

Made in Saratoga

Turret guns, drill bits and potato chips:
During the mid 1800s, local inventors were on a roll.



Left to right: Village president and inventor Caleb Mitchell; George Crum, a chef at Moon's Lake House, where the potato chip was invented, and a man who is probably Lake House owner Cary Moon (owner).

Ask the average person on the street what was invented in Saratoga Springs and most will answer, “the potato chip!” Yet many local inventions are woven into the fabric of our city’s history, while others continue to quietly impact the world to this day.

The success of the mineral springs that first made Saratoga famous spawned a number of innovations during the mid-1800s. Most involved improvements for storing and transporting spring water to distant parts of the country while retaining its medicinal qualities. In 1867, Abel Putnam of the Star Spring Company patented a tin-lined barrel in response to the complaint from his customers of a “wood taste” in the water after being stored too long. Excelsior Spring owner Caroline Lawrence developed a new method for bottling and barreling its water. Her contraption used hydrostatic tubes to deliver water

from the ground and directly into tin-lined barrels while air from the barrel was driven out through a smaller tube. Dr. Hosiah Haskins was so enthralled by the sight of his Seltzer Spring carbonated water that he patented a glass tube three feet in height that exhibited the water as it flowed from the spring. Thousands of tourists flocked to his pavilion to watch the sparkling water rush through his device, looking like “globules of quicksilver,” as he described it.

For a time after the Civil War, Saratoga Springs resident Theodore Timby was one of its most famous citizens. During the years leading up to the war, Timby invented and perfected a revolving turret gun, the first of its kind. There was little

interest in the invention when he first displayed a 21-foot model in New York City in the 1850s, but once war broke out, he was given a room at the Treasury Department in order to explain the weapon. President Lincoln himself was said to be impressed by its potential.

Almost simultaneously, a Swedish-born engineer and architect named John

was then paid another \$10,000 when two more ironclads were built, named the *Pacific* and the *Dictator*. After the war, he settled in Saratoga and issued a variety of inventions, including a needle case, water wheel, garden hoe, railway car wheel, and a variety of weapons and tower fortifications. His solar globe clocks were manufactured locally by

L. E. Whiting and sold around the world. These clocks can sometimes be spotted at auctions, selling for \$3,000 to \$10,000. The public can view one of them at the Canfield Museum in Congress Park.

The Canfield Museum not only houses some of the area’s past inventions, but is a physical reminder of what some may call Saratoga’s golden age, when the rich and famous would arrive each summer to enjoy the horse races, mineral springs and gambling houses. Village president and inventor Caleb Mitchell’s feud with the Canfield’s

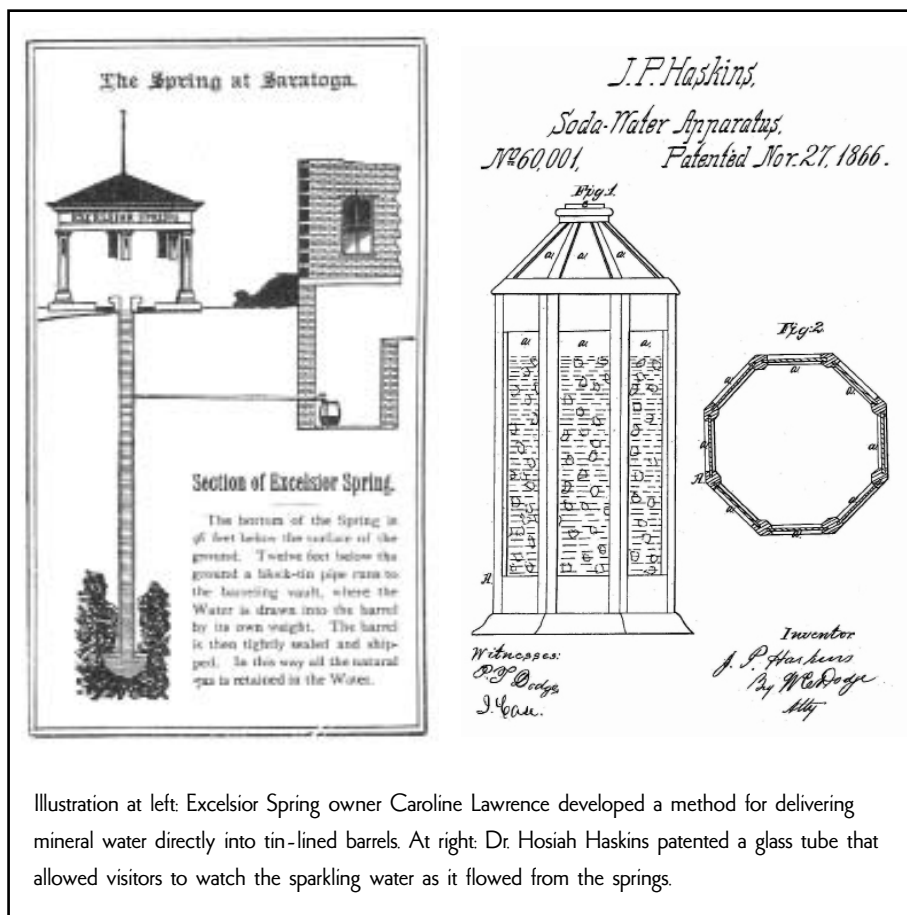


Illustration at left: Excelsior Spring owner Caroline Lawrence developed a method for delivering mineral water directly into tin-lined barrels. At right: Dr. Hosiah Haskins patented a glass tube that allowed visitors to watch the sparkling water as it flowed from the springs.

Ericsson proposed the construction of an ironclad ship—a response to the Confederate Navy’s efforts in plating one of its wooden ships with iron. Someone had the bright idea to marry Ericsson’s iron ship with Timby’s iron revolving turret, and the result was the *USS Monitor*. This warship and the Confederate ship *Merrimac* went on to fight one of the most famous sea battles in history. Although it was technically a draw, Timby’s turret was a decisive factor in the battle, as a barrage of broadsides from the weapon caused the *Merrimac* to finally disengage and retreat after hours of fighting.

Timby was paid \$5,000 as a royalty when the *Monitor* was completed, and

owner at the time made front-page news for several years and ended in a sensational tragedy.

Mitchell came to Saratoga from Troy in 1869 and soon opened a restaurant in the basement of Marvin House and a retail store on Broadway. His brother operated the Glen Mitchell hotel and trotting park at the northern end of Broadway.

Mitchell also actively promoted the expansion of the gaming industry that brought great wealth to the economy. So many citizens agreed with his efforts that he was elected president of the village in 1872 under the slogan “pleasure and health.” A few years later, Mitchell patented a refrigerated bottle-rack table for storing liquor bottles. Compartments

kept the ice from directly contacting the bottles, which he claimed kept the bottles “very neat and clean and their contents agreeably cold.”

A small but influential “reform” element, actively supported by Senator Edgar Brackett, opposed Mitchell’s efforts and managed to get him maneuvered out of office by passing a questionable new law that required village trustees to elect the president rather than the voters. Attempting to recover from his very public defeat, in 1899 Mitchell opened a pool room across from the racetrack, but the track’s new owner, William Whitney, lobbied village leaders to close it. Mitchell protested that politically connected Richard Canfield was allowed to operate his lucrative casino while others were forced to close.

The ongoing battles with Senator Brackett and Canfield caused Mitchell to sink into a depression. On January 29, 1902, he walked to the Senator’s office at the town hall and asked the receptionist if he was in that day. When he was told that Brackett was out of town, he turned away and shot himself, dying almost instantly. It is not known what would have happened if Brackett had been present when Mitchell arrived.

While Mitchell’s death made headline news around the state, another death on nearby Mount McGregor made news around the world that affected at least one local inventor. Former president Ulysses Grant took up residence at the Drexel cottage in the summer of 1885 to write his memoirs. He was suffering from throat cancer and sought the cool breeze of the southern Adirondacks to ease his pain and allow him to complete a biography for the benefit of his family. He passed away two weeks after finishing what would later become a best-selling and critically acclaimed history of the Civil War.

The family doctor was in New York City at the time of Grant’s death and

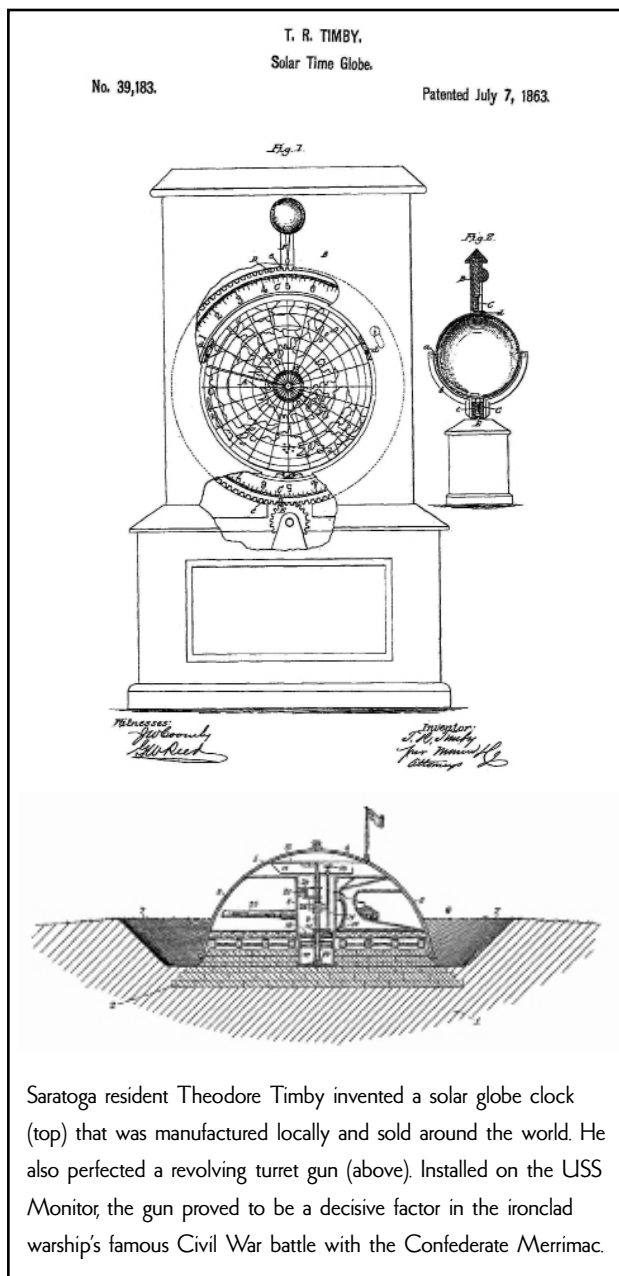
would not arrive at the cottage until the following day. The area was enduring a searing heat wave at the time, and the family worried that Grant’s body would not be able to remain preserved until

right away. Holmes arrived at the cottage bearing his patented casket, which apparently did its job well, although there was some well-publicized controversy when the Grant family received a bill for \$500. The Grant family doctor claimed that a bill for \$25 would have been more appropriate, especially because the family did not keep the casket.

Holmes was also a prominent builder and the architect of several residences that still stand in Saratoga Springs. Another nineteenth century builder named Seymour Ainsworth achieved great success in this occupation, constructing the Ainsworth Building at 456-470 Broadway and the Grand Central Hotel. He was also a prolific inventor who sought out new and unusual business opportunities wherever he could find them.

When Ainsworth observed a family from Greenfield selling wooden crafts to tourists, he contracted with them to purchase all they could make. He even gave them machinery to dramatically increase production, which he sold at a substantial profit. On another occasion he noticed some boys carrying white lilies from Saratoga Lake and selling them on the street. Ainsworth purchased some land on Church Street, excavated a pond, and soon had a thriving lily collection. Unfortunately he had to drain the pond when hotel guests began complaining of mosquitoes.

Ainsworth noticed that several fashionable ladies were brandishing feather fans one summer. Recognizing another business opportunity, he first purchased turkey eggs and paid local farmers to raise them in order to have an ongoing supply of white feathers. He then had an idea to manufacture fans from ostrich feathers. Apparently he was the first to think of it since he was awarded a patent for this stroke of inspiration. Soon his ostrich feather fans were in demand around the country, and dealers were forced to pay him royalties. Ainsworth himself



Saratoga resident Theodore Timby invented a solar globe clock (top) that was manufactured locally and sold around the world. He also perfected a revolving turret gun (above). Installed on the USS Monitor, the gun proved to be a decisive factor in the ironclad warship’s famous Civil War battle with the Confederate Merrimac.

the funeral scheduled two weeks later. Therefore, local undertaker Ebenezer Holmes was called upon to report to the cottage as soon as possible.

As it happened, Holmes was the inventor of what he called the “Selected Ice Refrigerator Casket,” which featured a lead-lined, waterproof container for holding ice. His invention was intended to preserve corpses in the heat of summer when an embalming could not take place

manufactured thousands of them using sticks imported from China and ostrich feathers imported from Africa.

Saratoga's earliest "famous" inventor was furniture maker Ransom Cook. He came to Saratoga in 1815 and opened a small chair shop on Congress Street. His first of some two dozen patents was for a wrought iron cannon-making machine in 1842. It received little attention in this country due to the remote possibility of war, but was widely publicized in Europe. Cook claimed that an Englishman named William Armstrong obtained a copy of the patent and made a fortune selling it to arms makers in his home country.

Cook's reputation as a gifted inventor was known outside of Saratoga. Prominent visitors to the area often visited his shop to observe his latest inventions. In 1842, he was called upon by the state government to oversee the construction of an experimental new prison in Clinton County at Dannemora. The convicts would cover the costs of their incarceration by working in the nearby ore mines. Cook invented a magnetic ore separator for the project that used magnets to separate the ore from the soil. He was also widely praised for his decision to treat prisoners humanely in an effort to rehabilitate them rather than merely punish them for their crimes. Incidents of violence were much lower at the prison than in others around the country.

Once his job at Dannemora was accomplished, he returned home and resumed work at his furniture shop. In the years that followed, a string of patents were issued to him for such inventions as furnace blowers, blast pipes, scissors, a lunch pail and ventilating fans.

His most famous invention, from which carpenters continue to benefit to this day, was the Cook Auger, patented in 1851. The problem of designing a drill bit that did not require a pilot hole had plagued Cook for a number of years. As he was walking in the forest one day, he sat down on a rotting stump and noticed small beetles boring into the wood. He brought some home and observed their jaws under the strongest microscope he could find. His observations led directly to the development of a ground-breaking auger that featured a small screw-like

Who Made the First Chip?

The most famous invention to come out of Saratoga County is also one of the most controversial. During the heyday of Saratoga's tourist era in the 1800s, there were several restaurants and hotels situated along Saratoga Lake. One such restaurant was Cary Moon's Lake House, where George "Crum" Speck and his sister Kate Speck Wicks worked as chefs. It was at the lake house that the Saratoga Chip was discovered by accident in 1853 and rapidly became one of the most popular side orders on the menu.

Unfortunately, these are the only facts that can be stated with much conviction. According to popular legend, a customer at the lake house kept sending back his order of French fried potatoes with the comment that they were "too thick." The impatient Chef Crum decided to teach the customer a lesson by cutting the potatoes wafer-thin and boiling them in deep fat until they were cooked to a crisp. To Crum's surprise, the customer exclaimed that they were delicious.

There is reason to believe that this version of the story may not have happened. One fact that cannot be dismissed: George Crum himself was never quoted as taking credit for the invention. An 1893 biography which Crum subsidized makes no mention of the invention. In fact, the biographical sketch ended with, "He is chiefly known to the public through his services as the hospitable landlord of Crum's Place."

Contemporary sources often gave credit to Moon's wife Harriet. A *New York Times* article claimed that Mrs. Moon developed the chips over time, the potatoes growing "thinner and thinner, crisper and yet more crisp."

Another compelling version of the story involves Katie Wicks. While in the kitchen preparing sliced potatoes, she accidentally dropped a piece of potato into a pan of boiling fat. After fishing it out and placing it beside her on the table, she went on with her work. George Crum walked in and tasted it, remarking how good it was. After some experimentation with the thickness and cooking time, the new potato chips were added to the menu and quickly became a popular side dish.

It is unfortunate that the real inventor of the Saratoga Chip will likely remain obscured by the various "tall tales" that have developed over the years. However, it is safe to say that the potato chip was born in Moon's Lake House, and George Crum was either the originator or at least on hand to develop and perfect its preparation. Whether Crum, Katie or Harriet Moon discovered it alone or together will forever be debated, but Crum will likely remain the favorite. — T.S.

projection fabricated onto the tip.

Within a few years the Cook Auger had replaced nearly all of the standard drill bits and garnered Cook a sizeable fortune. The *Morning Chronicle* of London stated that "the superiority of this tool over anything hitherto known consists in the extraordinary ease with which the hardest woods may be bored and the perfectly cylindrical character of the hole. Although this discovery has only been before the public for some fifteen months, the new tools have already nearly

superseded all others, and the demand is far greater than the supply." The *New York Press* said that "beetle bits were the foundation of his fortune." **SL**

Timothy Starr is employed by the American Red Cross of Northeastern New York as Director of Finance. "Invented in Saratoga County" was self-published by Mr. Starr in 2008 and is available at the Brookside Museum in Ballston Spa or online at www.historyofsaratoga.com.