady and abundant supply (...)*” (Waite, 9). He designed and implemented two conduits to solve the water supply issues: one from Hemlock Lake to Rush Storage reservoir using gravity (Hemlock lake was 388 feet above the city) to provide drinking water to the citizens and another one, coming from Genesee River using a direct pumping system for water in case of fires (Baker 1888, 132). Finally, the construction started on July, 1873 and was finished in less than three years in February, 1876. “Glory! Hemlock Water At Last!” was on the headlines of the newspaper (Flanigan) and it meant a big change for the city, which was growing in population along with urban and economic development and technological advancements.

Figure 3. Official Record of the Water Work Department and works on Hemlock Lake.

WATER WORKS DEPARTMENT.	
<i>Chief Engineer and General Sup't—J. Nelson Tubbs.....</i>	Salary \$3,000
<i>Assistant Engineer—Emil Kaichling</i>	" 1,890
<i>Draughtsman—Thomas H. Rogers.....</i>	" 730
<i>Clerk—Frank M. Hills.....</i>	" 575
<i>Receiver—Charles Bernhard.....</i>	" 1,260
<i>Clerk—John Kavanagh.....</i>	" 1,000
<i>Clerk—William N. Tubbs.....</i>	" 835
<i>Clerk—P. H. Callahan.....</i>	" 780
<i>Clerk—Milton Race.....</i>	" 780
<i>Foreman of Repairs—Sidney C. McKay.....</i>	" 1,300
<i>Engineer Holly Works, Brown's Race—Henry Jones.....</i>	" 1,300
<i>Assistant Engineer—Luke C. Hart.....</i>	" 1,300
The Water Works were begun July, 1873, and finished Feb. 1876.	
Miles of iron pipe in Holly System in city, April 1, 1882 : 8.333 ; miles of iron pipe in Hemlock System in city, 112.727 ; total miles of distribution pipe in city, 121.05.	
STRANGERS CONSULT THE DIRECTORY, AND ADVERTISERS GET THE BENEFIT.	

During these years, Tubbs also worked in Mount Morris in 1870 as a consultant engineer to build nine springs using a gravity system (Baker 1889-1890, 161); in 1887, he designed the conduit and system for a water supply from Conesus Lake in Geneseo (Baker 1889-1890, 145); and from 1887 to 1888, he designed the extension of a canal in Geneva where he introduced a new pumping system to complement the former gravity system (Baker 1889-1890, 145).

In 1890, Tubbs opened his own office at Wilder Building (1 E. Main Street) known as Rochester's first modern skyscraper, and worked as a consulting engineer until February of 1895 (Rochester Trades Assembly and Building Trades Council, 130). During this time he was involved in several projects of civil and hydraulic engineering, as a designer and consultant. He was part of various water work projects in Rochester, Syracuse, Geneva, Geneseo, Medina (Baker 1897, 119), Dryden, Albion, Mt. Morris, Lyons, Oneida, Port Jervis and Penn Yan in this

State, and in several cities and towns in other states (Devoy, 230). At the same time, he was employed as an expert in litigations involving important hydraulic systems around New York State. These important cases included the condemnation proceedings instituted by the city of Syracuse, in connection with the construction of its water-works; condemnation proceedings connected with the construction of the new water-supply conduit for the city of Rochester; the legal contest of the Delaware and Lackawanna railroad against the town of York; the town of Geneseo against the Board of Supervisors; the case of White against the Delaware and Lackawanna railroad; the mill power owners of the Oatka creek against the salt manufacturers; and the water-works contractor against the village of East Syracuse (Devoy, 230).



Figure 4. Wilder Building located at 1 E. Main Street, Rochester.

In 1895, He was appointed by Hon. George W. Aldrige as General Inspector for the Department of Public Works of New York. Having a long career in the engineering field, he was a member of the American Society of Civil Engineers, the American Water Works association, the New England Water Works association, of various Masonic societies of the city and of the Whist club in NYC. (Devoy, 230).

Joseph Nelson married Elithea “Eckie” Mandell Wooster and had two sons, William N. Tubbs born in 1858 and Frank W. Tubbs born in 1861; and one daughter, Josie Elithea. Born in 1873 (Devoy, 230).

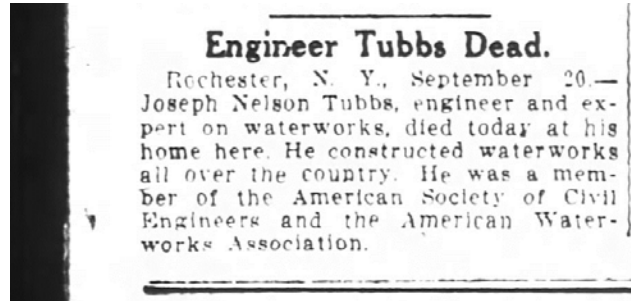


Figure 5. Obituary from Newspaper *The Constitution, Atlanta* (Tuesday, Set. 21, 1909)

Joseph Nelson Tubbs died on September 20, 1909 from apoplexy at his home, as stated in the Mount Hope Cemetery records. He was buried two days later at Mt. Hope on lot 144 in section D2, which he now shares with the rest of his family. There are markers for his wife, Elithea Wooster who died on 1910; his sons, Frank W. Tubbs and William N. Tubbs on 1927 and 1917 respectively (the latter shares the marker with his wife, Gertrude Shuart who died on 1942); his daughter, Josephine E. Tubbs died in 1951 and whose marker is next to his husband Dwight Rockwood, who died in 1923.

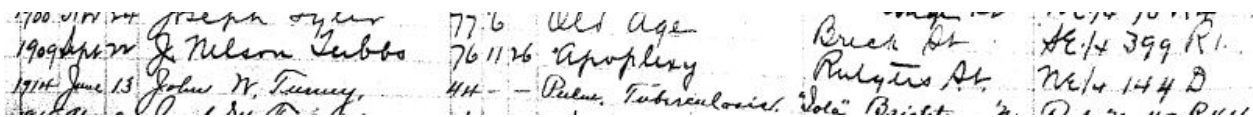


Figure 6. Mount Hope Cemetery records.

<div style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto;"></div> <p>Josephine E. Tubbs Wife of Dwight C. Rockwood 1873-1951</p>	<div style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto;"></div> <p>Dwight C. Rockwood 1877-1923</p>
---	--

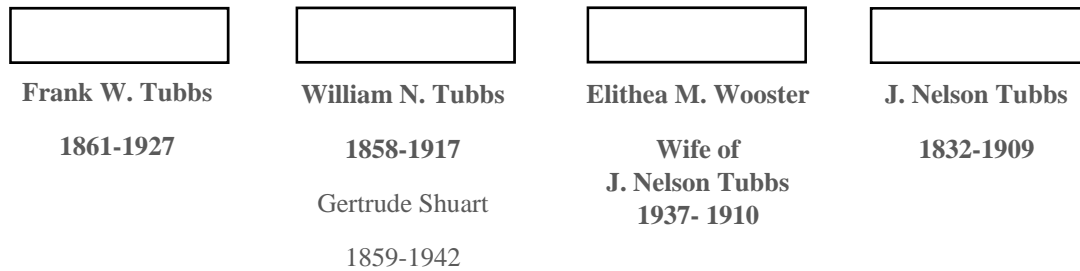


Figure 7. Distribution of the markers on Tubbs' lot in Mt. Hope

BIBLIOGRAPHY

- Baker, Moses Nelson. *The Manual of American Water Works*. Engineering News: New York, 1888.
- Baker, Moses Nelson. *The Manual of American Water Works*. Engineering News: New York, 1889-1890.
- Baker, Moses Nelson. *The Manual of American Water Works*. Engineering News: New York, 1897.
- Devoy, John. *Rochester and the Post Express; A history of the City of Rochester from earliest times; the pioneers and their predecessors, frontier life in the Genesee country, biographical sketches; with a record of the Post Express*. Post Express Printing Co.: Rochester, 1895.
- “Engineer Tubbs Dead”. *The Constitution, Atlanta*. 21 Set. 1909: Page 3. Print.
- Flanigan, Patrick. *City Of Rochester*. [s.n]. Rochester, NY City Hall. Date of access: 10/29/14. <http://www.cityofrochester.gov/article.aspx?id=8589936601>
- Interment Record. Page 670. Mount Hope Cemetery. <<http://www.lib.rochester.edu/IN/RBSCP/Databases/IMAGES/MtHope/disc2/00000339.pdf>>.
- Rochester Trades Assembly and Building Trades Council. *Illustrated history of the Rochester Trades Assembly and the Building Trades Council, Rochester, N.Y.* Boyd Press: Rochester, 1897.
- State Engineer and Surveyor. *Annual Report of the State Engineer and Surveyor on the Canals of the State of New York*. The Engineer: New York, 1872.

- Waite, D. Byron. *O-neh-da Te-car-ne-o-di; or Up and Down the Hemlock*. G.E. Colvin & G.P. Waite Printers: Canadice, 1883.