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First Printing June, 2008  
Second printing August, 2008  
Rock City Falls, New York  
Instant Publishing, USA

Library of Congress Number 2008904358  
Invented In Saratoga County – First Edition  
Includes bibliographical references

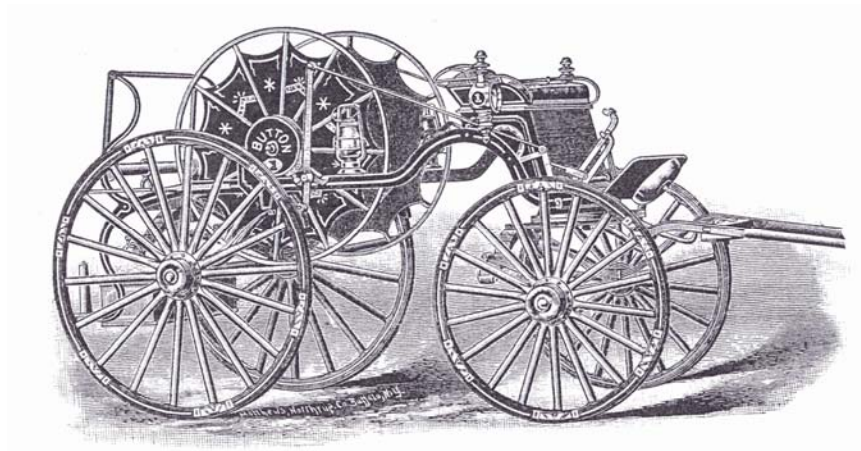
Copies on file in the Ballston and Saratoga public  
libraries, Brookside Museum, Milton Town Historian,  
Saratoga County Historian, and the Waterford Museum.

Printed in the United States of America

# Invented In Saratoga County

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By Timothy Starr



## Acknowledgements

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The author wishes to thank the following people for their valuable help:

The staff of the Saratoga Room of the Saratoga Springs Public Library

The staff of the Saratoga County Historian's office, Ballston Spa

Joy Houle and Linda Gorham of the Brookside Museum

Brad Utter of the Waterford Museum

Rachel Clothier of the Corinth Museum

Stillwater Town Historian Linda Sanders

Edinburgh Town Historian Priscilla Edwards

Mechanicville Historian Paul Loatman

Ballston Spa Historian Chris Morley

Author Ann Hauprich

## Other Books

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Other books by the author, available at the Brookside Museum, Ballston Spa:

*Lost Railroads of the Kaydeross Valley: The Electric Trolley Line of Ballston Spa, New York*

*Lost Industries of the Kaydeross Valley: A History of Manufacturing in Ballston Spa, New York*

*The Ballston Terminal Railroad and Its Successors*

*Invented in Ballston Spa*

## The Author

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The author was born in Danbury, Connecticut and grew up in Hebron, New York. In 1997 he moved to the Town of Milton, Saratoga County and has enjoyed researching its history ever since. Mr. Starr works as an accountant and lives in Rock City Falls with his wife Alison and daughter Morgan.

## On The Cover

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Front Cover, clockwise from top left: John Latcher's washboard; Theodore Timby's globe clock; Ransom Cook (portrait); Lysander Button's fire engine; George Eddy's hydrant; Israel Mosher's shovel plow; Tarrant Manufacturing Company's spreader. Back cover from left to right: Ebenezer Holmes' refrigerated casket; Elias Ford's potato digger.

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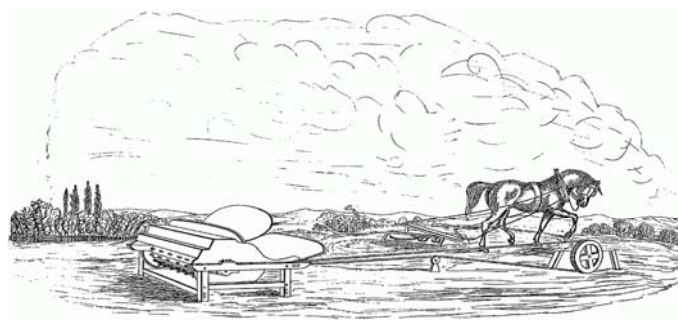
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# Introduction

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Fans of Saratoga County history enjoy a fairly comprehensive set of books, newspapers, databases, and research that have been compiled over the past hundred and fifty years. The works of Nathaniel Bartlett Sylvester on the early history of the county from its founding to the late 1800s may be considered definitive and would be difficult to improve upon. *Saratoga County Heritage* brought the county's history into the 1900s, while the *Saratogian* newspaper has provided an ongoing record of events to the present time. With these sources and the many others that exist, a nearly complete history of the county can be learned.

This book is an attempt to study its history from a different perspective. The inventions of Saratoga County can provide unique insights into what was important in the lives of its citizens. The change from agriculture to manufacturing to suburbia is evident in the patent record. The earliest inventions were mainly for farming implements and carpenter's tools. As the industrial revolution crept up New York State with the railroads, emphasis was placed on machinery for the production of goods. When manufacturing died out in the early to mid-1900s, industrial patents for local companies came to a halt, to be replaced by patents filed in the name of large corporations located in nearby cities.

Another goal is to reintroduce some of the county's greatest inventors and innovators. People with even a passing interest in local history have heard of Charles Dowd's invention of Standard Time, George Crum's "Saratoga Chips," and George West's invention of the square-bottomed paper bag. But time has all but forgotten Henry Miller of Waterford, arguably the greatest inventor in the history of Saratoga County. Ransom Cook is fairly well-known for his invention of the auger bit, but few are aware of his contributions to the art of stenciling, magnetic engines, and cannons. Only the most avid historians are aware that Theodore Timby of Saratoga had an invention that was instrumental in one of the most famous sea battles in history.

The sheer number of inventions is staggering. Many thousands have been patented over the last two centuries, and very likely thousands of others were never patented. The most famous unpatented invention was the "Saratoga Chip," which unfortunately casts doubt as to the true inventor. Numerous references are made to unpatented inventions in the records of the county, but like the "Saratoga Chip," they often cannot be corroborated independently. Therefore, this book focuses for the most part on those inventions that were formally patented. An overview of patents for each town in the county is given below.

The education and wealth of Saratoga Springs is evidenced by the large number of inventions that were developed throughout the 1800s. Only Waterford comes close to rivaling Saratoga in terms of quantity of inventions, and because Waterford derived nearly all of its wealth from industry, Saratoga can lay claim to a much more diverse portfolio. All classes of patents were submitted in abundance, including farming, health, utilities, appliances, tools, railroading, and entertainment. Saratoga also had the greatest number of prolific inventors. The stunning number of patents submitted by James Baker, Ransom Cook, Theodore Timby, and the Tarrant family are detailed in this book, but other inventors such as Julius Dickey, William Gailor, Arthur Ferguson, and James Rogers each had five or more patents. Other noteworthy inventors that for space reasons could not be included in this book include attorney John Crane, surgeon George King, Judge William Pierson, master mechanic William Gage Sr., railroad repair shop mechanic John Maston, and printing office owner Richard Mingay, inventor of a gripper for platen printing presses.

The invention listing of Waterford is overwhelmingly dominated by those relating to industry. Those of the Button family, the Eddy family, and Henry Miller, all detailed later, account for more than 200 patents. Hundreds more were submitted for textiles, hydrants, and foundry castings, all important to the village's economy at that time. In contrast to Saratoga, very few patents are related to health, entertainment, or household items. Other inventors include baker Thomas Davis, blacksmith Joseph Prescott, valve

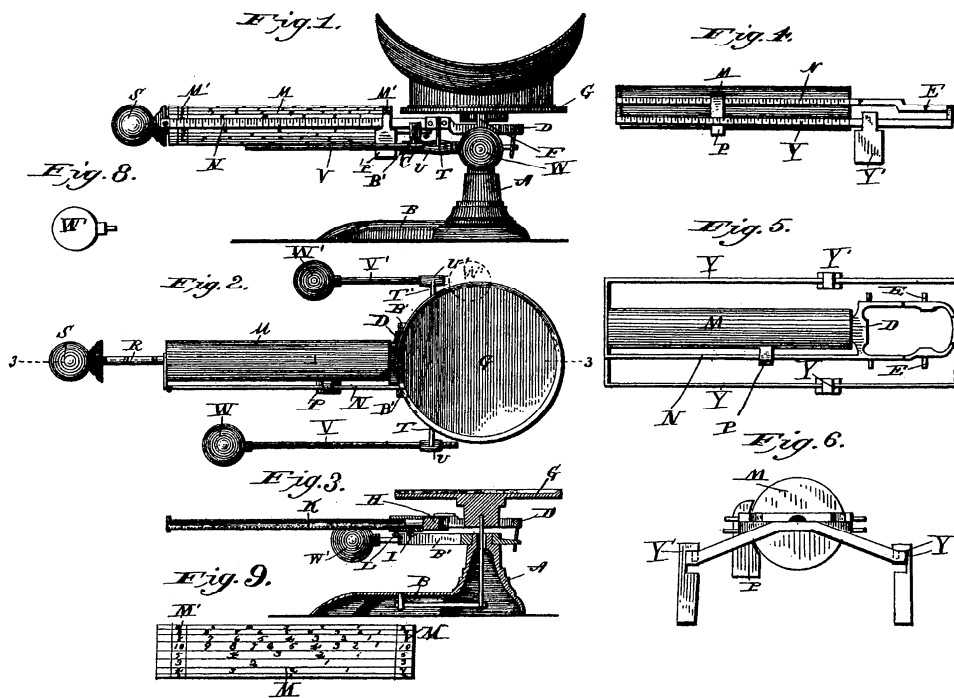
manufacturer Henry Ludlow, machinist Jabez Stone, and collar manufacturer Harry Shumway. Waterford can also lay claim to the most "assigned" patents – those that were licensed to various businesses.

Those unfamiliar to this area's history may be surprised to learn that Ballston Spa comes in a close third behind Waterford in number of inventions, despite having a smaller population than several other villages in the county. The economy of Ballston was radically different a century ago than it is today and was dominated by large numbers of diverse manufacturing enterprises, most notably paper mills and clothing factories. Businessmen such as Albert Ackerman, Horace Medbery, Ethan Rogers, Matthew Vassar, and Benjamin Barber, all covered in this book, were driving forces in the economy by putting their inventions to good use in the manufacturing sector. Dozens of other citizens were the owners of multiple patents in a wide variety of subjects, such as Gerald McLaren's vending machines, Samuel Day's telegraphs, Matthew Hoyt's churns, and Lindley Crane's paper products. Other prominent inventors included school principal Hiram Bulkeley, paper mill owner Coe Buchanan, undertaker Henry Crippen, emery factory owner Charles Heaton, postmaster James Leach, and foundry owner William Namack. John Reynolds, the maternal grandfather of *60 Minutes* commentator Andy Rooney, patented a pump and paper machine screen during his long residency in the village.

The City of Mechanicville, although also dominated by industry during the 1800s, had comparatively few industrial inventions. The Vredenburg family submitted several patents in support of the brick industry, while Homer Eckerson invented new types of bedding which he manufactured for his mattress company (detailed later). A few other inventions supported the textile, paper, and tool industries, but most of the rest were for railroading and farming. Some of the county's more unusual inventions came from Mechanicville, including Benjamin Haskins' "Automatic Spittoon Holder," Charles Hicks' "Flying Machine," Albert Green's "Toy Puzzle," Ezra Swartwout's "Swinging Plant Stand," and David Vines' "Ticket Holder."

The Hudson River Pulp & Paper Company dominated the economy of Corinth for many years, so it is not surprising that more than 90 percent of that town's inventions relate to the paper industry. Those of Warren Curtis and Theodore Elixman, detailed later, were utilized at the Hudson mill and in the Elixman Paper Core Company. Eugene Meurer, the only inventor in Saratoga County to be the subject of an emperor (in this case, the Emperor of Germany), patented two digesters and a pulp screen. Only a small handful of inventions did not relate to paper in the 1800s, such as Michael Savoy's "Shank for Boots" and William Hawkes' rotating dumping car.

Schuylerville was another industrial-based village with few industrial patents. Timothy Cleary, described later, patented several wall coverings that were assigned to the Standard Wall Paper Company. He was the only inventor to have multiple patents that directly related to local industry. Cigar manufacturer Orville Vandenberg had several patents, but only one likely helped his business ("Weighing and Price Scale"). His beverage pitcher and painter's jack would seem to have little use in his store. Charles Hermance developed such diverse items as a gate hinge, cooking stove, stone driller, and washing machine, but there is no evidence that these were used for profit. Robert Hermance was the inventor and manufacturer of the "Imperial Wash Boiler and Washing Machine Combined." Railroading and farming make up the bulk of the rest of the inventions.



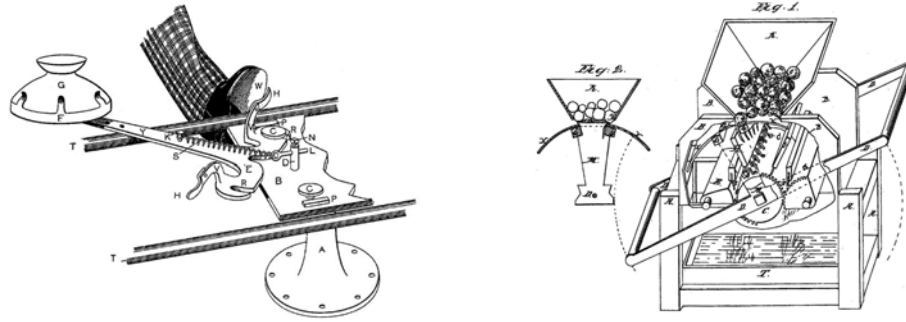
Orville Vandenburg's "Weighing and Price Scale," patented on January 29, 1889.

The patents of Elias Ford, Theodore Baker, and Joel Farnam, described later, make up one-half of all the nineteenth century patents submitted in the Village of Stillwater. These gifted inventors were primarily concerned with farming, but other innovations concerned paper products, water pumps, and tools. A few other inventors in Stillwater had multiple patents, such as Anthony Sherman, Henry Palmer, and Edward Hewson. Only two patents could be found in the Town of Stillwater outside of the village – those of Paul Dennis of Bemis Heights ("Improvement in Cultivators") and Fred Ferris of Ketchum's Corners ("Spring Tooth Harrow").

Population and economic changes stand out conspicuously in the Town of Wilton. Recent retail development has resulted in a large influx of new citizens, but for most of its history the town was quite rural, and therefore has few inventions. One man, James McGregor Jr. (described later), accounts for more than 90 percent of all patents ever submitted in the town. Renel Jacobs submitted one of the earliest inventions in the county's history – his "Economical Sawyer," patented in 1831 but unfortunately was lost in the Patent Office fire of 1836.

Even greater population changes have occurred in the Town of Clifton Park. Today it is one of the most populous areas of the county, but was largely dominated by farmland in the 1800s. Therefore, only a few patents were filed during that century. Approximately half of all nineteenth century patents were submitted by William Potter, inventor of the roofing composition that is in widespread use today. The influence of the canal can be found in Valentine Brown's canal lock gates and Sands Carpenter's "sluice gate," both filed before 1850. John Hegeman, who is described later along with William Potter, patented a folding pontoon boat in Vischer's Ferry, the only patent filed in that village. Undertaker Elisha Philo grew fruit in his spare time, and therefore patented a cider mill.





(Left) Benjamin Haskins' "Automatic Spittoon Holder," patented on October 9, 1883.

(Right) Elisha Philo's "Cider Mill," patented on March 27, 1860.

In contrast to Clifton Park, Galway is now largely rural, but in the early to mid-1800s the town had a thriving economy. Some of the county's earliest patents came from the Village of Galway, including Richard McOmber's "Double Leon Spring Power Press," James Jones' beehive, Rueben Mosher's "Machine for Paring Apples," and John Wheeler's "Machine for Roping and Spinning Wool," all patented before 1850. Village blacksmith Alphonse Cote invented a new spring leg frame, pipe coupling, and railroad chair between 1884 and 1888. Israel Mosher invented and manufactured an improved shovel plow, described later. After Matthew Hoyt closed his churn manufacturing business in Ballston Spa, he moved to Birchton (located in the southeast corner of Galway) and invented several dairy improvements for D.H. Burrell & Company, including a centrifugal liquid separator and milk tester.

The Town of Edinburg also possessed several thriving communities in the 1800s that have become largely extinct. One of the greatest inventors of the county, John Latcher, came from Beecher's Hollow, while successful businessman Lucien DeGolia, inventor of an improved washboard, came from Batchellerville (both are described later). Other patents include John Millet's improvements in manufacturing boxes, cans, and baskets, Leonard Lyon's improvements in sleigh thills, John Conkling's improvement in detecting check boxes, and Myron Glassbrook's improvement in sleigh knees.

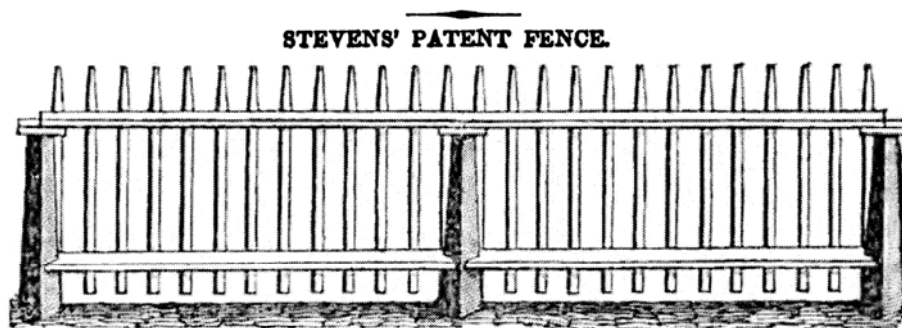
The Town of Moreau was settled some years after many others in the county, and therefore most of its patents were submitted in the late 1800s and forward. Only two are dated before 1860 - Jesse Billings' "Horizontal Spinners of Wool and Cotton," submitted in 1826, and George Putnam's "Vise Jaw for Saw Filing Machinery," submitted in 1851. Billings was a prominent doctor in Northumberland whose son Jesse Jr. achieved even greater wealth with his boat and ice businesses. George Putnam was the town's greatest inventor, accounting for about one-third of all patents (described later). The now-extinct hamlet of Moreau Station (once on the mainline of the Delaware & Hudson before the route was changed) contains one patent - George Lewis' "Milk Pan Rack." Peter Howe's "Auxiliary Rifle Barrel and Extractor Thereof" is the only patent that could be located from the hamlet of Fortsville. All other patents from Moreau came from South Glens Falls.

The remaining towns in the county were either sparsely populated or did not possess the combination of factors that would lead citizens to innovate. A small handful of patents were filed in Charlton, including Cyrus Baker's churn, Andrew Smith's flywheel, G. M. Conner's waterwheel, and Albert Wareham's odometer. Hadley's primary hamlet of Conklingville was the site of Solon Bingham's lamp chimney cleaner and William Robb's fruit paring machine and apple slicer. Gunton Conkling, son of hamlet founders Gurdon and Caroline Conkling, patented a process for rendering leather waterproof. The Town of Greenfield has the most diverse, sporadic, and widely scattered list of patents. There has never been a large population center or industrial base, so the patents on file were in support of industries in nearby towns. These include Alfred Stedman's improved glove, George Selfridge's pump, and Brice Davis' anvil. George

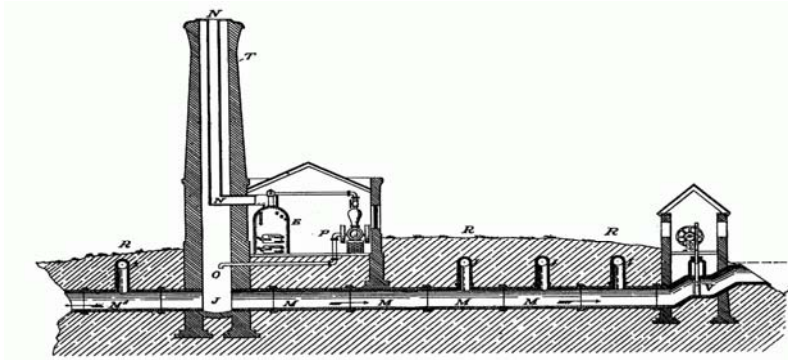
Tibbit's has the honor of possessing Jamesville's only patent, a water cistern, before the hamlet's name was changed to Middle Grove. William Redding has the only patent from King's Station - an improved clothes drier.

One surprise is the Town of Malta's dearth of inventions. The Village of Round Lake was settled in the 1860s and used for religious meetings. These meetings drew thousands of people, and a building boom commenced later in the decade to accommodate permanent residents. However, it appears that this type of economy was not conducive to innovation, as only a few patents were filed. These include George Burr's valve, Adelbert Filkins' snap-hook, and Thomas Fuller's "Combined Dust Pan and Broom Holder." A handful of other patents were filed elsewhere in Malta, most notably those of carriage-maker John Simpson, including a machine for cutting wheel spokes, a method for removing bugs from vines, and a thill coupling.

The lone patent that could be located from the Town of Providence is William Barker's "Improvement in Fastenings for Scythes," filed in 1865 and assigned to Buchanan Yale of New York City. The Town of Northumberland was home to postmaster and patent rights agent Van Vandenburg, who invented an improved washing machine and a washing machine agitator. Charles Hilton invented a new wrench and a "bosom ironing board." Joseph Stevens earned a mention in the *American Agriculturalist* for his mode of constructing fences in 1846. The posts for the fence were made of a brick-like composition that was impervious to rot. The reviewer stated that the fence was ornamental, cheap, and durable, which rendered it "a useful and valuable discovery."



In keeping with the title of this book, no inventions are listed that were developed outside of Saratoga County. There were a number of patents filed in Cohoes and Troy that benefited businesses in Waterford, but do not qualify as invented in Saratoga. One of the more well-known examples is Joseph Henry, who was a world-famous scientist and inventor with an electrical term named after him (the "henry"). When his father died in 1804, Henry was sent to live in Galway with his aunt, where he reputedly was inspired to enter the field of science. However, his famous work with magnetism and electrical impulses that revolutionized telegraphs and electric motors were all developed when he was older and had moved to Albany. Abner Doubleday would seem to earn a high place among Saratoga County inventors as the originator of the game of baseball, but there is evidence that suggests he was not the actual inventor. Regardless, he was born in Ballston Spa but never returned to the county after he left for school in Cooperstown.



John Crane's "Improvement in Sewerage," patented on November 18, 1879.

As previously noted, there are many claims in various biographies for inventions that could not be substantiated by a second source, and therefore were not included here. A biography of Albert Hermance states that he was the "inventor of the low-down reservoir attachment for ranges and cooking stoves now in general use throughout the country, and is also the patentee of many other stove attachments and is well known among the stove manufacturers [in Saratoga County]." A thorough search uncovered several patents filed in Williamsport, Pennsylvania (where Hermance moved around 1890), but the only stove-related patent was filed by Richard Hermance and assigned to Albert. Likewise, a biography of Byron L. Hurd of Schuylerville claims that in 1893 he patented his celebrated "Chemically Pure Baking Powder" and "Hurd's Adirondack White Pine Cough Balsam," both of which "he can hardly manufacture in quantities sufficient to meet the demand that exists for them in the United States." A search for patents under Hurd's name yielded nothing in Saratoga County or elsewhere.

One disclaimer must be noted. Patents issued by the United States Patent and Trademark Office before 1976 are searchable only by number, date, or classification. Therefore, a variety of other methods were utilized to compile a list of patents from Saratoga County. These included various databases and tedious searching of the Patent Office's records using data gleaned from biographies and other sources. Therefore, the patents listed for each inventor or company cannot be said to be definitive or complete. Future editions will update these lists as more information becomes available.

This book is meant to be historical in nature, and therefore nearly all of the twentieth century patents have been excluded. Although this may at first seem to be an unacceptable gap in the history of Saratoga County inventions, the vast majority of patents filed after 1925 were assigned to large corporations such as General Electric. These are often highly technical, narrow in purpose, and difficult to comprehend. Many were developed by a team of people, some residing in the county and some living outside the county. One such example is the 1989 patent titled "Compositions Comprising Polyphenylene Ether-Polyester Copolymers," submitted by Sterling Brown of Schenectady and Richard Lowry of Saratoga. A few exceptions to this rule were made, such as for Tarrant Manufacturing, which was established in the 1800s and directly benefited the citizens of Saratoga Springs.

The study of the patents and inventions of Saratoga County in the 1800s and early 1900s sheds a light on the fascinating economic environment of that time period that has largely been lost. It is hoped that even students of Saratoga County history will come away with new insights as to how businesses remained competitive for decades on end, and what subjects inspired local inventors to patent and market their ideas for the betterment of mankind.