

## Jefferson Quick, Timely Reads

### Strange Headline from 1853: *Submarine Sinks Offshore*

By David Frew  
May 2020

*Dr. David Frew, a prolific writer, author, and speaker, grew up on Erie's lower west side as a proud "Bay Rat," joining neighborhood kids playing and marauding along the west bayfront. He has written for years about his beloved Presque Isle and his adventures on the Great Lakes. In a new series of articles for the Jefferson, the retired professor takes note of life in and around the water.*

Ordinarily, a news story about a submarine would make the average person think about the Atlantic Ocean, World War II, or even modern times. But as strange as it may seem, a submarine went down in Lake Erie in 1853.

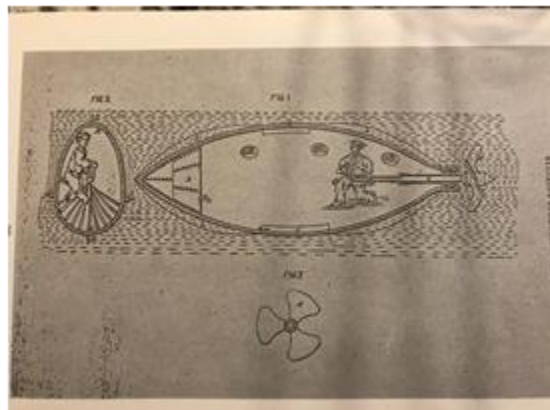
The early sub was brought to Erie on a railroad car in what was billed as an attempt to salvage valuables from the steamer Atlantic, which sunk the year before and was highly publicized. While Lodner Darvontes Phillips, the owner, creator, and captain of the sub claimed to be here on a salvage mission, it now seems more likely his appearance was more of a publicity stunt. In hindsight, there was no possible way his primitive diving machine could have been used for a recovery operation.

Phillips was the son of the owner of a Michigan City, Indiana shoe factory who began his career working as an engineer at the shoe works. His inventive mind found the life of an assembly-line engineer boring, so he decided to live on a modest trust fund and become an inventor. For unknown reasons, Phillips became obsessed with the challenge of designing and building a submarine.

Given the engineering skills that he had developed at the shoe factory, he was ultimately able to create a diving vessel that worked well, at least in shallow water. He

launched his first sub off the beach at Michigan City in 1845 but it failed badly, collapsing, and sinking in shallow water to the horror of family members. Phillips escaped through the hatch in the top of the submarine and swam to the surface. Satisfied that he ironed out the kinks in his first design, he built a second and took it to Chicago, where he imagined that a demonstration would attract a huge crowd. The crowd came, only to watch Phillips' sub sink again; this time to the bottom of the Chicago River. Once more, Phillips survived (barely) by escaping through the main hatch and swimming to the surface.

He learned something important on the second try, however. He would have to invent an air circulating system to keep oxygen flowing through the diving machine. Undaunted, he returned to Michigan City to create a third version that featured a propulsion system as opposed to a leather gasket through which a pole could be used to push the sub along the bottom, the only means of moving the first two subs.



*Engineering drawing of Lodner Phillips' propeller submarine*

The third-generation submarine was far more sophisticated than the first two. Approximately 40 feet in length, it had a four-foot beam and featured thick, plate glass portholes in the main compartment. More importantly, it was powered by a propeller that could be turned by one or two people, operating hand pedals similar to those on a bicycle. Phillips said it could reach underwater speeds of four miles per hour. It also had an air re-circulating system that was said to be capable of providing breathable air for 10 hours.

His third submarine was completed in 1851 and, recalling the crowds that had gathered in Chicago to watch his second failed submarine, Phillips decided to stage diving demonstrations on the Michigan City beach. Michigan City is on the southern shore of Lake Michigan and its beaches are punctuated by the highest sand dunes on the Great Lakes, the tallest of which, Mount Baldy, is 126 feet high (today's Michigan City is one of the westernmost exchanges on Interstate 80 in Indiana before the final toll plaza). The dunes, which are visible on clear days from Chicago, made Michigan City a popular 19th century tourist destination. Excursion boats brought Chicago visitors for day visits

and overnight stays, and it was this crowd that Phillips was counting on to help pay for his submarine.



*Vintage postcard of the dunes at Michigan City which have now become a national park*

Phillips charged an admission fee for tourists to watch his submarine dive below the surface and remain submerged for minutes at a time. During beachside demonstrations, he would lecture about diving technology and allow observers to inspect and sit in the submarine, but he did not take people for rides. He did, however, take his wife and children on underwater rides to demonstrate the safety of the sub and the degree to which he was confident in it. Unfortunately for Phillips, the tourist season was short and crowds were more interested in the beach and in climbing the sand dunes. Consequently, Phillips was not able to support himself and, by the 1852 season, it had become apparent he would need an alternative source of income.

More worrisome was the fact that while the submarine was reliable and stable in the shallows along the beach, it had difficulties with leaks in deeper water. With the shipping boom on the Great Lakes and an increase in shipwrecks, Phillips began to consider adjustments that would allow his sub to be used for salvage operations. He added a hinge for the forward compartment so that when the sub reached a wreck it would be possible to open it and manipulate tools from the air-tight interior. Phillips used his shoemaker's leather skills to create a flexible wall between the air-tight compartment and the hinged open-end, allowing the submarine operator to reach through the leather barrier and into the wreck to do salvage work. His modifications were completed by 1852 and all that Phillips needed was a wreck worth salvaging.

The 1852 wreck of the Atlantic in Lake Erie seemed to be a perfect opportunity. Phillips traveled to Erie to investigate and was excited to learn of the fame of the wreck as well as the apparent value of the safe and other valuables said to be waiting in first class cabins after the passengers had abandoned ship. He became discouraged, however, by publicity involving the American Express salvage attempts. Hearing of the work of Johnny B. Greene, the salvage diver who had been hired to work on the wreck, Phillips

returned to Michigan City. But he did not give up. Over the winter, when he read that Greene's attempt to recover the safe had failed, he began to plan his own salvage operation. In July 1853, Phillips loaded his "Sub Marine Propeller" on a railroad car and sent it to Erie.

Phillips and his support crew loaded their sub on a schooner and took it to the site of the Atlantic, about 20 miles north of Presque Isle. After meticulous preparations, it was lowered into the water with a boom from the schooner and Phillips climbed aboard. The first hint of trouble emerged on the trip to the wreck site when Phillips, who had understood Lake Erie to be shallow, learned that the Atlantic was lying in 165 feet of water. His previous understanding was that the sunken steamship was resting in only 40 or 50 feet of water. Phillips was not aware that Lake Erie was so deep, nor had he taken his submarine to depths greater than 30 or 40 feet. To make matters worse, the weakness of all his earlier subs was that they sprung leaks in deep water. Not 165 feet, but 35 or 40 feet. Realizing the tenuous nature of the prospective steamer Atlantic dive, Phillips wisely arranged for a signal line to be fed into the sub and informed the crew on the schooner that if there was trouble he would signal with repeated, short tugs on the line.

Slowly and carefully, the crew played out both the main cable connected to the submarine and the signal rope. As they did so, Phillips allowed the ballast chamber to fill with water and his submarine began its descent. The sub slowly dropped into the depths toward the Atlantic and, after just a few minutes, Phillips began to realize that he was already deeper than he had ever been. Yet he was not yet halfway to the shipwreck. By the time that he was down 60 feet, all light from the surface disappeared and he was alone.

Topsides, the crew watched from the schooner as cable was being played out. They watched and counted as 10-foot markers disappeared into the water. The submarine was at 80 feet, 90 feet, 100 feet. And then the descent stopped. For some reason Phillips, who was controlling the rate of descent, had stopped at the 100-foot level. Minutes seemed like hours as the crew wondered what was happening below. Suddenly their concerns were answered by frantic tugs on the signal line. Using the schooner's anchor winch, the crew began to retrieve the submarine, but it wasn't easy. Slowly and carefully. Agonizing minutes later, the sub broke the surface, the hatch opened and a disappointed and soaking wet Lodner Phillips signaled that he was coming back aboard the schooner.

Phillips explained exactly what had happened. At 70 feet, he began to hear and feel water seeping into the sub. At 90 feet, he told himself that the seeping might be slowing. Then at 100 feet, it began to rush in. That was when he realized that the extra weight of the water might make it impossible for the winch on the schooner to haul the sub back to the surface. There would have been no escaping from that depth. A ruptured cable would have meant certain death.



He was relieved to be back on the deck of the schooner but terribly disappointed. Phillips had come all this way and was not prepared to give up. Looking through the schooner, the crew located and moved ballast stones into the sub; enough to equal Phillips' weight. Once they had weighted down the sub, Phillips stepped back aboard for a moment and activated the plunger that would fill the ballast tanks with water so that the sub would descend. Closing the hatch, Phillips scrambled back aboard the schooner and watched his beloved submarine disappear. But this time without him. The crew asked how it would recover the sub if Phillips was not aboard to operate the plunger that evacuated the submarine's ballast water. He responded that the giant winch aboard the schooner should be able to haul the sub back to the surface. So they sent the sub back down by itself and the support crew, including Phillips, himself, counted 10-foot markers as the submarine descended to more than 160 feet and came to a stop.

Relieved, Phillips realized his sub had been able to make the descent. Then the difficult part. The crew placed the retrieval cable on the schooner's anchor winch and began to tighten. The thick hawser tethered to the submarine tightened, groaned, shuddered ... and suddenly snapped. There was a resounding crack, the oversized line split, and went slack. Moments later, the bitter end of the line returned to the surface without the submarine. Phillips was wrong!

Phillips returned to Michigan City and made a gallant attempt to paint a positive face on his Lake Erie adventure. He told the hometown news media that he had been able to dive to the extreme depth of the Atlantic but that he had lost his submarine. "No matter," he was quoted as saying, "I will spend the winter of 1853-1854 rebuilding." And rebuild he did. Over the next few years, even though he had to borrow money after he had bankrupted himself on his Lake Erie adventure, Phillips built two more submarines. And with rumors of the Civil War on the horizon, he began to think about his submarines as weapons of war.

He borrowed money (that he was unable to repay) and launched two new submarines armored with guns. By 1859, he was demonstrating the power of his war submarines by diving under old boats that he floated near Michigan City and strafing them with bullets from a bow-mounted gun. Even though his inventions were later touted as brilliant, Phillips was never able to convince the Navy (either the Union or Confederate) to invest. Neither was he able to patent the mechanical features that made his sub work.

Phillips died in 1869 in Manhattan, where he had moved because he was commissioned to build a submarine for a wealthy investor. He was buried in Brooklyn and obituaries variously listed his age as either 39 or 43. Subsequent submarine inventors credited Phillips and his ideas with their own successes and the famed South Carolina Confederate submarine, the Hunley, featured a propulsion system that was remarkably similar to the pedal-operated propeller shaft that Phillips had tried to patent.

While Phillips passed away in relative obscurity, the legend of his 1853 submarine continues as an interesting, contemporary Lake Erie mystery. There is every reason to believe that it must be somewhere on the bottom, near the wreck of the steamer Atlantic, but the “unnamed submarine” has never been found. The exact location of the shipwreck was lost after salvage attempts in the 1850s and 1860s but found again during the 1980s by Port Dover diver Mike Fletcher.

Fletcher spent years visiting and filming the old steamer while he worked to protect it but never found the submarine. If anyone could have located the sub, it should have been Fletcher. It has been hypothesized that the shape and size of the sub may have allowed it to drift away from the immediate wreck site, or that Phillips and his crew could have been diving in the wrong location. Meanwhile, the submarine has become another missing shipwreck in the Lake Erie Quadrangle. In 1915, Chicago divers located the sunken remains of Phillips’ second submarine. They raised it, restored it, and presented it as a waterfront attraction called the “Fool Killer.”

**Photos:**

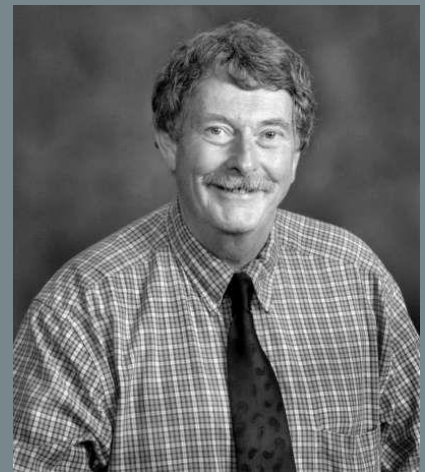
Lodner Phillips’ Propeller Submarine:

[http://www.therebreathersite.nl/12\\_Atmospheric%20Diving%20Suits/1856\\_Phillips/1856\\_Phillips.htm](http://www.therebreathersite.nl/12_Atmospheric%20Diving%20Suits/1856_Phillips/1856_Phillips.htm)

Dunes at Michigan City: <https://www.flickr.com/photos/shookphotos/4201019868>

## ABOUT THE AUTHOR

*Historian and author David Frew, Ph.D., is an emeritus professor at Gannon University, where he held a variety of administrative positions during a 33-year career. He is also emeritus director of the Erie County Historical Society/Hagen History Center and is president of his own management consulting business. Frew has written or co-written 35 books and more than 100 articles, cases, and papers.*



## **Strong Estate Postscript**

### *The Oldest Bottle of Champagne in Town?*

By Mark Steg

Dave Frew’s latest “[Great Timely Read](#)” on the [Strong Estate](#) was great. This answered all the questions I’ve ever had about that enigmatic place but were never answered until now. I’d like to add a postscript to his story about an interesting artifact from there; what’s probably the oldest unopened bottle of champagne in Erie.

The story begins at a place called Canadian American Gems and Minerals, which was located at East Eighth Street and East Avenue. Like the Strong estate, it's no longer there. I've always been a frequenter of antique stores so I was very happy when I discovered this place around 1985. Mr. and Mrs. Robert and Ruth Grubbs, charming people, were truly purveyors of the odd and unusual: fossils, semi-precious stones, some stuffed animals and much else. Sadly, they were going to go out of business soon because the entire block, which included them and the Greek Catholic Slovak Club, was slated for demolition. Thus, there was going to be a going out of business auction or sale, I can't recall which.

Among the items for sale was a wooden champagne case, containing two bottles, one opened and one still sealed. The labels on the bottles dated them to 1904. I had recently become interested in bottle collecting, so I asked Mr. Grubbs the story behind them, which went as follows:

In the 1970s, as Dave wrote, the Strong estate had long been abandoned. Mr. Grubbs was friendly with the caretakers and did some work for them. In return for the work, he was offered payment, which he turned down. He told me that, in response, the caretaker, Mrs. Virtue, opened up a trapdoor to the fabled wine cellar and told him to help himself to whatever he wanted. He told me that "I took quite a bit, kept it in the garage. Some of it froze and broke but we drank some, some of it was pretty good." One can only speculate as to the potential value of the "pretty good" libations from the wine cellar of the richest people in Erie!

At any rate, all that was left in 1985 was the wooden case and the two bottles. The unopened one had leaked, but it was still sealed. I told him I was interested in purchasing them and promised to return for his final sale. I can't recall if there was a price on it then, or if I expected it to be cheaper on the final day, which was important to me as I was fresh out of the Army, in between jobs, and mindful of my money.

Regardless, he was true to his word and held it for me until I got there. After I purchased it, I asked him if he would write me a provenance statement, which he kindly did. It reads "I, Robert G. Grubbs, certify that the following box and bottles came from the Strong estate, given to me by Mrs. Virtue, Charlie Strong's secretary, in 1970."

I still have this memorabilia, unique relics of Erie's Gilded Age. There are other artifacts of the estate around. For example, I have a wooden sculpture made from baluster salvaged from "Someplace," the Strong cabin-style retreat. Last year, a book case from the estate, very Adirondack in style, was sold at an estate sale in Erie. But to the best of my knowledge, there is only one bottle remaining from the fabled cellar!

