Industrialization in Little Falls, New York, 1790-1960

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A Cabinet of Curiosities

COOPERSTOWN GRADUATE PROGRAM

SUNY ONEONTA
ONEONTA, NY

Contents

Foreword

JEFF GRESSLER, PRESIDENT OF THE BOARD OF DIRECTORS OF THE LITTLE FALLS HISTORICAL SOCIETY

The Little Falls Historical Society much appreciates the opportunity to work with the SUNY Oneonta's Cooperstown Graduate Program of museum studies. Some background history about Little Falls will add perspective.

The City of Little Falls is a community of around 4700 residents situated in southern Herkimer County astride both the Mohawk River and the Erie Canal. Little Falls' development and rich industrial history were impacted by geology and topography, particularly its waterside proximity.

The first inhabitants of the immediate area around Little Falls were members of the Iroquois Confederacy, primarily the Mohawks, one of the five tribes making up the Confederacy. The Mohawks were the keepers of the Eastern Gate of Iroquois territory. They called the area "Astenrogan" or "tumbling waters."

The region's first European visitors in the early 1600's were Dutch and French traders and French Jesuit priests all in pursuit of favorable relations with Native Americans. The French first referred to the area as "little falls" to distinguish it from the "big falls" at Cohoes. In 1664, England seized New York from the Dutch

England used Palatine Germans in their upper Hudson Valley naval stores project; the Palatines eventually migrated into the central Mohawk Valley in the early 1700's. Divided loyalties, largely based on ethnicity, characterized the entire region during the Revolutionary War.

The six lock Western Inland Lock Navigation Canal began operation in 1794 in order to make easier waterway passage around the Little Falls rapids. Little Falls was incorporated as a village in 1811. The Erie Canal was completed in 1825 and Little Falls began to thrive as the industrial hub of the central Mohawk Valley. Little Falls was later chartered as a city in 1895.

In 1833, the present Old Bank Museum, made of native rock and cut limestone, began operation as the first bank in Herkimer County. The building was placed on the National Registry of Historic Places in 1970 and it is the present home of the Little Falls Historical Society.

Fast forward to 2018 when Dr. Erik Stengler resided in Little Falls with his family for a short period before taking up residence in Cooperstown. During his stay in Little Falls, Dr. Stengler became enamored with the community's history. He was the first to conceptualize of Little Falls history as a potential area of study for his museum studies students. In 2019, Dr. Stengler reached out to the Historical Society to serve as an educational partner for his students.

The board of directors and officers of the Historical Society responded most favorably to this overture and this collaborative partnership was born and the byproduct of this collaboration is this book. Please enjoy this wonderful piece of work that has been generated by this fine group of students.

Little Falls, NY – February 13, 2020

Preface

ERIK STENGLER, ASSISTANT PROFESSOR, COOPERSTOWN GRADUATE PROGRAM, SUNY ONEONTA

This is the first of many “Cabinets of Curiosities” that students of the Cooperstown Graduate Program will imagine with objects from the collection of the Little Falls Historical Society in Little Falls, NY. As part of the course “Science Cabinet of Curiosities” the students select objects for this imaginary cabinet of curiosities, do in-depth research about them and their role in a specific aspect or period in the history of Little Falls, and then create a product that supports the Historical Society’s Museum and its programming. In 2020, the product has been this book about the industrialization in Little Falls.

Every chapter begins with an image of the selected object. Together they constitute what the students collectively considered could be an exhibit representative of the industrialization period of Little Falls between 1790 and 1960. We do not claim that this cabinet of curiosities is a comprehensive account of this period, nor that each individual topic is exhausted by the information provided. Inspiration for this class project comes from the book “Future Remains – A Cabinet of Curiosities for the Anthropocene”. Just as in that book, as well as the original cabinets of curiosities of the past, this selection of objects does not follow a systematic analysis of the corresponding historical period, but personal views of several snapshots that can give the reader a glimpse of what it was like to live in Little Falls in the 19th and early 20th centuries.

Due to considerable delay related to the covid-19 pandemic, this book sees the light almost simultaneously with the 2021 Cabinet of Curiosities, which takes the format of an audio guide to several buildings and historical locations in Little Falls. We look forward to the cabinets of curiosities that are yet to come, in different formats and about different aspects of the history of Little Falls. What they all will have in common is that they showcase how science, technology and history are inextricably intertwined and cannot be studied in isolation from each other.

When I first visited Little Falls it became immediately clear to me that this city was a perfect example of this interdisciplinarity of reality and a visit with the newly admitted students each year is now part and parcel of the beginning of the academic year at the Cooperstown Graduate program. A year and half later a few of those students come back to Little Falls to share an unforgettable semester of research, collegiality and creativity to work hand in hand with an incredibly welcoming and friendly group of members of the Historical Society, to which we are all immensely grateful for this experience.

I also thank the students themselves for their engagement, enthusiasm and drive to get this Cabinet of Curiosities off the ground, and for all the great memories from this course.

I would also like to thank Jennifer Jensen, SUNY Oneonta’s scholarly communication librarian and Ed Beck, instructional designer of SUNY Oneonta’s Teaching, Learning and Technology Center, for their encouragement and support to get this book published in its present format; and Denise Straut, Director of Sponsored Programs at SUNY Oneonta, and Tanya Waite, Partnership Manager at the Research Foundation for SUNY for their assistance with everything related to copyright and intellectual property.

Cooperstown, NY – May 31, 2021

1. Building Little Falls

William H. Bartlett's "Village at Little Falls, Mohawk River"

MIRANDA SHERROCK

William H. Bartlett, Village at Little Falls, Mohawk River, 1840, American Scenery, or Land, Lake, and River, Illustrations of Transatlantic Nature

Little Falls, NY, one of the many towns that sits on the Mohawk River, holds unique geological features, and an important piece of American Industrialization history. The print seen above captures Little Falls, New York during a time of national growth and prosperity. This chapter will take a closer look at this print and highlight the significance of each feature to understand better the rich natural and cultural history of Little Falls. We will discuss the artist, the regional geology, the Mohawk River, and modifications of the natural landscape. Exploring these topics through visual representations will foster a deep appreciation for Little Falls' story of growth, and development during the era of American Industrialization.

The Artist

William Henry Bartlett is the man who sketched this scene of Little Falls, New York while exploring the East Coast of America. Starting as an artist of architecture Bartlett has a marvelous attention to detail in his works. By 1830 Bartlett took on the role of a journeyman, traveling many places to document the scenic landscapes he

encountered[1]. His travels took him to places like Switzerland, Italy, Ireland, Canada and the United States. This Sketch, *Village at Little Falls, Mohawk River*, shows Little Falls as it was in 1837 and reveals the harmony between the town's natural environment and the built environment. This print was published in *American Scenery, or Land, Lake, and River, Illustrations of Transatlantic Nature*[2] and was accompanied by Nethaniel Parker Willis' picturesque description of the town:

> "This thriving town sits above the north bank of the Mohawk, amid some of the most exquisite scenery of the world. The falls afford great facilities for manufactures of all kinds, the Erie canal and rail-road both pass through it, up the Valley of the Mohawk, making it altogether the busiest spot, and it is the loveliest on the great route westward."

The Mohawk River brought Bartlett to Little Falls, New York. Following the waterway that carried many men through this same passage before him. Bartlett drew quite a few sketches of Little Falls capturing the unique natural and cultural heritage of the location. The time he took to observe, study, and draw Little Falls has created the opportunity for us to revisit what it was like during the American Industrialization on the Mohawk River.

The Geology

The geology of the area played a big role in shaping the landscape, and in creating the perfect place for a town to be built. Rocky rapids and a large, 40 foot drop, in the river's height distinguishes Little Falls from other areas of the River; but the story of Little Falls goes back a long time, before any people inhabited the area. During the last ice age, around 13,000 years ago, massive glaciers covered North America and carved features in the landscape that can still be seen today[3]. When these glaciers began to melt, large amounts of water drained through the Mohawk River Valley. Much of the ground in the Mohawk Valley is made of relatively young sedimentary rock but Little Falls holds something different underneath. A geological survey of New York State[4] reveals a section of, much older, metamorphic rock that is on the surface only at Little Falls. Long ago this area was covered with sedimentary rock, just like the surrounding areas, but a shift in the basement rock caused the earth at Little Falls to rise above the rest. Melting glacial waters and debris wore down the raised sedimentary rock to reveal the strong metamorphic rock that was underneath[5].

Bartlett drew steep cliffs on either side of the rushing river to represent these stunning sharp rocks of the Little Falls gorge. Today, Moss Island sits in the Mohawk river and holds geological evidence of the glacial activity from long ago. Potholes that stand over 20 feet tall are the lasting indicators of the glacial waters and debris that carved through the strong metamorphic rock years ago[6]. In 1976 The National Park Service recognized Moss Island as a National Natural Landmark to acknowledge and preserve this pristine example of glacial potholes in the eastern United States[7]. To this day Moss Island attracts rock climbers and hikers to marvel at these wonderful potholes, which reveal the natural history that built the foundation for Little Falls.

1. Alexander M. Ross, "Bartlett, William Henry," University of Toronto, 1985. http://www.b iographi.ca/en/bio.php?id_nbr=3768
2. Nathaniel Parker Willis, American scenery; or, Land, Lake, and River Illustrations of Transatlantic Nature (Vol 2). (London: George Virtue, 1840), 40.
3. Geoffrey Childs & Gary Thomann, *A Climbing Guide to Moss Island, Little Falls, NY* (Single Track Publishing, 2012), 3.
4. James F Davis, *Geologic Map of New York.* (New York State Museum and Science Service, 1970).
5. Y. W. Isachsen, Geology of New York: A Simplified Account. (Albany: The New York State Department of Education, 2000), Chapter 13.
6. David Krutz, "*Evolution of Little Falls Waterways,*" Little Falls Historical Society Museum, 2017 https://littlefallshistoricalsociety.org/museum-exhibit/little-falls-waterways/
7. National Parks Service, *National Natural Landmarks.* U.S. Department of the Interior. https://www.nps.gov/subjects/nnlandmarks/state.htm?State=NY

Current view from what is thought to be Bartlett's position when creating "Village at Little Falls". The location was estimated by triangulation using the circled buildings. Note the artistic license of sideways compression in Bartlett's print. Photo and comparison by Erik Stengler.

The River

What once was a path for flooding glacial waters has since been used as a convenient navigable passage for people. The rushing river in Bartlett's print is the Mohawk; flowing through New York state it has been a valuable resource for traders and travelers throughout history. Before European settlers arrived the valley was home to the peoples of the Iroquois Nations. The eastern most group was the Mohawk Tribe for which the river got its name. Iroquois tribes navigated the river on boats of birch[8] and recognized the rocky rapids at Little Falls, New York as "Astenrogan" which means tumbling waters, or place of rocks[9]. European settlers recognized these rapids as the "Little Falls" distinguishing them from the "Big Falls", further East, in Cohoes, New York[10]. This area of the river caught the attention of those who navigated here, becoming a geographic landmark that has been

8. W. Mayer, *The History of Transportation in The Mohawk Valley.* (Proceedings of the New York State Historical Association, 1915), 218.
9. Edward Cooney, "*Little Falls, Chartered 1811.*" Three Rivers HMS, 2003. http://threeriversh ms.com/lf.htm
10. Edward Cooney, "*Little Falls, Chartered 1811.*" Three Rivers HMS, 2003. http://threeriversh ms.com/lf.htm

documented throughout the history of the area. The "Astenrogan" forced boaters to stop and carry their vessels around on foot. During the 18th Century the first group of Palatine settlers came to the Little Falls area to farm their own land. The first signs of permanent settlement in Little Falls included taverns, small storage buildings and a grist mill powered by the flowing water of the river. The rushing waters at Little Falls were treacherous, but the power of the river held opportunity for travel, trade, and industry if the power could be harnessed[11].

The Mohawk River Valley became known as the Great Passage West, connecting the eastern shore to the Western Region of the continent[12]. The convenient route was a great resource of trade and expansion in the early years of America. Just like America itself, as a newly established country, Little Falls was only beginning to expand and industrialize, and the first industries had their ups and downs. The original grist mill, the first to harness the power of the Mohawk River at Little Falls, was attacked and burnt down in 1782[13]. Eventually, the grist mill was rebuilt, many industries thrived, and Little Falls was well on its way to becoming a booming industrial town.

The Infrastructure

A whole decade before Bartlett's illustration of Little Falls, the Erie Canal was completed. This system of locks was built to make an easily navigable route through the natural valley and to expand the manufacturing and trade potential of the nation. As seen in Bartlett's illustration the Erie Canal ran along the south bank of the river and was bordered by a towpath; mules and men would pull boats along the canal to access the locks[14]. Not seen in the illustration is the series of 4 locks that raised and lowered boats to compensate for the 40 foot drop in the river elevation at Little Falls[15]. Following the flow of natural rivers and streams, the Erie canal was a catalyst for the boom of industry that Nathanial Parker Willis described in his annotation to Bartlett's drawing[16]. The ability to easily move goods along the canal system opened possibilities for manufacturing, business, and global markets in river towns along the Mohawk. Many mills and factories were built on the riverbanks to take advantage of the natural energy source of the river and the accessible trade route of the Erie Canal, which increased the need for laborers. European immigrants arrived in America and worked in the factories; these people made up a large percentage of Little Falls' population during this era[17]. Little Falls banks filled with many successful industries including wool, leather, shoes, and bicycles. For a time Little Falls was exporting cheese to England and called the cheese capital of the nation[18].

Increased population, business and activity in Little Falls made for other necessary modifications of the waterway; each making the town more accessible. In 1841, the year Bartlett's print was published, the Erie Canal was expanded to accommodate increased traffic and larger boats. Not long after a navigable aqueduct was built bridging the river to a boat basin above its north bank[19]. The aqueduct has since been washed away by the rushing river; a great example of the Mohawk River's natural fury constantly testing manmade infrastructure.

11. David Krutz, "*Evolution of Little Falls Waterways,*" Little Falls Historical Society Museum, 2017 https://littlefallshistoricalsociety.org/museum-exhibit/little-falls-waterways/
12. W. Mayer, *The History of Transportation in The Mohawk Valley.* (Proceedings of the New York State Historical Association, 1915), 218.
13. Edward Cooney, "*Little Falls, Chartered 1811.*" Three Rivers HMS, 2003. http://threeriversshms.com/lf.htm
14. Patricia Stock, "Along The Towpath," Little Falls Historical Society Museum, 2017 https://littlefallshistoricalsociety.org/museum-exhibit/little-falls-waterways/#toggle-id-2
15. David Krutz, "*Evolution of Little Falls Waterways,*" Little Falls Historical Society Museum, 2017 https://littlefallshistoricalsociety.org/museum-exhibit/little-falls-waterways/
16. Nathaniel Parker Willis, American scenery; or, Land, Lake, and River Illustrations of Transatlantic Nature (Vol 2). (London: George Virtue, 1840), 40.
17. Edward Cooney, "*Little Falls, Chartered 1811.*" Three Rivers HMS, 2003. http://threeriversshms.com/lf.htm
18. *W.W. Hughes,* "History of the Mohawk Valley." *Schenectady History Digital Archive*, 2018 http://www.schenectadyhistory.org/resources/mvgw/history/125.html
19. David Krutz, "*Evolution of Little Falls Waterways,*" Little Falls Historical Society Museum, 2017 https://littlefallshistoricalsociety.org/museum-exhibit/little-falls-waterways/

In the early 1900's the need for a larger canal, to accommodate increasingly larger vessels, was apparent. In some locations the Erie Canal was enlarged to become part of the Barge Canal; at Little Falls the original canal footprint was deserted and the Mohawk River was expanded to become part of the Barge Canal. Lock 17, at an impressive 40.5 feet high, has replaced the original lock series at Little Falls and is functional to this day[20]. Visible remnants of the Erie Canal and aqueduct still stand as a reminder of the River's persistent strength, and man's sequential engineering feats to tame the waters of the Mohawk River.

Conclusion

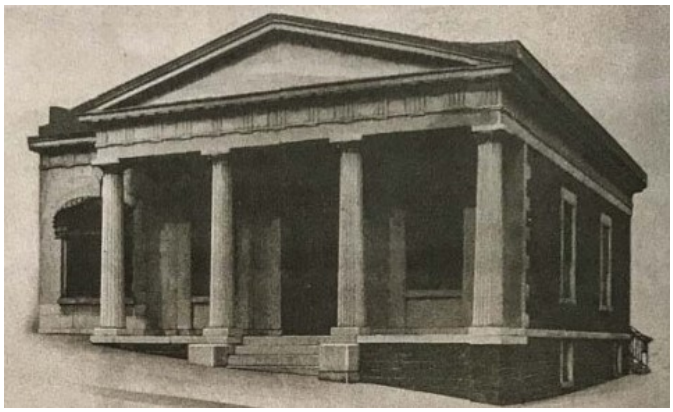
Little Falls, New York holds a piece of American History that tells a story of nature and man coming together to achieve great things. William Henry Bartlett and other traveling artists have played an important role in this part of the nation's early history. Artistic representations, like this sketch of Little Falls, provide an opportunity to reflect and interpret that past. The natural landscape, the physical location, and the infrastructure that Bartlett captured are all instrumental building blocks of the town of Little Falls and the American story.

20. David Krutz, "Evolution of Little Falls Waterways," Little Falls Historical Society Museum, 2017 https://littlefallshistoricalsociety.org/museum-exhibit/little-falls-waterways/

2. Keeping it Safe with the Little Falls Stone Bank

The Little Falls stone bank building at 319 S Ann St.

ALEX LIEN



The Little Falls stone bank building, located at 319 S Ann St., has witnessed the Little Falls community grow for the last two centuries while serving it in multiple ways, building on its story and importance. We tend to learn about the importance of banks at a young age but do not truly understand it until we are older. Banks provide financial stability for the residents of the area by housing our savings, providing checks and debit cards for instant access to our money, and even loan out money for our ambitious projects such as obtaining a house, going to school or starting a business. Now imagine if there was not a bank in your town. In the 19th century, settlements throughout the newly formed United States often did not have established financial institutions like banks. Eventually the American Industrial Revolution sparked an economic boom throughout the country, leading to a need for banks to support our finances and projects. This is why the Little Falls Stone Bank was built in 1833 and begins its service to the Little Falls community over the next two centuries. The building had its ups and downs throughout its history, growing in character as it was used in a variety of ways, from its original use as a bank, to being a simple storage building, to eventually becoming the home and keeper of Little Falls' history.

Industry and Money- 19th century

As the United States entered the 19th century, it began to shift from exporting its resources and importing manufactured goods, to manufacturing its own goods. As an agricultural community near the Mohawk River, Little Falls began manufacturing and selling their own products throughout the Industrial Revolution which helped the town grow in people and financial assets. The Mohawk River provided a vital resource, as it's elevation changes 40 feet within a mile, providing a major source of waterpower. This combined with the natural resources of the area, and some creative ideas of local businessmen, helps Little Falls flourish in the 19th century.

While many European countries started their industrial revolutions between 1790 and 1830, the United States was lagging behind. This was because the United States had only been a country for a short period of time and focused on mercantilism, which had it exporting its natural resources, because the lack of a strong labor force meant the country only had the ability to harvest the resources, but not manufacture them. The country focused on exporting raw materials to Europe, who would then manufacture the goods and sold them to other countries or back to America. Samuel Slater, an American industrialist, was ahead of the curve and used pirated designs from Britain to start his own industrial mill in 1790. His mill became a leader in the area, as he was able to use machinery to turn cotton into yarn and a much faster rate than hand spun yarn[1]. Slater helped start the American Industrial Revolution, but much more needed to be done before it truly gained traction, At first, products were made using the "outwork system" which had workers making parts of a product in their homes and eventually bringing it together to be sold. However, this quickly switched to the "factory system" that we know today, which was popularized by the Boston Associates, creating one of America's first textile mills at the beginning of the 19th century[2].

Mills and factories began popping up all over the New England area throughout the middle of the 19th century, especially near areas with an abundance of resources that can be manufactured. Little Falls housed a variety of mills throughout the 19th century. Simpler mills that utilized the river, like lumber and stone mills, moved into the area first up until the 1820s. While they remained in the operation, more complicated mills, like textile mills, took the spotlight towards the middle and end of 19th century. Textile mills used the newly created machinery of the industrial revolution with the power from the Mohawk river to mass produce clothing but were rather expensive to start. This was the start of the need for a local financial institution like a bank to provide those investments of money, and then house the incoming assets. Eventually the Erie Canal built in 1825, which allowed the community to bring in more materials for the mills. It also allowed them to ship their goods down the Mohawk river until it connected to the Hudson River, which could bring the newly made goods all the way down to New York City and even over the Atlantic Ocean to Europe.

By June 1825, around 50 boats would pass by Little Falls every day carrying flour, wheat, stone and other merchandise from the east. Locals would often be seen walking along the canal bank to watch the packet boats float by with all sorts of goods, providing entertainment via the mystery of what each boat was shipping. By November 1828, packet boats were traveling through Little Falls from Schenectady to Utica in about 24-28 hours, which is about an 80-mile trip[3]. The canal was the equivalent to the internet of its time, as it not only transported goods and people, but also information and ideas.

The Ellice Estate was prominent within the Little Falls community, known for the large amounts of land north of the town and on the edge of the Mohawk River. The Ellice Estate was created before the Revolutionary War and acquired more land during it, making the Ellice family a lot of money as it rented out the land for multiple generations. Owned by Alexander Ellice, who was a hands-on owner, the estate's land was rented to businesses for decades. It was sought after because of its prime location on the river, perfect for mills or factories. The estate was eventually inherited by his son Edward Ellice, who resided in England most of his life, putting others in charge of maintaining the estate, but retaining his father's ideals to only rent the land, and refusing the sell it. This limited the amount of businesses that could reside along the river and served as an obstacle for the community's growth. The community had an anti-rent war against Ellice, via town meetings and petitions to local legislation, until a clause was found in the local land ownership laws, allowing Ellice's heir to take over the property and break up the commonwealth[4].

In 1831, the Ellice Estate was purchased and dispersed, allowing mill companies to buy up the land around the

1. "Economic Growth and the Early Industrial Revolution," *U.S. History Online Textbook* (Independence Hall Association) https://www.ushistory.org/us/22a.asp
2. Idib.
3. What Happened Today in Little Falls, Little Falls Historical Society Records, 1820-1860.
4. Arthur T Smith, PAPERS READ BEFORE THE HERKIMER COUNTY HISTORICAL SOCIETY: during the Years 1899, 1900, ... 1901, to July 1, 1902 (Classic Reprint), version ebook, vol. 1-2 (FORGOTTEN Books, 2016).

canal and bring in more business to the town. It is worth noting that the land was situated around an outdated canal that was eventually removed after the Erie Canal was finished. The property lines and buildings needed to be updated and reestablished for new mills and businesses to begin operating on the new land. In the same year, a man named Mr. Buxton hired over 500 men to work and prepare stone for sale[5]. This was the start of many new businesses within the community, which led to an increase in residence and revenue.

After overcoming various obstacles and figuring out how to utilize their resources during the industrial revolution, Little Falls continued to become a bustling economy over the years. In order to meet the demands of the rapidly growing economy and incoming businesses and mills, the community moved to establish a bank to house their assets and provide financial investments. After years of planning and legislative debate, as "the business-doing citizens of this country... and the proper amount of capital to ask for... it seems to be the general consent... that an early and vigorous effort should be made for a Bank in this county at the ensuing Legislative session"[6] was declared in 1830. It took three years to get approval for the bank in Little Falls due to the Herkimer County Seat wanting the bank in their community instead of Little Falls. Meetings were held until they reached an agreement received approval from NY legislation to establish a bank and commissioners for it. The Herkimer County Bank was established in the summer of 1833.

The Herkimer County Bank was originally located in a commissioner's house, where the commissioner would store the bank's assets under his bed in the second level of the house. He did not even keep a pistol or club near him to defend himself or the bank's resources[7]. It is hard to imagine a bank with valuable assets to not have a vault and a pistol to help guard them. This was only for a short period of time, as the stone bank building was finished on August 30, 1833. The community celebrated with fireworks, balloons and many speeches as it was a sign of financial success for the town, along with providing financial benefits to citizens and businesses of the area.

The bank was constructed out of a limestone from the Little Falls Gorge. The Gorge was created by the Mohawk river's precursor, the Iromohawk river, which was a larger version of the Mohawk river but connected to the Iroquois glacier lake during the Wisconsin Glacial Stage[8]. The Little Falls Gorge has provided literal tons of stone to be used for construction materials over the years[9]. This allowed the stone to be relatively cheap but also sturdy, which is why the building's exterior is still in good shape after almost standing almost 200 years. Being a symbol of security, the bank had to be made of stone, since wood was a liability back in the days when house fires were a semi-regular occurrence, and metal manufacturing was not yet available.

The building uses the newly popular Greek-Revival style, sporting four Doric columns on the front of the building, with stone stairs leading up to the door. The windows have stone frames carved into the rock that make up the front outside wall, and a front facing gable brings the façade together, giving the appearance of a small Greek temple. The Greek-Revival style started after Greece was reintroduced to Europe and their styles were spread via books. It was popularized in the United States by Benjamin Henry Latrobe, who was a government official appointed by Thomas Jefferson to build public buildings like the United States Capitol Building and the Bank of Pennsylvania. The stone bank building was heavily inspired by the William Strickland's Second Bank of the United States of Philadelphia, but on a smaller scale[10].

5. What Happened Today in Little Falls, Little Falls Historical Society Records, 1820-1860.
6. "The People's Friend" Thursday, August 26th, 1830.
7. Idib
8. Herman Le Roy Fairchild, "The Iromohawk River" , https://www.vizettes.com/kt/upstateny-history/historical/iromohawk.htm
9. "Little Falls Gorge Geology," The Old Mohawk-Turnpike Book, Little Falls (Charles B Knox Gelatine Co. Inc.) https://fulton.nygenweb.net/Turnpike/LFalls.html
10. Herkimer County Trust Company Pamphlet on their establishment and history; Press of Journal & Courier Co.

Second Bank of the United States in Philadelphia. Image by Beyond My Ken, CC BY-SA 4.0 https://creativecommons.org/licenses/by-sa/4.0, via Wikimedia Commons

The adoption of the Greek-Revival style by the US government, encouraged others to use it as well. It stood for the growing sense of democracy that United States citizens have come to be proud of. So, the bank's style was a way to show the prestige of the community, because not only did they have a successful bank, it was made of stone and resembled the culture of Greece and supported American Democracy. Located a block off Main Street, this building was something the community was proud of and wanted to show off when it was first built. It was also something that needed to be close to the businesses and people it was serving, so it had to be near the center of Little Falls.

The building has two doors, one being the front door facing west, while the other is a currently an emergency exit in the back of the building facing east. The bank has windows on the south and west side but none on the north side, as the bank used to be connected to another building on that side. Something to note about the stone bank is how it is built into the hill. The ground level is flush with the hill on the north side of the building, while the hill continues to slope downward, revealing a three to four feet of the basement on the south side. Since it is built into the bedrock of the hill, the basement is about 2/3 the size of the main level, with the bedrock making up the north wall. Four windows are located on the south side with two of them being regular sized windows on the main level, and two smaller windows for the basement, bringing in light and allowing for an exit if needed.

Because of the economic boom throughout the 19th century, Little Falls and its bank flourished. However, the more money the bank brought in, the bigger the risk. The Federal Deposit Insurance Corporation, which insures the money in banks through government support, was not started until 1933, shortly after the Great Depression as a response to people withdrawing their money and not trusting public banks after Black Tuesday[11]. This

11. "Birth of the FDIC," History of the FDIC (Federal Deposit Insurance Corporation), https://www.fdic.gov/about/history/

meant that throughout the 19th century and 33 years into the 20th century, the Herkimer County National Bank had to worry about patrons withdrawing all their money, leaving the bank without funds to continue operating. The bank survived the "darkest period in American banking" which was 1836-1863, when many banks failed in the task of serving the prosperous and rapidly growing pre-civil war society. 1857 was a particularly hard year, being recorded as a year that many withdrew money fearing the rumors of counterfeit money, especially the possibility of counterfeit money getting into the bank. The commissioners of the bank were an audacious group, with the first president, Colonel Standish Barry and Watts Sherman as the first cashier. The bank started with a capital stock of $200,000. Given how new the bank was, this was considered over-subscribed for the time but it showed the dedication the community and commissioners had for the bank[12]. And the commissioners vowed to keep the bank open through any struggles they may face to continue serving the community.

Since the community was thriving at the time, there were very few problems the bank had to face, but that did not exempt them from a bank's worst enemy, robbers. According to their records, on September 25, 1841, one of the bank's clerks, Anson Brown, "borrowed the key to the bank from Albert Story, a cashier, allegedly to draw some money on two small checks. However, Brown and two accomplices removed $72,857 in bank notes, gold, and silver and fled to the Albany area. Caught within 30 hours, all but $810 was recovered."[13] A trusted employee was able to escape the area with money equal to 2.2 million dollars in the present day. That would have been quite the heist if Brown and his accomplices had not been caught.

Contributing to the economy in the end of the 19th century and is ongoing today, the Little Falls cheese industry also contributed to the economy and the town's notoriety. The industry started after the "summerless years" which were known for the incredibly warm Januarys but cold summers in the late 1810s caused a shift in local agriculture production. Citizens of the area reported not having to use their in-home fireplaces during these winters, but the summers had snow reported. This hurt the grain industry in the area, as the grain would not ripen properly, and led to farmers switching over to raising dairy cows. This led to a prominent dairy industry within the community towards the middle of the 19th century and was the start of Little Falls' cheese markets that would draw international attention. The cheese industry had its ups and down, reaching record sales in 1878 according to the Herkimer County News. Many cheese producers and mills continued to send cheese, textiles and other goods down the canal and bringing money into the Herkimer County Bank into the 20th century and still has a few companies producing cheese today.

Towards the end of the 19th century, the bank went through a few changes. In 1865, the bank relinquished its power as a state institution and entered the national banking system in response to the shift to more federal unity after the Civil War. It became known as the "Herkimer County National Bank." The only change in this was a 10% federal tax on all notes issued by state banks. In 1878, the capital stock was increased, and the name changed to "The National Herkimer County Bank." The bank then kept pace with the growth caused by successful industrial and economic factors as the county moved into the 20th century and focused on building itself up. In 1917, the bank was forced to change back into a state institution, renaming itself the "Herkimer County Trust Company." This also resulted in a need for new bank notes and larger quarters, as it had been 84 years since the bank was built, so the bank moved from the building into the ground floor of the new Burrell Building to accommodate for the growth of Little Falls and its businesses. This marks the end of the stone bank building's years as a bank and the beginning of its forgotten years.

Forgotten But Not Lost- Early 20th Century

While the stone bank building was no longer a bank, it still served the community. In 1917, it was used as a center

12. Herkimer County Trust Company Pamphlet on their establishment and history; Press of Journal & Courier Co.
13. What Happened Today in Little Falls, Little Falls Historical Society Records, 1820-1860.

for the Red Cross. This was most likely due to its central location within Little Falls and its age. The building was 84 years old and had not received any major updates to bring it in line with modern expectations. While the building was still sturdy, in the age of electricity becoming relatively common, this building couldn't provide modern amenities, and it was much easier to build a new building than to completely renovate an old one. Being a community service organization with less revenue than a big business, the Red Cross was ecstatic to receive the building when most organizations was looking for newer buildings. The Red Cross used the building until 1918, when the Little Falls National Bank moved in after a fire moved them out of their previous location in the Cronkhite Building, continuing the stone bank's lineage as a bank until 1922.

The stone building begins to be tossed around between owners after the Little Falls National Bank passes it on to Dineen's Mortuary Parlor in 1923. In 1928, it becomes the Railway Express Office, and remains an important building for travel until 1943. It was bought and used as storage for Lovenheims' linoleum in 1943. While the interior was in poor shape the building stood strong, providing a sealed building for the linoleum. In 1964, an urban renewal program purchased the building from Lovenheims', aiming to give the historic building a new purpose. This was recommended by the New York State Council on the Arts to save the building with acquisition and restoration funds. The building was registered on the National Registry of Historic Places in 1970. After this initial support, the building started being seen as an important landmark in the eyes of Little Fall's citizens again. While it was obtained to be restored and revitalized, it sat empty, which was hard on the interior, for another thirteen years[14].

A New Purpose- Late 20th Century to the Present

The stone building was acquired by the Little Falls Historical Society in 1977 to be the new home for Little Falls' history. But to do so, a lot of work was needed to get the interior back in shape. In 1978, the building need $95,000 in renovations to be able to store historic documents and artifacts, as well as be a safe space to display them for the public. The vault within the bank was locked shut and needed to be literally cracked open, since the combination was lost over the years. Most of the work was done by volunteers of the community and the Historical Society, and after eight long years the museum opened on May 12, 1986, with the stone bank building as its new home. The Little Falls Historical Society raised $63,000 themselves, with local donors and other foundations donating funds like the Utica Foundation, America the Beautiful grant, and the Gannett Foundation[15].

The building is still being used as the Little Falls Historical Society, which sees regular attendance and events to draw locals and tourist into it's historic building to show off the history, objects and photos from within its vault. Exhibits are updated by the volunteers that run the society, who work diligently to continue collecting and preserving the history of the community. Most of the building is used as display space, while the back rooms are used as document storage and an office. The basement houses the artifacts and tools needed to maintain the museum. Everything has a home within this building, and it fits just right.

14. Little Falls Historical Society, Museum Data and History, pdf.
15. Idib.

The Bank building houses now the Museum of the Little Falls Historical Society. Images by Erik Stengler (left) and courtesy of the Little Falls Historical Society (right).

Safe Keeper of the Past

The Little Fall's Stone Bank building has had a rollercoaster of a life throughout the past two centuries. It started as a key community institution, being used to protect the citizens' and businesses' important assets. It was eventually abandoned and used as simple storage. And finally, it became the home to Little Falls' history and culture. Not only does it house the community's history, but it is a part of that history. Without a proper financial institution, Little Falls might not have become the bustling canal town that it did. Without a bank, who knows what businesses might not have started or which residents might not have moved into the area. But that's not what happened. The Herkimer County Bank opened and built the stone building to protect the goods the citizens of Little Falls trusted them with, overcoming financial instability, robbers, the eventually relocation of the bank and eventually the History of the areas, allowing the Little Falls Historical Society to continue telling the stories of the community and protecting the evidence that supports those stories.

3. War and Cheese: A Play

A Marshall Rennet Testing Kit

ALYSSA ZAJAN

Bucket containing a rennet testing kit. Item from the Little Falls Historical Society collection. Photo by the author.

Characters:

Joseph Hawkins – a put together man in his 50s, recruited by the US Food Administration to give public talks and demonstrations

Miss Frances Grace – a young working woman, 17-25

Mrs. Dorothy Miller – eager to help the war front, mother and housewife in her 30s-40s

Officer Frank Crabtree – a veteran police officer

Newsboy – a young boy, dirty but charming

Heckler 1

Heckler 2

Pedestrians and onlookers

Time:

Some day in May 1918 (During World War I)

Setting:

A park alongside bustling street. A small platform is set up with a podium and small table. A step or small set of steps allows access up onto the platform. The table contains a pile of pamphlets, flyers, various bottles filled with liquids and tablets, a Marshall Rennet Testing Kit and large tin container. Underneath the table is a metal chest. Posters saying, "Meatless Mondays," "Wheatless Wednesdays," "Buy Local," "When in doubt, eat Potatoes" and "Observe the Gospel of the clean plate" line the back of the small platform. At the front of the platform a sign reads "Live Demonstration at 10:00"

The Play

Pedestrians and onlookers stroll across the stage in front of the platform, enjoying the sunny day. Some stop to look at the signs across the back of the platform or gather into small groups awaiting the presentation. OFFICER CRABTREE *slowly makes his way across the stage, occasionally stopping at various groups of onlookers.*

NEWSBOY *enters holding a paper aloft and plying his trade.*

NEWSBOY German's "flying tank" deflects bullets, read all about it, flying tank escapes six attackers.[1] (*Continuing to shout and sell papers runs into* OFFICER CRABTREE.)

During the following exchange JOSEPH HAWKINS *enters and makes his way to the platform carrying a large jug of milk. On his way* HAWKINS *greets all groups as he passes on the way to the platform. Once at the platform,* HAWKINS *climbs up and looks over the table.*

CRABTREE Whoa there son, watch where you are going.

NEWSBOY Sorry, sir.

CRABTREE What is the Kaiser up to today?

NEWSBOY (*Holding up paper)* Only two cents to find out, sir.

CRABTREE (*laughs)* Alright, here you are. (*Hands* NEWSBOY *money and takes a paper)* Now get along lad.

NEWSBOY *runs away from* OFFICER CRABTREE *and rejoins the crowd.* HAWKINS *steps to the front of the platform to address the onlookers and pedestrians walking by.*

HAWKINS Hello everyone, ladies and gentlemen, thank you for joining me today to learn how you can help our boys on the warfront from the comforts of your own home. By each making small sacrifices, we can provide everything they need overseas. For instance, refraining from eating meat one day a week means our entire army will-

HECKLER 1 Who are you to tell me how I should eat? My eating a little meat is not going to change anything about this war.

HAWKINS Now good sir/ma'am, I am here as a representative of the United States Food Administration. I assure you that if we, as a population, make these small changes to our diet we can ensure that not only our soldiers, but those of our allies, have what they need to win this war. Mr. Herbert Hoover says that the US must ensure hope and food for all the allied powers throughout the war.[2]

A round of "Hear! Hear!" and other noises of agreement ripple through members of the crowd. Not all onlookers are convinced but many feel moved by patriotism.

HAWKINS I have previously presented on the benefits of starting your own vegetable garden, caring for

1. This comes from a New York Times headline story published May 21st, 1918, describing an armored plane used by the Germans to attack US troops. Full article at https://nyti.ms/38QvEHy.
2. In a speech at the National Milk and Dairy Farm Exposition, Herbert Hoover stated that the US had the duty to build up a reserve of food to get the allies through the war and recovery-post war. Full article at https://nyti.ms/2IGXtHU

chickens in your yard and proper canning techniques. Preserving our excess food allows us to save it for when there may not be as much fresh food about.

MILLER What will you be showing us today Mr. Hawkins?

HAWKINS Ah, Mrs. Miller, always the eager one! Today we are here to talk about how easy it is to turn excess milk into cheese. Neighbors and community groups can join to turn their ripening milk into a long-lasting cheese.

MILLER Sir, we already have so much to do in a day. With all due respect, I don't believe any of us have the time required to make cheese.

HAWKINS Not how your grandmother used to make it perhaps, but in this modern age farmers and housewives everywhere can safely and easily make cheese. The rennet and Junket tablets produced by our own Charles Hansen's Laboratory in Little Falls, New York revolutionized the cheese making process. No longer do you need to use the stomach of a calf to get the rennet for making cheese. These tablets dissolve right in water that can be added to milk to safely start curdling it. One tablet of Hansen's Junket is strong enough to turn 10lbs of milk into cheese. Now, for my demonstration I would appreciate the assistance of one of you from the crowd. (*gestures to a woman in the crowd)* How about you, miss?

GRACE Oh, I am sure there are those better suited than I.

HAWKINS You will do splendidly, now just make your way up on the stage here. (*Gestures to the side of the platform*)

GRACE Alright then, I suppose I could. (*She makes her way to the platform and up the steps to join* HAWKINS *at the center of the platform.)*

HAWKINS Thank you, miss...

GRACE Grace. What would you like me to do Mr. Hawkins?

HAWKINS (Still speaking in presenter voice) Miss Grace if you could take one of these Hansen's Junket tablets and dissolve it in the water in this bottle. (*As* HAWKINS *continues he sets up a tin basin on the floor of the platform and fills the rennet testing kit graduated cup with milk.)* To begin we will test our milk to find out how ripe it is. The riper our milk, the faster it will begin to curdle once we introduce the Junket. The ripeness of the milk will change the taste of our resulting cheese. To produce a consistent flavor of cheese, test your milk to ensure the same ripeness. Charles Hansen Laboratory has developed a handy kit for testing our milk.

Alright now Miss Grace, you are going to slowly pour your Junket dilution into my milk cup here as I release the plug at the bottom of the cup.

> HAWKINS *unstoppers the bottom of the cup as* GRACE *begins pouring the diluted Junket into the milk.* HAWKINS *stirs the mixture as milk pours out of the bottom of the cup into the tin dish.*

HAWKINS Now that Miss Grace has added the Junket, our milk is starting to curdle and solidify. As it comes together the milk will stop streaming out the bottom of the cup. (*The liquid coming from the cup tapers off and* HAWKINS *tilts the cup to show the audience the curds filling the cup.)* Miss Grace, by looking at the level of our curds you can tell us the degree of ripeness of our milk.

GRACE Oh hmmm, (*inspects the cup closely*) I believe it is at about 2 and one half. What does that mean?

HAWKINS My dear, that means our milk is at a perfect ripeness to begin making our cheese. Thank you Miss Grace for your aid, now you may return to your friends. How about a round of applause for the young lady? (*Onlookers clap lightly*)

GRACE Thank you, sir (GRACE *makes her way off the platform, back into the crowd).*

HAWKINS While not necessary, maintaining a consistent ripeness of milk for cheese making ensures that the cheese produced has a consistent taste and is safe for consumption. I have found 2-and-a-half degrees to be an excellent degree of ripeness On the note of taste, be aware that your cheese will take on the flavor of whatever is in the air as it is being made so ensure a clean place to make your cheese.

The easiest type of cheese for you to make at home is a soft Neufchâtel

Cheese. All it requires is milk, rennet, a cheese cloth and some string. Once you have heated the milk to about

80° simply add diluted Junket and the milk will begin coagulating. (*As he speaks,* HAWKINS *reaches into the metal container and pulls out a small tin dish of curds and whey)* After around 30 minutes, the milk will finish curdling and look like so (*holds up the premade example to show the crowd, as* HAWKINS *continues to speak he demonstrates hanging the curds in a cloth bag*). Mix salt into the curds as you see fit. Then you can tie the curds up in a cheese cloth or cotton bag and hang it over a bowl to let the whey drain out over a few hours. Once drained, simply take down the cheese and store it in your ice box.

HECKLER 2 Yeah but is it even any good?

HECKLER 1 What's gonna make me want to have any of that when there is real cheese out there?

MILLER Isn't saving food to send to our brave soldiers enough? They are risking their lives for-

HECKLER 1 Now listen here lady-

CRABTREE (Stepping up to HECKLER 1) Now, now sir, lets calm down, or do I need to show you the way out of the park?

HECKLER 1 I don't want to stand here listening to this anyways. (*exits)*

HAWKINS Mrs. Miller you have made an excellent point. The little changes and sacrifices we make can help provide our soldiers and allies with plenty of food to get us through the war. While the cheese you make at home may not be the best cheese on the market, it will taste even better knowing the good you are doing for your country.

The Onlookers release another round of "Hear, hear!" and patriotic agreements at HAWKINS *statement.*

HAWKINS I have pamphlets here if you would like to learn more about the Food Conservation campaign and how you can help us win this war. Now, thank you all for learning how to make cheese at home with me today. Next week I will be back with more tips on how to make your Victory Garden flourish. Remember our nation needs your dedication and resourcefulness to get us through these rough days.

The onlookers begin to scatter, group conversations resume, and the newsboy can be heard calling again as the lights fade to black.

THE END

Notes

The United States Food Administration

The United States established the Food Administration on August 10th, 1917. Herbert Hoover acted as director of the administration until its abolishment in November 1918. The Food Administration worked to regulate the price of wheat, prevent food monopolies and manage food resources for the country. No official rationing went into effect during World War I, however, large campaigns by the Food Administration encouraged the US population to limit their eating and grow their own food.

All the signs surrounding the platform are examples of actual slogans used by the United States Food Administration. These slogans encouraged citizens to reduce the amount of meat, wheat, sugar and other foodstuffs that were needed for soldiers on the warfront. The US sent preserved meat, wheat, sugar and salt across seas to the soldiers fighting in World War I. Meatless Mondays" and "Buy Local" have made their way into modern campaigns for smarter eating and reducing carbon footprints. The Food Administration encouraged shoppers purchase locally produced food to conserve fuel for the warfront.

Throughout World War I, the Committee on Public Information (CPI) developed and dispersed propaganda for the various war related efforts of the US government. The CPI produced posters, pamphlets and events to

inundate the population with information and calls for individual efforts that helped the war cause. The CPI created a group of volunteers that gave brief four-minute speeches in public spaces to encourage buying war bonds, volunteering, self-rationing food, etc. These public speeches inspired the talk and demonstration given in this play, though the CPI speeches were not as Joseph Hawkins demonstration.

Rennet

While most often obtained from calves, the term rennet is used as the general term for enzymes that cause curdling in milk. All ruminating animals, animals with four stomachs (goat, sheep, deer, etc.), produce rennet enzymes in their fourth stomachs. Calf rennet consists of two specific enzymes, chymosin and pepsin. Only young animals, that still survive on their mothers' milk, produce rennet. Once an animal has weaned off milk the stomach no longer produces the rennet enzymes. Unfortunately, an animal must be slaughtered to access the rennet within its stomach.

In 1873 Christian Hansen was the first to begin chemically extracting rennet from the fourth stomach of calves and other ruminant animals. The next year he began producing and selling liquid animal rennet in Denmark. His rennet extraction became widely popular across Europe. In 1878, Chr. Hansen's Laboratory opened a new factory in Little Falls, New York to provide the American market with the company's renown rennet extraction.

Hansen's Laboratory, Little Falls, New York

Little Falls has always been a hot spot for the cheese industry and an obvious choice for Chr. Hansen's new factory. Throughout the late 18th century and 19th century, Little Falls hosted one of the most important weekly cheese markets. The prices set at this market were the standard used across the nation and in the international market. Quickly outgrowing its initial factory, the Chr. Hansen bought what is now Hansen's Island. An island in the Mohawk river, Hansen Island is part of Little Falls, New York. Little Falls has always been a hot spot for the cheese industry and an obvious choice for Chr. Hansen's new factory. Throughout the late 18th century and 19th century, Little Falls hosted one of the most important weekly cheese markets. The prices set at this market were the standard used across the nation and in the international market.

Johan Frederiksen managed the New York factory and continued to increase the sales of Hansen's rennet in America. In 1886 the New York factory began producing "Junket" tablets for the American market. The name Junket originated from a dairy based dessert from England, these tablets were marketed to housewives to make a new and easily digestible dessert option. The Junket tablets consisted of a mix of rennet, salt and calcium additives. With a smaller concentration of rennet, Junket tablets were often used to make cheese in the home with smaller amounts of milk.

In 1918 Johan Frederiksen produced a pamphlet for the Food Conservation campaign "to meet the urgent demand for brief directions" on the cheese making process.[3] His pamphlet detailed methods for producing multiple types of cheese for farmers and adaptions for people making cheese at home. Frederiksen recommended that household cheese makers avoid making hard cheeses, such as cheddar, because of the more complicated process. Instead, Frederiksen recommended making Neufchâtel, cream or cottage cheeses. These soft cheeses do not go through the aging process and require less skill to produce. Neufchâtel is a soft cheese originating in France during the early middle ages.

3. Frederiksen included the text of this pamphlet as part of a larger book project after the conclusion of the war. See Frederiksen, Johan D., 1919, *The Story of Milk*, 1st ed. New York: The Macmillan Company. p 86.

Marshall Rennet Testing Kit

As Hawkins explains in the play, cheese producers tested their milk to determine the ripeness of the milk. Having a consistent milk ripeness produced a more consistent flavor and quality of cheese. Most cheese makers aim to have their milk at the same ripeness for every batch. Two to four degrees ripeness was the most common levels desired. Riper milk curdles faster due to the increased acid levels in the milk. The Marshall test uses the decreasing level of milk as a marker of time taken to curdle.

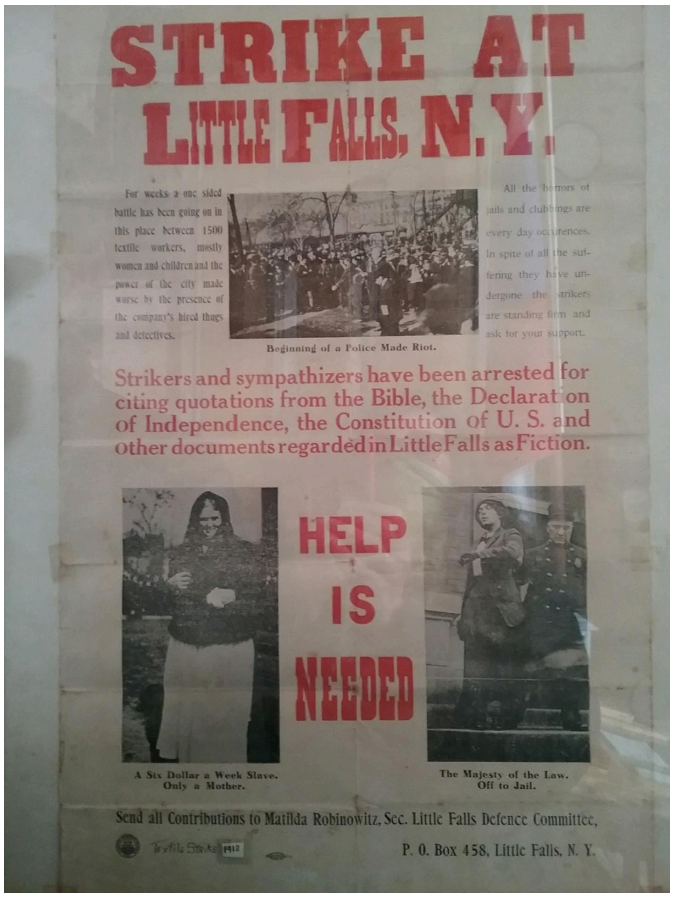
The testing kit consisted of a graduated cup with a hole in the base, a small glass bottle and a glass stirring rod. A diluted rennet solution was added to the milk when it was level with the top line of the cup and the hole is released. The liquid milk poured out of the bottom until the coagulation caused by rennet clogged the hole. Using the graduated lines on the cup, cheese makers determined the level of the milk/curds in the cup. The level corresponded to a degree of ripeness.

Glass instruments that are part of the rennet testing kit. Photos courtesy of the Little Falls Historical Society

4. “Strike at Little Falls”: Fighting for Labor Rights in the Era of Industrialization

"Strike at Little Falls" poster, 1912

SARAH CALLAN



In bold red letters, the poster declares “STRIKE AT LITTLE FALLS, N.Y.”. In October of 1912, a strike spontaneously began when textile workers, predominantly women who were recent immigrants from Italy, Poland, Hungary, and Austria, walked out of the Phoenix Knitting Mill in the small city of Little Falls in upstate New York. Known primarily for its thriving industries of dairy, bicycle, hammer and textile industries, the factories of Little Falls would soon garner national attention for more than the items they produced.

The poster demands “HELP IS NEEDED”. This poster is not meant to be seen only by other workers in the area to attract more strikers in unity with the textile workers of the Phoenix and later Gilbert Mills. It also speaks to the entire nation in an effort to attract witnesses to both the inhumanity of the working conditions as well as local law enforcement’s treatment of the strikers. Help is demanded beyond sympathies, seeking financial support

for the strike. At the bottom of the poster, those who are inspired to help are directed to send contributions to Matilda Rabinowitz, the Secretary of the Little Falls Defense Committee, to a local P.O. Box in Little Falls.

The poster describes both visually and textually not the causes of the strike, but rather the strength and the magnitude of it—"a one-sided battle has been going on in this place between 1500 textile workers, mostly women and children and the power of the city made worse by the presence of the company's hired thugs and detectives". It also decries the police brutality that ensued and the infringement on the Constitution-protected freedoms of free speech and assembly. This poster demands that the greater public see the deplorable actions and hold the city of Little Falls accountable.

This strike poster representing the 1912 Little Falls Textile Strike embodies the intersection of many issues and trends occurring in Little Falls at the height of its industrialization: a large wave of immigration, predominantly from Southern and Eastern Europe; the peak of socialism in the United States; a rising level of unskilled workers fighting for labor rights with union help; women becoming more active not only in the work force but also in the political sphere; debate over the right for free speech and assembly; and an awareness of the power of organizing and class unity.

The 1912 Little Falls Textile Strike was a monumental event, revealing the tensions and abuses beneath the surface of industrialization. However, it also revealed the strength of a well-organized group and the power the disenfranchised can wield when they come together to protest and organize against inequality. The same forces that intersected in Little Falls in 1912 to inspire nearly three months of protest continue to exist today. This strike poster reminds us that although the strike may have ended over 100 years ago, perhaps help is still needed in the communities around us.

Immigration to the Rock City

Much of the history of Little Falls can be traced back to the unique geology of the locale, and the history of immigration in Little Falls is no different. As Helen Schloss, a tuberculosis nurse and later important figure in the 1912 strike, opens with in her first article about Little Falls published in *The New York Call*, "Little Falls is bounded on the west by huge rocks, on the north by huge rocks, and on the south and east by the same."[1] The town of Little Falls sprung up on the banks of the Mohawk River where people travelling down the river were forced to carry their boats along land to avoid the rough falls created by the surrounding rocks and boulders. Later the construction of the Little Falls Canal and Erie Canal would draw laborers during the late 1700s and early 1800s respectively to help construct this monumental bypass of the rocky section of the river. The laborers during this time were predominantly Irish, and while some stayed in Little Falls after working on the canal, many moved to other areas. As the 1800s drew to a close, railroad construction would draw a new wave of immigrants to Little Falls as well as the rise of factories powered by the readily accessible and abundant waterpower generated by the falls. The majority of immigrants coming to Little Falls this time were from Southern and Eastern Europe, primarily from Italy, Poland, Slovakia, Slovenia, and Ukraine.

From 1900 to 1910, a record number of Southern and Eastern Europeans arrived in Little Falls. Between those years, the population of Little Falls increased by 18.2%. During this time, the native-born population in Little Falls declined, meaning that a growing immigrant population was almost solely responsible for the population increase of nearly 2,000 people.[2]

1. Schloss, H. (2016). *Tales from the Rock City*, p 3.2 Snyder, R.E., 1979. Women, Wobblies, and Workers' Rights: The 1912 Textile Strike in Little Falls, New York. *New York History*, 60(1), pp.29-57.

Life in Little Falls: a city divided

Life in Little Falls varied dramatically depending on one's class and race. Most immigrants to Little Falls lived in tenements on the "South Side" of Little Falls where the majority of the factories and mills were located as well. Conditions in the South Side were so deplorable that they created concern even from the largely disinterested affluent members of the city of Little Falls. Tuberculosis outbreaks were on the rise, and fear over the disease crossing from the South Side of Little Falls into the homes of those on the north side of the Mohawk River led the Fortnightly Club, a social group of prominent local women, to hire Helen Schloss as a visiting tuberculosis nurse to help document and curb the spread of the disease in Little Falls.

Schloss was a well-educated Russian-born immigrant who before coming to Little Falls had worked as the District Nurse in Malone, New York and a medical inspector for the New York City Department of Health. When she arrived in Little Falls in May of 1912, she began to work with the city to educate about tuberculosis and encourage direct action against it such as renovation and fumigation of the South Side tenements. In addition to the programs that she started, she also began documenting the living conditions in the tenements on the South Side and conducting interviews with the families there. What she found was beyond unsanitary living conditions that concerned her far beyond the threat of tuberculosis. Schloss found three to four families—upwards of 20 people—living in single-family homes, with beds shared in shifts and crammed into all empty spaces of the houses. Smoke from the trains that ran near the South Side made the air unclean and difficult to breathe. The construction of the houses was unsafe, with narrow staircases, crumbling walls, damp ceilings, and lack of proper and limited ventilation in many rooms. In addition to poor living conditions, Schloss also took note of the structural inequalities and racism that created these conditions. The property owners, many of whom were members of the Fortnightly Club, refused to invest in and take proper care of their tenements, arguing "Why, the Dagos, Slavs, and Polacks can live on almost nothing! They are dirty and filthy and will never amount to anything. There is no use in trying to fix their houses, as they will only dirty them again!"[2]

As she shared these discoveries with the women of the Fortnightly Club, Schloss met resistance to her suggestions for change. It became readily apparent that the women's concern ended at tuberculosis, not caring for the actual people who were dying from the disease nor the conditions that made them vulnerable to it.

The conditions in the textile mills mirrored the conditions in the South Side. The New York State Federal Investigating Commission that was appointed to examine health and safety standards in mills and factories following the Triangle Shirtwaist Factory fire came to Little Falls in August of 1912. In their tour of the factories in the city, they found some of the worst conditions in the state, with children as young as five years old being employed and given work to complete in their homes, perhaps in order to hide it from state inspectors.

In response to these egregious conditions and on the recommendations of these state-wide investigations, New York State legislators passed a law in 1912 that reduced the number of hours women could legally work in a week from 60 to 54, capped the number of hours women could work in a day at 10, and stated that women were not allowed to work before 6 in the morning or after 9 at night. Like a similar law that passed in Massachusetts earlier, it did not include any regulations on wages. In Massachusetts, mill management still sought ways to avoid losses to their own profits and to continue to reap the greatest personal benefit from their laborers, and many mills lowered pay following the reduction in hours in order to recoup their losses in productivity. When mill workers found on their next paystub the reduction in pay corresponding to the reduction in work hours, it was met with strikes and walk outs at mills across the state of Massachusetts, most notably in Lawrence. With barely livable salaries to begin with, this pay decrease was intolerable and workers decided that "if they must starve, they would rather starve idle than working."

On October 1, 1912, the new law protecting women workers went into effect in New York. This set the stage for

2. Schloss, H. (2016). *Tales from the Rock City*, p 7.

the strike in Little Falls, where the Phoenix and Gilbert Knitting Mills would test the limits of their workers in a similar fashion to the mills in Massachusetts.

The Little Falls Textile Strike of 1912

The Little Falls Textile Strike began on October 9, 1912 after 80 women spontaneously walked out of work at the Phoenix Knitting Mill located in the heart of Little Falls, New York near Clinton Park. The women had just received their pay envelopes and found that they had been given less than their usual pay, accounting for the mandatory decrease in work hours. Later that week, 76 women from the nearby Gilbert Knitting Mill would also walk out of the factory, with approximately 600 workers in total eventually joining the strike—nearly matching the number of those still crossing the picket line to work. While the strike was spontaneous and unorganized at first, as word of the strike spread, sympathizers such as prominent socialist Reverend George R. Lunn, mayor of Schenectady, as well as representatives from both the American Federation of Labor (AFL) and Industrial Workers of the World (IWW) descended into Little Falls to help organize the strike and advance the workers' cause.

Socialist party members along with Mayor George Lunn arrived by train into Little Falls on October 13. The group of socialists began efforts to organize the original strikers as well as to persuade other workers to join the strike. However, the socialists met immediate opposition from the local police force, led by chief James "Dusty" Long, who arrested Mayor Lunn among others when they tried to address the strikers in Clinton Park. While freedom of speech and assembly were nationally protected by the Constitution, local ordinances in the Little Falls city charter placed tight restraints on how, when, and where the community could express these protected rights. These ordinances included restrictions such as requiring all people to receive a permit in order to hold a street meeting and forbidding over twenty people from congregating on the streets. While these laws were not regularly enforced, they were swiftly and aggressively put into effect in relation to the strike. In a written statement to a local newspaper, police chief Long revealed his reasoning behind the sudden enforcement: "We have a strike on our hands and a foreign element to deal with. We have in the past kept them in subjugation and we mean to continue to hold them where they belong. We will not allow anyone to attempt publicly to stir up a feeling which might cause serious trouble to this city, county, state ... The city may have these local quarrels, but I will at all times object to butters-in." In order to resist enforcement of these restrictions on freedom of speech and right to assembly, strikers and supporters employed tactics such as submitting to arrest in order to overcrowd jails and overwhelm the administration and the courts. Finally, support from the Governor of New York, John A. Dix helped secure the strikers' right to assemble after he warned Little Falls Mayor Frank Shall and Herkimer County Sheriff James W. Moon that the people of the state of New York wished to see the rights guaranteed in the Constitution respected. By October 21, the socialists managed to assert their rights to freedom of speech and assembly and were able to demonstrate without arrest.

IWW organizers Ben Légère and Filippo Bocchini arrived in Little Falls and began to establish a strike committee and set demands for the strike. With the conservative AFL hesitant to aid unskilled, immigrant workers, the IWW became the dominant union force in relation to the strike, and on October 24, 1912, the strikers voted to join the IWW and a charter was issued for the new National Industrial Union of Textile Workers of Little Falls.

The strike was notable for how peacefully it had begun, with workers simply walking out of the factory and not destroying machinery or other property. However, the police force incited brutal violence on October 30 after the picket line did not clear a path for the scabs to enter the mills. Special police and mounted patrolmen began to attack the strikers, beating members of the crowd—some to the point of unconsciousness. Injuries resulted on both sides of the conflict, with one policer officer getting shot in the leg and another getting stabbed. The violence extended beyond the site of the strike as police pursued fleeing strikers into the South Side neighborhood, where they stormed the strike headquarters at Slovak Hall, destroyed the instruments of

the Slovak Society Band, and arrested strike committee members and supporters who had not even been at the front lines of the strike. IWW organizers Ben Légère and Filippo Bocchini were taken into police custody and would remain there for the remainder of the strike, being held without bail. This prompted the IWW to send in Matilda Rabinowitz, a young but talented member of the IWW, to organize her first strike.

Despite the brazen display of excessive violence by the police, an assembly of the mill management, merchants, local politicians, and clergy of Little Falls, among others, came together to wholeheartedly endorse the actions of local law enforcement. This made outside support necessary to garner a positive conclusion for the strikers. Additionally, the IWW could not financially support local strikes so bail funds, legal fees, wages for organizers, and money for food and supplies needed to be raised by the strike committee. Many strategies to help elevate this local strike to a national stage were taken, including the arrival of well-known IWW labor organizer Willian "Big Bill" Hayward. To this effect, the strike poster exposing the police brutality and terrible working conditions became an important tool for combating the press against the strike as well as earning the sympathy and financial support of those outside of Little Falls.

After nearly three months of striking and the dramatic sending away of the strikers' children to safer towns in late December, the New York State Department of Labor finally responded to the strike and ordered an official probe by state inspectors. After hearing from the strikers and the mill management and touring the tenements of the South Side, the state mediators reached a settlement with the Phoenix and Gilbert Knitting Mills and delivered it to the strike committee. The agreement met the demands of the strikers nearly in full: individual strikers would not be discriminated against, all employees would be reinstated, workers would receive 60 hours of pay for 54 hours of work, and piece work rates would be adjusted to compensate for the reduction of time caused by the new 54-hour work week law.

These conditions were read to the strikers at a meeting presided over by Matilda Rabinowitz and interpreted in various languages for all strikers to understand. With great excitement, the workers unanimously voted to accept the conditions, ending the long-enduring strike after 89 days.

The Power of Print Media

The strike poster is an important piece of material culture representing the 1912 Little Falls Textile Strike because of the importance print media played in constructing the image of the strike to outsiders. The IWW had a long history of using the power of print media to garner support for their causes. While not directly linked to the IWW, this Little Falls strike poster uses language that was commonly used in other IWW media. In the poster, a woman is referred to as a "six dollar a week slave", mirroring language seen throughout IWW propaganda where workers are referred to as slave laborers. The police are referred to as "the majesty of the law", connecting the position as public officials to the ruling class. Like much of the IWW print media created during this time, people are defined by their class above all else, and class solidarity is framed as the key to ending the rule of the employing class over the working class.

The strike poster would had been distributed throughout the nation to raise awareness of the strikers' cause as well as the abuses they faced fighting for reasonable claims. In the vacuum of Little Falls, few besides the strikers and socialist sympathizers were concerned by the police brutality and working conditions. The poster was important for making others outside of Little Falls aware of these conditions so that local officials, law enforcement, and the affluent community would be criticized into changing their behavior.

In addition to sympathetic support, the poster was also important for raising funds. Local strikes were self-supported, so organizers were faced not only with the task of arranging the strike but also raising funds. Posters like this would be seen not only by socialist supporters but also those outside of the socialist groups who might be sympathetic to the abuse and be inspired to donate money, if not to the socialist cause then directly to the strike itself.

Posters and proclamations created by the organizers were important to also combat the narrative the

mill owners and mainstream new sources were creating about the strike. Prominent figures in the Little Falls community painted the strikers as ignorant fools being manipulated into violence by insidious outside socialists. Character defamation of the organizers was also used strategically to try to take away from the sympathy outsiders might feel for the strikers. This was the case in Little Falls when a spy operating on the inside of the strike for local officials intercepted letters Ben Légère and Matilda Rabinowitz were exchanging while Légère was in jail. Légère and Rabinowitz were lovers even though Légère had a wife and children. The letters not only included details about the strike, but also included sentimental declarations of love and intimacy. The private contents of these letters were published in full by the local newspaper during Légère's trial in an attempt to defame his character and through that undermine the strike. Strike organizers produced their own stream of reporting on the strike and participants to create a narrative that was more sympathetic to the workers and focused on the abuses they met.

5. Safety First

A piece of the fire box grate from the train engine which exploded in the Gulf Curve wreck

CARLIE DOGGETTE

April 19, 1940, 11:30 pm

Doris Cannon was at the Little Falls High School gymnasium, listening to the school dance band "Rhythm Dukes" finish their sold-out gig for the night. Doris and the other students had paid 25 cents to dance at the gym that night. By 11:30, some students had drifted off into the chilly New York night, many trying to get home before their curfew. Doris was still in the gym when at 11:33 she felt the gymnasium shake and heard an explosion. She heard the shouts from several of her classmates "Accident! Accident!" But just what accident had occurred?

Another student at the gym, Bob McEvoy, thought that a truck must have crashed into the Dolgeville Railroad Bridge, which had happened several times before. Doris and her friends ran down East Main Street toward Ward Street where they found the source of the explosion[1].

Before the high schoolers lay a disaster scene. The smell of scorched metal filled the air. The only sound was the steam hissing from the destroyed engine. One student nearly stepped on a body that had been thrown from the wreck. In front of the students, 15 train cars were piled up. Overall, 31 passengers were killed and over 100 more were injured. Canon and the other witnesses after the fact would never forget what they saw.

The Gulf Curve

To understand just how impactful the train crash was on the small city of Little Falls, we first must understand

1. Doris Cannon Burney. In *I Was There* edited by Louie Baum, February 22, 2015.

the importance of the railroad itself. The first train passed through Little Falls in 1836 as part of the Utica-Schenectady Railroad. Eleven years later, the New York Central Railroad laid a second track through Little Falls creating the infamous Gulf Curve. With a curvature of just over seven degrees and a length of 856 feet, it was the sharpest bend in the entire New York Central System[2].

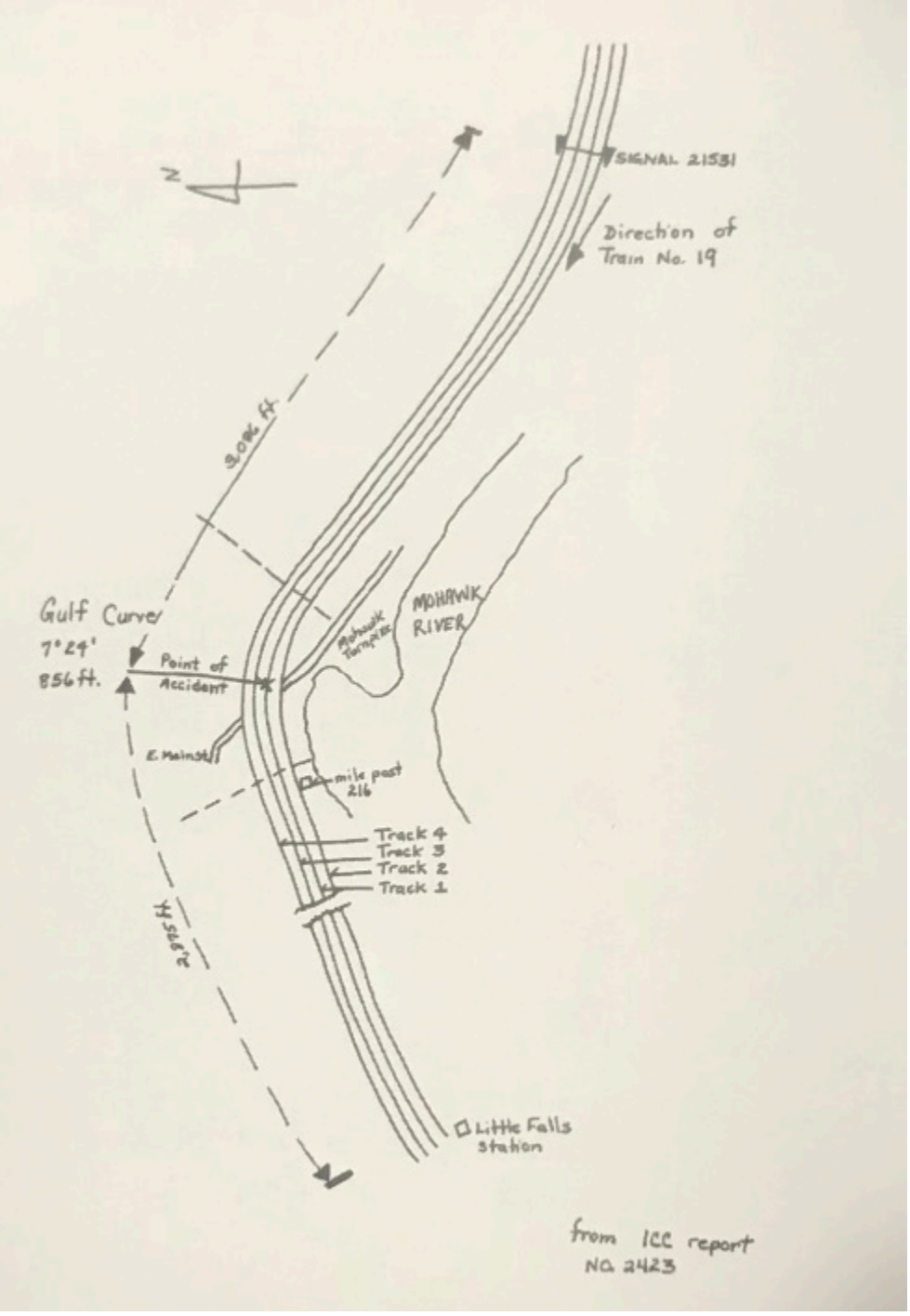


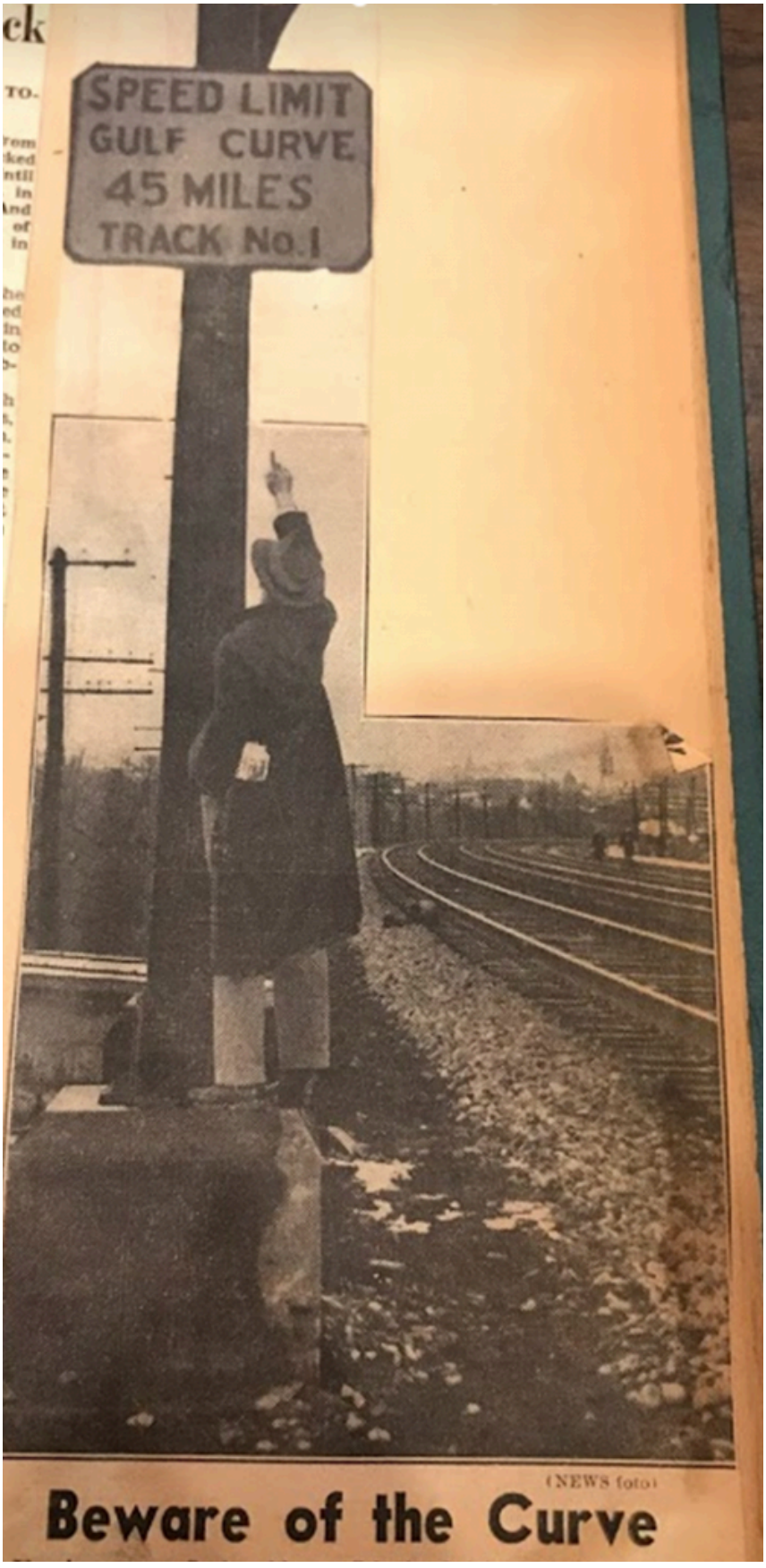
Illustration of the Gulf Curve in Night of Disaster: The New York Central Gulf Curve Wreck by David A. Taylor and Lucinda M. Parker.

2. "Special to the Telegram and the Times 5-25-15," Newspaper Clipping in a Scrapbook, Little Falls Historical Society.

Why would a railroad company create a track with such a sharp curve? The answer is simple: the Mohawk River was in the way. When the Gulf Curve was created in 1847, the rail lines were laid to follow the curve of the river as it bent around Moss Island. Regardless, the New York Central marketed the route through the Mohawk Valley as an "amazingly smooth operation."[3]

The first Gulf Curve crash happened on August 23, 1903. The four-car train, manned by Engineer Robert Lillie and Fireman Thomas Connelly, carried the Sunday New York City newspapers upstate. Both men were killed when the train jumped the tracks in the middle of the Gulf Curve and slammed into the adjacent retaining wall. As a result of this crash a mandatory speed limit of 45 miles per hour was posted at the curve[4].

3. New York Central Lines. "Nearly at sea level for a thousand miles." Advertisement. Little Falls Historical Society.
4. David A. Taylor, and Lucinda M. Parker. *Night of Disaster: The New York Central Gulf Curve Wreck*. Second ed. Thomaston, ME: Indie Author Books, 2019.



"Beware of the Curve" newspaper clipping. Image courtesy of the Little Falls

Historical Society.

In 1909, the New York Central Railroad was the first railroad to adopt the slogan "Safety First." This slogan was posted on signs, buildings, and bridges across the state[5]. The company produced pins and pencils to market its slogan to the masses. A General Safety Agent was hired to drive home the entire campaign. A movie, called "Steve Hill's Awakening" was produced in 1914 to be used in the Safety First campaign. The Railroad attributed the 273 fewer deaths and 4,030 fewer injuries in 1914 than in 1913 to the Safety First Campaign. Safety appeared to be improving throughout the New York Central Railroad. And the trains traveling through Little Falls appeared to be no exception.

April 19, 1940: Train Crash

> "When I drove over the knoll and saw the hospital ablaze with lights, my heart sank. I knew for certainty then that tragedy had struck, and there had been a train wreck of some sort. What prompted me to turn down Ward Street I don't know, but it was the beginning of a nightmare." [6]

The New York Central Lake Shore Limited Train No. 19 to Chicago was supposed to leave the Albany Train Station at 9:48 p.m. But on the fateful night of April 19, 1940, the first-class passenger train, under the control of Engineer Jesse Earl, left 21 minutes late at 10:09 p.m. Supposedly trying to make up for lost time, the Lake Shore Limited Train sped around the Gulf Curve at 59 mph – 14 mph over the recommended limit. The locomotive jumped the tracks, flipped onto its right side, and crashed into the stone wall lining the curve causing the cars behind it to accordion into each other and derailing 11 of the 15 cars[7]. The boiler was struck by a protruding rock and caused the explosion that was heard across Little Falls[8]. Engineer Jesse Earl's watch stopped at 11:33 p.m. – the accepted time of the crash.

One newspaper described the pile up stating that the train cars "crumpled like tissue."[9] Another newspaper reflecting on the crash twenty-eight years later reported "the huge iron creature virtually broke its back. It was torn apart by an explosion that followed. Two cars telescoped, roofs were ripped off others and the remainder were tipped and spilled across the roadbed."[10]

5. *The New York Central Railroad 1831-1915.* Book. Little Falls Historical Society.
6. Edgar Moore, "Our Readers Write: Edgar Moore Recalls Assisting At Lake Shore Limited Wreck." Little Falls Historical Society.
7. "Locomotive Nose Buried in Rock Wall" Newspaper Clipping in Scrapbook. Little Falls Historical Society.
8. Jim Fitzgerald, "One Major Construction Project: Rerouting the New York Central Mainline and the Mohawk River at Little Falls, New York." Unknown Newspaper.
9. "Locomotive Nose Buried in Rock Wall" Newspaper Clipping in Scrapbook. Little Falls Historical Society.
10. "Lake Shore Limited Was Wrecked Here 28 Years Ago Tonight." *The Evening Times*. April 19, 1968.

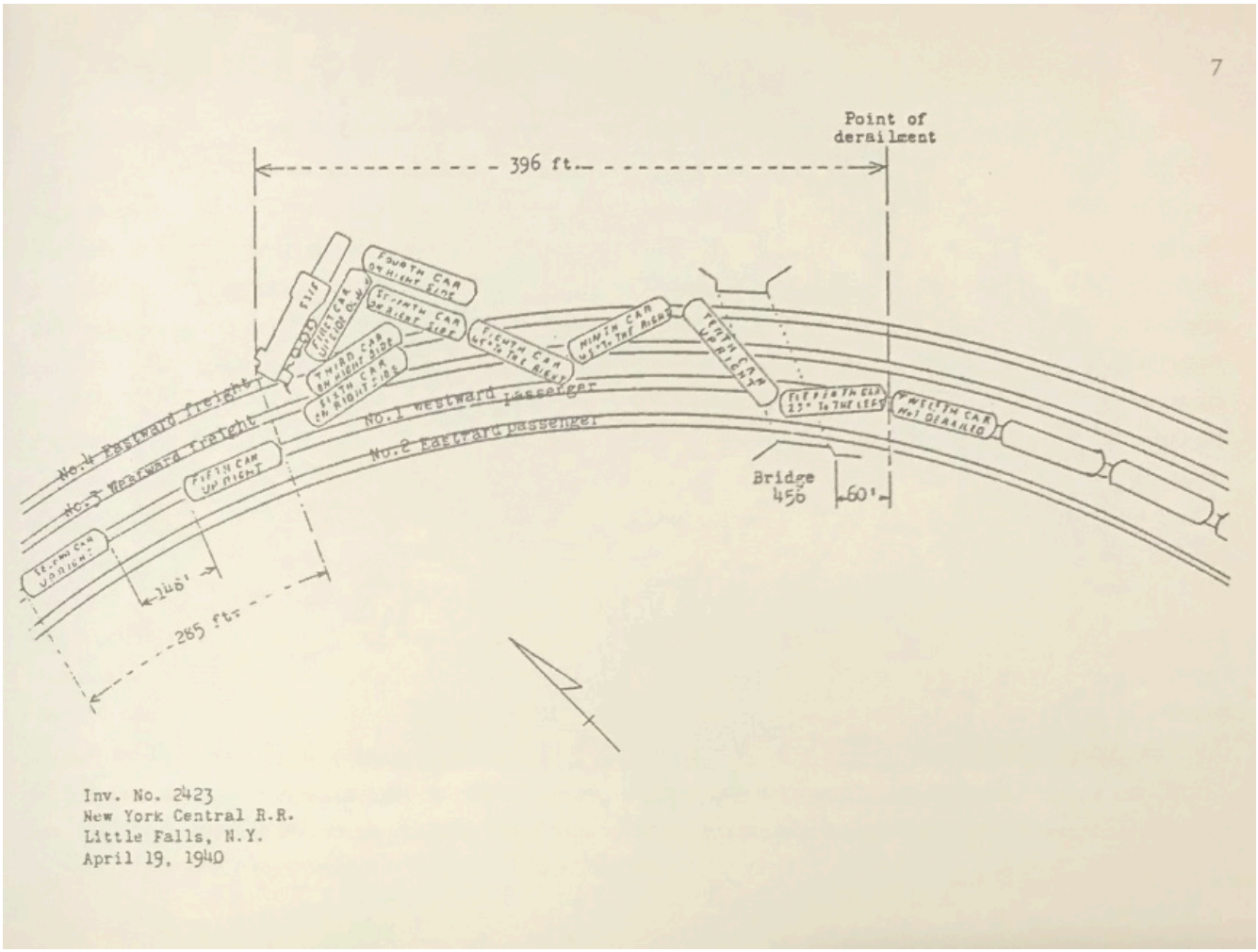


Illustration of the Gulf Curve wreck in Night of Disaster: The New York Central Gulf Curve Wreck by David A. Taylor and Lucinda M. Parker.

Fireman J.Y. Smith and several passengers were thrown from the train. Pipes burst in the train cars, causing them to fill with water. Some passengers feared that the train had leaped into the Mohawk River and those who had not died upon impact would drown as the cars sank. All telephone and light poles in the path of the crash had been destroyed, plunging the scene into darkness. When the boiler exploded, pieces of the engine scattered in all directions.

One newspaper reported it "Laying [sic] on its side like a dying Goliath, the mighty power of the Lake Shore Limited, still hissing with parts ripped from its huge body, scattered in all directions."[11] In the days following the crash, the remaining engine had to be cut into more pieces to remove it from the track so trains could resume their journeys through the Gulf Curve.

Witnesses after the fact and first responders began to follow the sound of the explosion to the crash site. A resident simply identified as "Lee" remembers: "I never hoped to see such a horrible scene as greeted my eyes as I broke over the top of the embankment...There was a tangled mass of wreckage, hissing steam, screams and

11. "The Camera's Eye: Train Wreck." *Village & Town Shopper Incorporated*. November 15, 1971.

cries of the injured and dying, with practically total darkness."[12] Lee and others began to pull victims from the wreckage – many of whom were already dead.

The power company came to light up the scene with floodlights. The telephone company set up emergency lines. People from all over Little Falls offered their help and their homes to the injured. Medical professionals from cities beyond Little Falls made their way to the Gulf Curve to help. Edgar Moore marveled at the efficiency of the response to the crash, although he found himself hoping that he would wake up soon and realize this was all just a nightmare.[13] Everyone worked throughout the night to save the injured to remove the bodies from the train.

Engineer Jesse Earl's lower half was pinned under the wreckage and he knew he was paralyzed from the waist down. When rescuers found him, he was still clinging to the throttle of the locomotive. He stated that he did not know what had caused the wreck. Doctor James Douglas was able to administer drugs to Earl to ease his pain, but he eventually died of blood loss and two fractured legs before rescuers could free him around 2:00 a.m. One of his last words was simply "home."[14] This train bound for Chicago was supposed to be Earl's last run before retirement.

When the sun came up the morning after the crash, Doris Cannon returned to the wreck with her classmate Dick Daley. Cannon and Daley were just two out of the thousands of people who came to witness the crash site on the morning of April 20th and the days that followed. Cannon noticed that the entire site was in less of a panic. Everything was happening in an orderly fashion and tarps were being placed over many of the overturned cars. Bodies of the dead were placed in wicker coffins adjacent to the wreck.

Identification of the bodies proved difficult and some passengers were erroneously reported as dead. By Sunday morning only 17 of the 25 bodies had been identified. Officially, 138 people were injured in the crash, many of these requiring medical attention at a hospital. Little Falls Hospital was beyond capacity that weekend, and several injured were transferred to Herkimer Memorial Hospital and Faxton Hospital in Utica. The last death occurred on Friday, April 26 when Mrs. Charles Dyer succumbed to her injuries at the Little Falls Hospital, bringing the official death toll to 31. The last injured passenger to leave the hospital was L.E. Rogers of San Francisco, who was discharged on July 29, 1940. Rogers suffered a concussion and chest contusions.

Little Falls resident Ed Gregorka found his way to the wreck on both the night of and the morning after. Being a professional photographer, Gregorka documented the crash. His photos became the "gold standard" and were used across the nation in newspapers and magazines. The wreck would be featured in popular publications such as *Life* and the *Wall Street Journal*. New York Central sent people to officially document the wreck before it was removed from the Gulf Curve. The main difference to the site from the previous night was that the rescuing was over – it was now time to clean up and evaluate the aftermath.

12. Lee to Mr. T. Byron Lally, April 23, 1940. Little Falls Historical Society.
13. Edgar Moore, "Our Readers Write: Edgar Moore Recalls Assisting At Lake Shore Limited Wreck." Little Falls Historical Society.
14. David A. Taylor, and Lucinda M. Parker. Ibid, p. 11

Wreckage on the Gulf Curve. Image courtesy of the Little Falls Historical Society.

Aftermath

After the train crash, an editorial was published in the Little Falls Evening Times that voiced the opinion of many in the Little Falls community. The article, titled "The Gulf Curve Must Go!" conveys the feeling that in the town, before the crash, people would have welcomed their town being publicized across the country. But a fatal train crash is not the way they wanted this publicity to come to Little Falls. Was this the new normal now? Is this what Little Falls would be famous for? Would the history of the town, from the cheese markets to the canal to the picturesque setting be overshadowed by tragedy? Would future local accomplishments be responded to with only "isn't that the town where the train crashed?" Soon after the crash the *New York Sunday News* renamed the Gulf Curve "Death Curve" in a photo caption.[15] The author of "The Gulf Curve Must Go!" writes:

> "Fate dealt a cruel and brutal blow, not only to the Lake Shore Limited and its ill-starred crew and passengers, but also to the New York Central railroad, and to this community, which shudders at the recollection of the death and destruction wrought Friday night and the thought of being remembered as the locale of one of the worst railroad wrecks ever to occur in the east."[16]

The author calls for investigations into the cause of the disaster in the hopes that a similar tragedy can be prevented from ever happening again. But whatever the investigations would reveal, the author places the blame on "Mother Nature." The Little Falls gorge created a natural challenge when attempting any transportation through the valley, whether by water, car, or train. When the valley was being formed, the bend of the Mohawk River was created in such a way that it would test man in the industrial age.

15. "Wreck Laid to Race for Time." *Sunday News*. April 21, 1940, Vol. 20 No. 1. Newspaper Clipping in Scrapbook. Little Falls Historical Society.
16. "The Gulf Curve Must Go!" *The Evening Times*. 1940. Newspaper Clipping in Scrapbook. Little Falls Historical Society.

This challenge presented by nature is not unique to Little Falls or the Mohawk Valley. Nature does not form the land with industrialization in mind. As industry grew and mass transportation of goods and people became a necessity throughout the country, humans faced a dilemma. When encountering a mountain do you build on, around, or through the mountain? When a water drop-off is too steep do you rethink the path of your canal, or do you engineer locks to bring the boats up and down the river? And when the path of your railroad is obstructed by the river do you move the river or bend with the path of the bank?

Little Falls initially benefitted from its natural geography. The river featured a 40 ½ foot drop over a one-mile distance. This drop was perfect for the use of waterpower in the city, which benefitted early industrialization.

"The Gulf Curve Must Go!" urges the state and federal governments, as well as the railroad companies to remove the curve. The wreck is seen as a wakeup call. The danger had been recognized in the past, but no action had ever been taken. Now is the opportunity to change before anyone else must die. The author writes, "As the mighty locomotive and luxury cars of the fast train splintered and piled up in sickening disarray, the Gulf Curve was pronouncing its death sentence."[17] Little Falls as a community wanted to make sure that nothing like this would ever happen in their town again.

Almost immediately after the wreck was removed from the tracks, investigations began into the cause of the crash and future of the Gulf Curve. One person who was in the engine of the train at the time of the crash survived. Two days after the crash, Andrew Bayreuther, the traveling fireman, gave an official statement from his hospital bed where he was recovering. He reported that he did not believe that anything was wrong with the engine itself and that they had not been trying to make up time on their journey.[18]

He believed the engineer Jesse Earl had been slow in reducing the speed of the train before the curve causing the derailment. Bayreuther reported that a 14 or 15-pound brake reduction should have been made to successfully navigate the Gulf Curve. Earl had only reduced the brake by 11 or 12 pounds and the train hit the curve at around 60 miles per hour. Other workers on the train reported that they felt the train braking before entering the curve and did not think anything was amiss until the train left the tracks. Engineer Jesse Earl was not able to give any official statements as he died under the wreckage. [19]

On April 22nd, just three days after the crash, the Railroad Company, the Interstate Commerce Commission, and the Public Service Commission all opened investigations into the crash. The Interstate Commerce Commission immediately sent an inspector to Little Falls who produced a 27-page report on the crash.[20] Early investigations into the incident concluded that there had not been an obstruction on the tracks, the locomotive itself did not suffer a mechanical failure, and that the train had been traveling at 59 miles per hour when it derailed.

The inspections also revealed that Engine No. 5315 had made a successful trip from Syracuse to Albany less than twelve hours before it jumped the tracks of the Gulf Curve. Engineman Lasher had been in charge of this trip and reported after the crash that he had not experienced any difficulties stopping at any of the 17 stops on his route to Albany. Air Brake Inspectors Farley, Murtha, and Krichman inspected the engine while it was in Albany. The engine passed all tests and only required one adjustment, which should not have affected the braking capabilities.

Several people have offered unofficial and unsolicited theories as to what they believe caused the crash. One theory states that the roadbed under the tracks had been weakened by the heavy rains and thawing ice. Others believed that the water levels in the boiler were a contributing factor, but this was proven untrue, as the boiler exploded as a result of the crash, not causing it. Other people believed that the engineer suffered a heart attack, but this would appear unlikely as he was alive and conscious for up to three hours after the crash.[21]

17. Ibid.
18. "Bayreuther Says Delay in Reducing Speed of Lake Shore." April 1940. Newspaper Clipping in Scrapbook. Little Falls Historical Society.
19. David A. Taylor, and Lucinda M. Parker. Ibid, p. 10.
20. "As Investigation of Gulf Curve Wreck Opened at Albany" Albany, April 22, 1940. Newspaper Clipping in Scrapbook. Little Falls Historical Society.
21. David A. Taylor, and Lucinda M. Parker. Ibid, p. 12.

On June 5th, the director of the commission, S.N. Mills, traveled to Little Falls to write a more in-depth and technical report. On June 13, the Interstate Commerce Commission officially stated that the cause of the crash was the engineer failing to reduce the speed of the train then closing the throttle too abruptly.[22] After Mills' report was published, the commission instituted a proceeding with the goal of removing the curve.

The New York Central pushed back against removing the curve apparently due to the cost of the endeavor. The company argued that as long as trains successfully reduced their speed on the curve, a crash would not happen again.[23] In July 1940, the company refused to adhere to the public service commission's recommendations to lower the speed limit around the curve to 40 miles per hour and lower the maximum age of engineers to 60 years.

On December 19, 1940, the Little Fall's newspaper, *The Evening Times*, reported that the public service commission held a hearing on removing the Gulf Curve to "minimize the hazard to the operation of trains."[24] The commission's goal was to show that the curve was too dangerous for trains to navigate. Questions arose as to whether the commission had the legal authority to force the removal of the curve. But eventually, despite the New York Central's protests, it was determined that the Gulf Curve should be removed not only to make it safer but to make the route faster.[25]

Moving the River

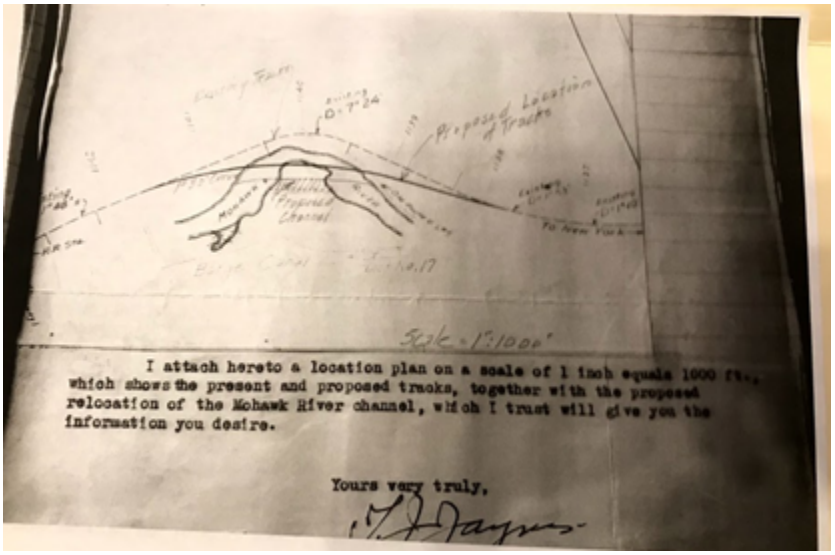


Illustration of the relocation of the Mohawk River Channel. Image courtesy of the Little Falls Historical Society.

What would follow would be a multi-million-dollar project that spanned seven years. As many as 135 people worked on the construction that cost over two million dollars in the 1940s, or equivalent to nine million today. Although the decision to move the Gulf Curve was made in 1940, the new railroad tracks would not be opened

22. "ICC Finds Wreck Lake Shore Limited Due to High Speed" Washington, June 13, 1940. Newspaper Clipping in Scrapbook. Little Falls Historical Society.
23. "Central Fights Curve Removal" *The Evening Times*. September 9, 1940. Newspaper Clipping in Scrapbook. Little Falls Historical Society.
24. "A Hearing on Curve Removal" *The Evening Times*. December 19, 1940. Newspaper Clipping in Scrapbook. Little Falls Historical Society.
25. Unknown Title. Section: "A Dangerous Curve: The Central Officials to Take Precautionary measures at Little Falls." Newspaper Clipping in Scrapbook. Little Falls Historical Society.

until November 19, 1947. The major construction project had to be put on hold during the Second World War[26]. Before the reconstruction of the curve, thousands of GIs were safely transported on this route to New York City without incident[27].

The project involved altering the path of the Mohawk River. A new channel would be excavated on the northeastern side of Moss Island – which involved demolishing part of the island with dynamite. A dam was erected to block the flow of the river into the new channel during construction. The western end of the channel was blocked by a natural rock formation. A Coffer-dam was created on the eastern end and blasted away when construction was completed[28]. The new channel of the Mohawk River would be 20 feet deep, 600 feet long, and 150 feet wide. The rock that was blasted from Moss Island formed the new embankment of the river.

Old and new gulf curve during construction. Photo courtesy of the Little Falls Historical Society.

Now, in the 21st century, if you were to walk down the Mohawk River in Little Falls you would never know that a train wreck that claimed 31 lives had happened right where you are standing. The path of the river and the side of Moss Island look natural to the unknowing visitor. The New York Central no longer carries passengers across

26. "Special to the Telegram and the Times 5-25-15," Newspaper Clipping in a Scrapbook, Little Falls Historical Society.
27. David A. Taylor, and Lucinda M. Parker. Ibid, p. 32.
28. "Special to the Telegram and the Times 5-25-15," Newspaper Clipping in a Scrapbook, Little Falls Historical Society.

the state, having been replaced by Amtrak, the Thruway, and planes. A Gulf Curve Train Wreck Monument on the side of the highway marks the location of the wreck.

Gulf Curve Train Wreck Monument. Photo by the author.

In the 1940s, humans changed the environment. Originally, following the natural bend in the Mohawk River was the best option for the path of the railroad. But as our needs change we continue to modify the environment. We blasted part of an island, moved a river, and built a rail line that better suited our needs. We need to move forward, understanding the impact our industry and actions have on nature in the past, our present, and our future.

6. Our Rock Crystal

Little Falls Diamonds

KATHRYN DRAGAN

"Little Falls Diamonds" from the collection of the Little Falls Historical Society. Photo courtesy of the Little Falls Historical Society.

"The Little Falls Diamond"

"The hills to the north and south of the "gorge" forming the Mohawk Valley at Little Falls, New York, you might find a small, clear, sparkling stone called the Little falls "diamond".

This semi-precious stone is not a real diamond which is pure carbon – but is a silicon dioxide (SiO2), or sand and oxygen, the same composition as the glass windowpane although much harder. The Little Falls "diamond" is a member of the great quartz family which include opal, agate, flint, amethyst, and other branches either found massive such as quartz rock from which mountains might be built; or having a definite shape which is designated by the term "crystal". When the quartz crystal is colorless and clear, it is called a rock crystal. Thus, we identify the Little Falls "diamond" as rock crystal and a member of the great quartz family of minerals.

Our rock crystal is not named after the City of Little Falls but the rock formation in which it was grown by nature. This rock formation was originally a sediment laid down in the Precambrian Little Falls Sea that covered much of central, northern, and eastern New York State, millions and millions of years ago. The original limestone sediment was later altered in composition by a great natural disturbance and is now known as Little Falls Dolomite.

The rock crystal, or Little Falls "diamond", was fashioned by nature in small pockets or vugs in this dolomitic rock. The crystal is found by breaking open the rock which is often very hard; or it is

free in the soil, having been weathered out of the rock matrix. Other minerals associated with and sometimes even included within the rock crystal are: calcite, dolomite, pyrite, and anthraxolite.

The Little Falls "diamond" is to be found in the mineral collections of universities, museums, and private individuals all over the world. It is recognized for an unsurpassed perfection of form and sparkling brilliancy. In fact, the Little Falls "diamond", or rock crystal, has been mistaken for the real diamond.

Even when found as a six-sided prism capped at each end with a six-sided pyramid forming a crystal with 18 faces, all glass smooth and sharp edged, it is difficult not to imagine such a stone has not, in truth, been artificially cut and polished. When our rock crystal is actually cut into such a "brilliant", it has a water clearness and lively sparkled that is beautiful even in the terms of gemology.

Let the scientific define it as a rock crystal... we will always recognize it as a Little Falls "diamond."

By Donal Hurley

Little Falls, N.Y."

A handful of sparkling gems of varying sizes. Their colors range from clearer than glass to smoky gray, with small pieces of black rock imbedded within them. The light hits them and magnifies the facets of these natural gems. They throw rainbows on every surface, even the darker gray gems refract dulled colors onto the surrounding walls.

They could be diamonds, as they sparkle in the sunlight.

But they are not. Not really, anyway.

That handful of diamonds are nothing more than quartz crystal, found in a very specific part of the world we live in. That part of the world, a little place called Little Falls, sits along the Erie Canal where a series of waterfalls makes it idyllic and, as of 2017, a great place for a movie.[1]

Little Falls Diamonds, or Herkimer Diamonds, are a quartz like crystal that naturally have eighteen facets and two terminating points, making it resemble a video game gemstone just clear instead of bright blue or fiery red. They grow as all gems grow: certain minerals in the drainage through the stone would gather and create beautiful little imperfections that are eventually found by the daring adventurer, or the child with a hammer on a day out with their family.

Life as a Simple Rock

Thousands on thousands of years ago, upstate New York was an ocean.

The Little Falls Sea, as it is affectionately called, covered the majority of upstate New York from Vermont to Lake Ontario. This sea existed during the Precambrian era, one of the many geologic eras that the Earth has lived through. It left behind different types of evidence of its existence . Humanity would never see its glory. This wide expanse of water that covers everything humanity holds dear under its dark waves. But the evidence gives clues as to what might have been there, from fossils to layers of rocks that mark the life cycle of an era. These rocks have been given names and classified by type, color, and hardness. The fossils are named, sent away to museums and displayed behind glass for the world to see. One of the rocks is called dolomite, specifically Little Falls Dolomite due to the sea it grew through. This rock is metamorphic, having transformed from a sedimentary calciferous sandstone into dolomite. Metamorphic rocks are made of whatever was left in their

1. The movie "A Quiet Place" was filmed in Little Falls in 2017, (Sorrell-White, 2017: "A Quiet Place" Transforms Little Falls. *Utica Observer-Dispatch*. https://www.timestelegram.com/news/20171030/a-quiet-place-transforms-little-falls)

place before. This layer of dolomite tops off at four hundred feet thick. We know this mostly because of geology and geologists. But one special piece of history comes from Donal Hurley.

Donal Hurley, a resident of Little Falls in times gone by, used his knowledge of geology and geography to create a short brief of what the geology of the area was through the ages. This brief is written over four colored pages. Many words are misspelled, the cursive of the pen is difficult to read.

Geology Brief On Little Falls. (1)

A - Trenville - some of oldest formation in the world. a sediment of very ancient sea of great size preceded Cambric period - little evidence now left.

B - Syenite - a plutonic igneous intrusive during Cambric period

(1) Plutonic igneous is slowly cooling mass from within the earth and not as volcanic which is from without or above the earth

(2) Intrusive is molton mass thrusting upward and cooling as it nears surface. (Extrusive is mass which cools horizontally as between layers of rock formations)

(3) Moss Island. Burnt Rocks. West Shore Cut

C - Potsdam sandstone - Pre-Cambrian sediment

D - Dolomite (Little Falls) known as Little Falls dolomitic rock and designated as Beekmantown by H. P. Cushing but actually the Little Falls dolomite and Beekmantown are two different formations also called calciferous sandstone or sandrock in early reports.

(1) Little Falls dolomite are metamorphic

Page from "A Brief Geology on Little Falls N.Y." By Donal Hurly (A transcription of the full document is attached at the end of

this chapter). Photo by the author.

Nevertheless, it shows the care that Mr. Hurley had for the environment he studied. Within Little Falls Historical Society there are mentions of Donal Hurley throughout the references to the geology of Little Falls and the prized Little Falls diamonds. He was an active, and well loved, member of many community organizations from the late 1800s until his death in 1980.

Be that what it may, the dolomite is not the special part.

Sure, every child loves rocks, that is a fact. They find them in places where the rocks are formed or, maybe even where their family takes their usual hike on sunny afternoons. I myself was a rock collector as a child and into my later years, embarrassingly enough. But we always looked for the prettiest ones. The ones with an extra swirl of color or an extra sparkle to them.

That is where the diamond comes into play

Is it a "Diamond"?

There is no record of when the Little Falls Silicon Oxide based gem came to the attention of the people who lived in the Mohawk Valley. There is no record of the native tribes of the area, such as the Mohawk, using them, but that does not mean they did not use these rocks for trade or for tools.

By composition and looks, they are not very different from diamonds. They rank a 7.5 out of 10 on the Mohs hardness scale, used to measure the hardness of gemstones. When it comes to the 4C's of gemstone quality (cut, color, clarity, and carat), they can apply just as they do to a diamond. They can be cut to fit shapes that would please any finely dressed lady, or gentleman. Their color usually stays on the clear and sparkly side, while there can be imperfections such as inclusions or bubbles, or even black carbon deposits. The finest jewelry would be made with the clearest of gems, unless otherwise requested. The only true difference that those with the untrained eye would see is that the sparkle is not the same. A Little Falls diamond, also called a Herkimer diamond because they are found in Herkimer county, NY, is made of something akin to glass, it most little harder and in larger chunks. This means that it will reflect and refract as a pane of glass does when the light hits a window. It is pretty, but the sparkle of a true diamond is something of a different experience entirely[2].

So, is it a diamond?

Not quite. But, for many, it isn't too far off.

An Industry of Stone

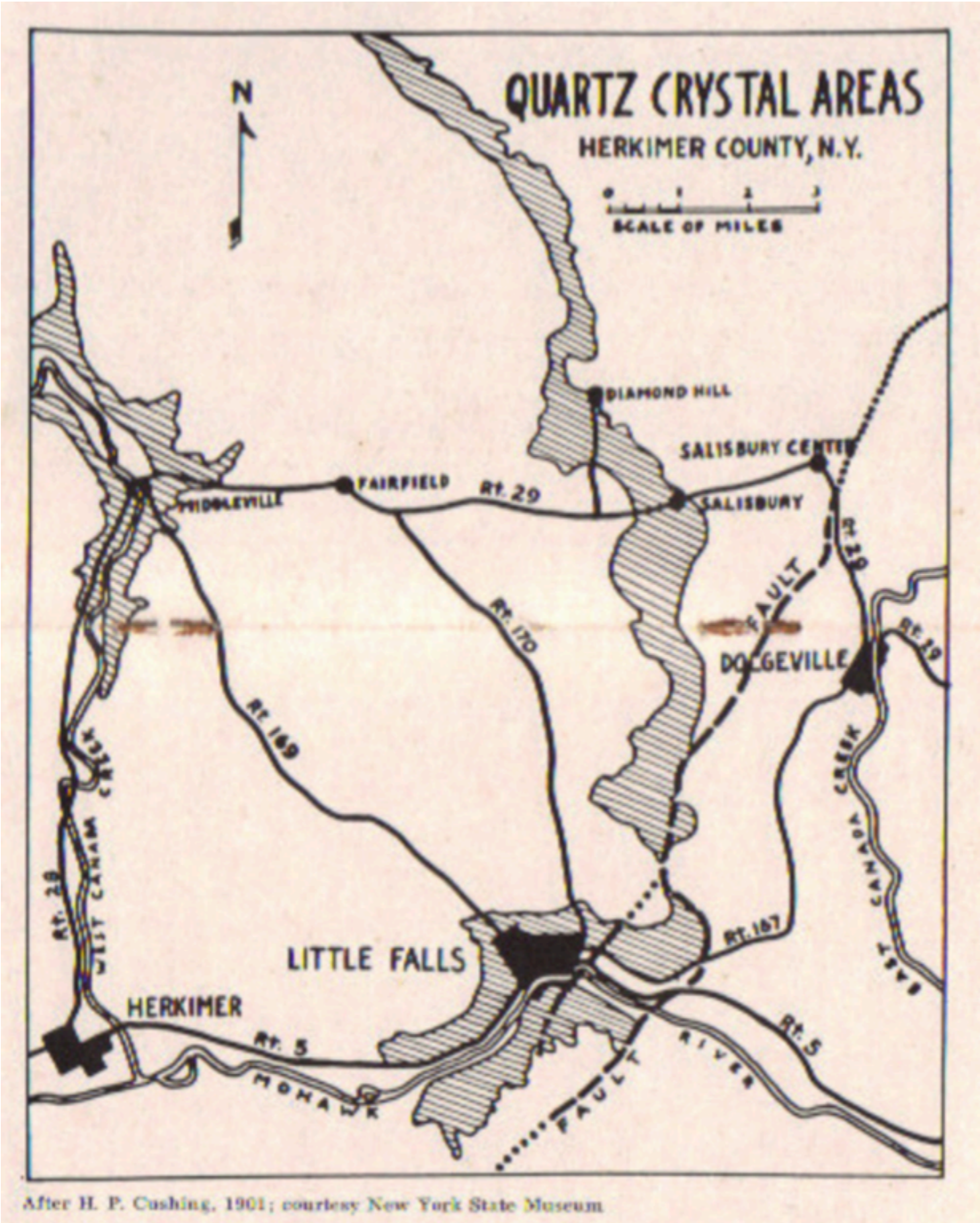
Since around the early 1950s, people have been looking for Little Falls diamonds. People will grab pick axes and hammers and go to town on the local hillsides and creek beds in hope of smashing a dolomite stone open and finding a "vug," also known as the originating pocket within the dolomite where the "diamonds" form. It has become an industry of its own within the area. There are many campgrounds that focus strictly on the hunting of their stones. Campgrounds have evolved to "miners' villages" such as the Herkimer Diamond Mines KOA Resort, which is the premier "miners" area for those who wish to spend a week of relaxing, mining, and enjoying the area.

2. Herkimer Diamonds – A Comprehensive Guide to this Little-Known Gemstone. 2018. Jewelry Shopping Guide. https://www.jewelryshoppingguide.com/herkimer-diamonds-guide/

Now, I call them “miners,” but they are not actually miners. A true miner would be delving away underground with a lantern in one hand, a pick ax on their belt, and a caged canary in the other hand. “Mining” these gems is a surface endeavor, involving pick axes and rock hammers at surface level rock formations, making it a great summer time family activity.

The industry of these stones has sprung up since its time as something only locals knew about. In fact, in 1950 a man named Claude H. Smith wrote a booklet on how to best get to the Herkimer Diamonds. “Let’s Hunt For Herkimer Diamonds” describes the geography and geology of the stone as well as what to avoid while searching for them and how to keep yourself, and others, safe while mining. Smith is a bit of a fantastical writer, calling the Mohawk Valley area the “Enchanted Valley,” capturing the attention of the reader whether they be “the confirmed rock-hound or the rankest amateur”[3]. Below is a map outlining the areas where Herkimer Diamonds could be found, marked by the striped section, as well as what features of note or what towns were nearby. This map comes with a caption “After H.P. Cushing, 1901” and comes to Smith from the New York State Museum. H.P. Cushing was a geologist who focused on the Adirondacks and other areas in upstate New York in the early 1900s.

3. Smith, C. E. (1950) Let’s Hunt Herkimer Diamonds. Geneva, NY.



Map from "Let's Hunt For Herkimer Diamonds" by Claude H. Smith (1950)

An Industry of Falsities

One can see the appeal of a diamond that it is not a diamond. First things first, it is going to cost much less than its true carbon counterpart, and second it has become more of a fun story.

Yes diamonds are pretty, but were they one of the New York showcase pieces in the World's Fair's Columbian Exhibition of 1893[4]?

When Governor Roosevelt came to Herkimer County in the early 1900s, did the townspeople not give him a box of the most perfect Little Falls Diamonds?

Does Meghan, the Duchess of Sussex and wife of Prince Harry, not have a whole set of jewelry that is made of Herkimer diamonds?

Okay she also has real diamonds but that is no surprise.

(The duchess does have a collection of Little Falls Diamond jewelry, which includes at least four rings, one set of earrings and a bracelet. Her jewelry designer, Pippa Small, worked with the owner of the Herkimer Diamond Mines KOA Resort to retrieve the diamonds she used. So there's a little bit of royalty even in our backyard[5].)

Anyway, what are the rest of us supposed to do? None of us can afford a full collection of real diamonds, let's be honest. But its not always about it being real. Sometimes it's just about how pretty diamonds are, the real carbon-based ones. People have been faking diamonds for years. Now, with the modern age of science, we can even make real "fakes".

The market for diamonds at the price of, well, not diamonds, is extraordinary. Buyers are average people who want something sparkly, most of the time.

Occasionally, there are people who want them for more nefarious purposes.

Take, for example, the Great Diamond Hoax of 1872.

This took place in the great, gold mining West, where people were frantic over the silver and gold mines that rested in the Rockies and areas to their south. Two Mexican American War veterans and proud Kentuckians, cousins Phillip Arnold and John Slack, managed to trick many very smart people with a scam. Arnold worked in diamond headed drill bits, so he was able to get his hands on a few uncut diamonds, which he mixed in with a few garnets, rubies and, sapphires. With that bag, he and Slack got to work. With a few well-placed words, a couple name changes, and some well-timed trips to a plowed field of "diamonds", these cousins managed to dupe many people, including Charles Lewis Tiffany (yes, *that* Tiffany), General George Brinton McClellan, who was the one time commander of the Army of the Potomac, and Representative Benjamin F. "Beast" Butler (a name he got by being particularly brutal to civilians whilst in New Orleans during the Civil War). These men convinced themselves that $20,000 of uncut gems were worth more than $150,000.

I'm not sure whether the fault is on Arnold and Slack, or on Mr. Tiffany for not noticing industrial grand diamonds as opposed to jewelry grade diamonds.

Either way, the two fraudsters spread their load of false gems into a field where they would lead investors to try to find some gems. These men, not really knowing how gems were grown, would find a few and invest in a heartbeat. It was not until a true geologist, Clarence King, was sent as part of a government survey that the truth was revealed. King knew how rocks worked and was able to prove to the poor duped investors and bankers that they had been lied to. By this time, John Slack had vanished, some think that to a foreign land. Meanwhile, Phillip Arnold got his family a nice house and died of pneumonia whilst recovering from a gunshot wound[6].

4. Podolak, J. (1990) Herkimer's Rocks Often Yield a Treasure of Bright Crystals. *The Buffalo News.* https://buffalonews.com/1990/05/13/herkimers-rocks-often-yield-a-treasure-of-bright-crystals/
5. Sorrell-White, S. (2018) Duchess of Sussex wears Herkimer Diamonds. Utica Oberserver-Dispatch. https://www.uticaod.com/news/20181017/duchess-of-sussex-wears-herkimer-diamonds
6. Wilson, R. (2004) the Great Diamond Hoax of 1872. Smithsonian Magazine. https://www.smithsonianmag.com/history/the-great-diamond-hoax-of-1872-2630188/

In this modern age of science, people are becoming less and less attached to true diamonds due to their origin. Diamonds come from mines and that means a lot of different things. There is a phrase that encompasses what some people think of diamonds (as well as a pretty good movie starring Leonardo DiCaprio[7]).

Blood Diamond.

Much like the phrase “blood money” it means that something terrible happened in order for that diamond to get on some pretty woman’s finger. They are more commonly known as conflict diamonds. In our age of environmental accountability, people are turning to other types of diamonds in order to stop the pilfering of the environment and the people who toil in it. These people have a wide variety of gems to choose from.

White Sapphire: a hard mineral that resembles diamond and is a natural stone. However, it is known to not have the same sparkle as a true diamond.

Zircon: it’s not that hard and it shows wear easily but it is a naturally occurring stone.

White Spinel: Pretty hard, but its true pull is that it can actually come in many different colors.

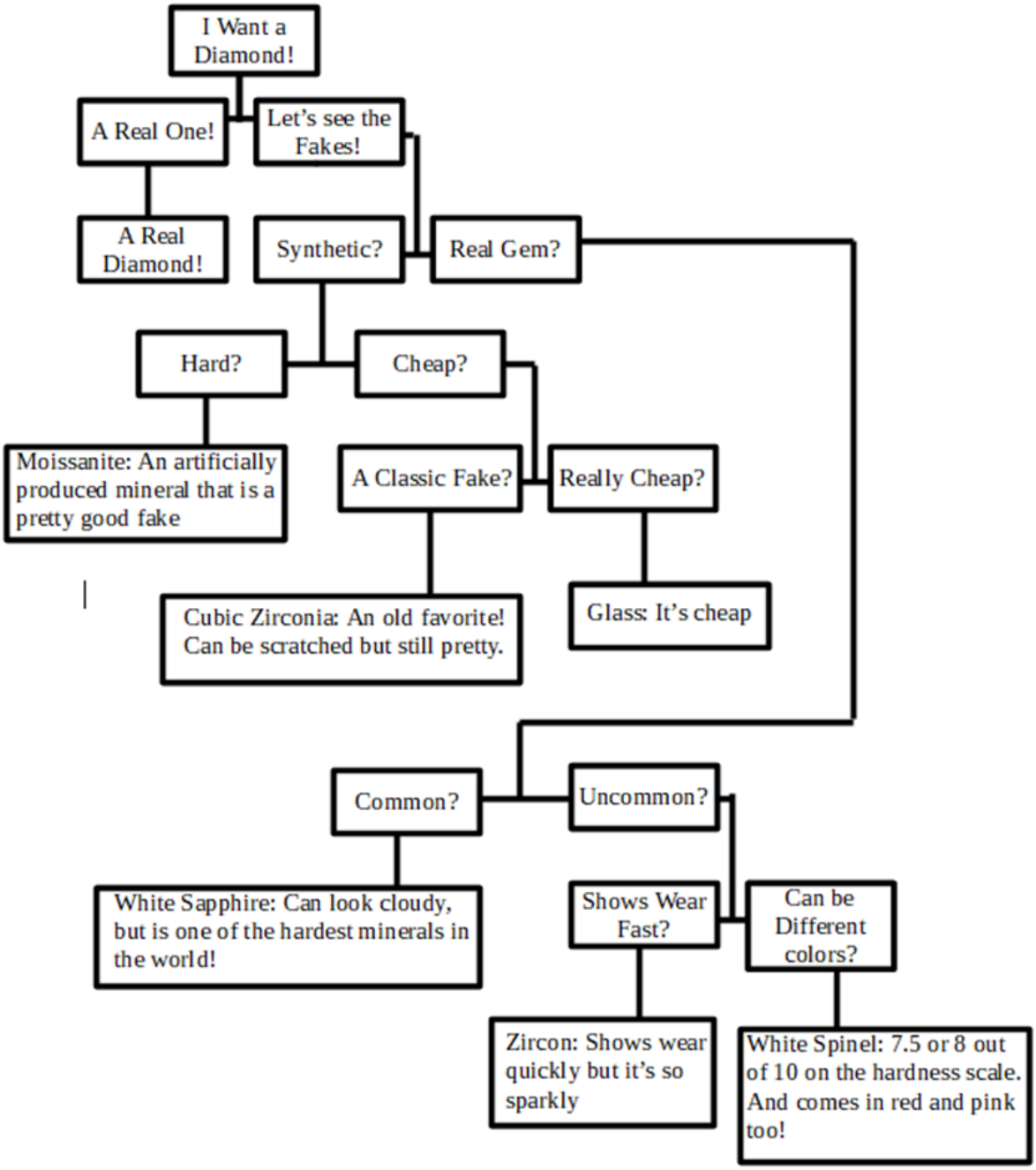
Moissanite: a real mineral that is artificially produced in lab due to its scarcity.

Cubic Zirconia: a true classic substitute to diamonds. It’s hard and sparkly but it can get scratched and dull over time,

Glass: It’s cheap and clear. Mostly used in children’s jewelry to make them think they have a diamond[8].

Each of these are shown on the “Pick Your Gem!” flowchart:

7. “Blood Diamond” from 2006, featuring Leonardo DiCaprio, Djimon Hounsou, and Jennifer Connelly.
8. Rosengart, K. (2018) The Different Types of Diamonds. K.Rosengart. https://blog.krosengart.com/types-of-fake-diamonds



"Pick your Gem" flowchart created by the author.

And there are also diamonds made in the lab that are true diamonds. Many jewelry companies speculate if the use of manufactured diamonds should be allowed. But that is mostly due to the monopoly of most diamond mines, the prices that diamonds cost, and the true scarcity of diamonds.

But that is a conspiracy for another time.

Our Rock Crystal

While all of those gems are pretty and good subtitutions for a true diamond, they are still second to our rock Crystal. Truth be told, the Little Falls diamond is unique in all the ways it could be.

It sparkles in the sun and makes beautiful jewelry for those who want to wear it.

They sit nicely on shelves and behind glass for collectors and people who wish to display them for the world to see.

They make for a good day at the park with the kids, as long as you have plenty of water, sunscreen, and energy (which children always seem to have).

The name is known across the world, from the wrist of a duchess to the necks of the women of the Mohawk Valley. There is even a brand of vodka that is poured over layers of Herkimer diamonds, as if that will filter out impurities. (Thanks to Dan Akroyd with their Aurora Crystal Head Vodka[9]).

Even though I am just an outsider, I understand the pride that is found in the Little Falls Diamonds (not Herkimer Diamonds, as I have been corrected by the people of Little Falls). They are things of beauty and childhood memories and history reaching all the way back to the beginnings of known geology.

And I would not know about that geology without the works of one man.

I tip my hat to Donal Hurley, whose words are not only at the beginning of this chapter but also are sprinkled through the geology segment. He taught me the most about where these gems come from and what the land is like. So thank you, Donal. One day I will mine you some Little Falls diamonds and lay a handful at your headstone.

Transcription of "A Brief Geology on Little Falls N.Y." By Donal Hurly

A – (G)renville- some of the oldest formation in the world. A sediment of very ancient sea of great size. Preceded Cambric period-little evidence now left

B – Syenite – a plutonic igneous intrusive during Cambric period.

(1) plutonic igneous is slowing loosing mass from within the earth and not as volcanic which is from without or above the earth

(2) Intrusive is molten mass thrusting upward and cooling as it nears the surface (extrusive is mass which cools horizontally as between layers of rock formation)

(3) Moss Island. Burnt Rocks, West Shore cut

C – Potsdam sandstone- Pre cambrian sediment

D – Dolomite (Little Falls) known as little falls dolomite rock and designated as Beekmantown by H.P. Cushing but actually the Little Falls dolomite and Beekmantown are two different formations also call calciferous sandstone or sandrock in early reports

(1) Little Falls dolomite is metamorphic (pg 2) rock having undergone a change in chemical composition from original sedimentary formation as laid down in ancient Little falls sea. The word metamorphic means "change"

(2) Little Falls sea was pre-Cambria and covered most of central, west and northern parts of state. This was period of fishes and plants and sediment resulted in limestone

(3) Dolomite is about 400 feet thick at the Rollway (west South side of gorge) at Little Falls and dips to 0 at Diamond Hill, Salisbury

(4) Quartz crystal found in Dolomite.

9. This is completely true. Supposedly, three of seven filtration steps for the Crystal Head "Aurora" is poured over upwards of 10,000 Herkimer diamonds (Thomas, A. 2017: This Vodka is Filtered Over 10,000 Diamonds. *Vinepair*. https://vinepair.com/booze-news/diamond-vodka/)

E – Trenton limestone above dolomite. Laid down as sediment in Trenton Sea – Fossils [Ordovician] Period

F – Utica Shale rest above – Newville Gorge also [Ordovician] period

G – Appalachian revolution or upheaval raised land to expose low, rounded mountains Palezoic Period

Erosion – pemplane – Upheavals

(Pg 3)

H – Drrainage of [Quaternary] Period found rock barrier of Little falls partially due to upthrust. The Mohawk River started east of barrier and Rome river started west- each drainage for their respective flow. Headwaters for Mohawk River was supposed to have been East Canada Creek; headquarters headwaters for Rome River was West Canada Creek. Both Canada Creeks west ancient

I – Little Falls Fault

J – Ice Age of Quaternary Period of 25,000 to 50,000 years ago and lasted from 500,00 to 1,500,000 years. A mile thick sheet of ice covered the area, One tongue of ice advanced down from the St Lawrence; and second tongue of ice came down the Champlain Valley to the Hudson with branch up Hudson to meet the St Lawrence glacier near Little Falls

(1) Ice receded to from Lack Algonquin in the basin of the precent Great Lakes. The St.Lawrence river outlet blocked by glacier. Thus the water drained through the Mohawk valley, forming a lake at Little Falls (pg 4) due to rock barrier which then connected what is now the valley walls. The flow of water was greater and the falls more stupendous by two or three times than the present Nigara Falls

(2) Overflow of ancient lake indicated on south valley wall just west of city where a depression indicates an overflow cut which can be traced to Grant Wrights- Newville – Newville Gorge to valley of Indian Castle.

(3) Shale and dolomite (the softer formations) cut away rather rapidly down to harder igneous syenite. Beach markings on south valley side opposite Country [blub?] indicate lake at those levels for some time.

(4)Pot holes resulted from whirling-grinding action of rounded stones near base of the glacier falls. The difference in elevation of the pot holes indicate a wearing down of the rock barrier. The difference in east to west of the location of pot holes indications a wearing backward of the barrier.

K – Wiabase dike – igneous – black and fine grained – exposed 120 feet wide along the Wolgville Railroad

L – Mohawk Valley of today is composed of an inner and outer calley. The outer valley is from 10 to 30 miles wide. The inner valley is the narrow gorge of Little Falls. This inner valley is the lowest passage East to West from the St. Lawrence to the appalachian range.

The Mohawk River at Little Falls is less than 400 feet above sea level; and only 420 feet above sea level at Rome which is 40 miles west.