

## Through Fog and Angry Seas: Underwater Archaeological Investigations from the 2024-2025 Field Seasons



Included: *John Evenson, Jennibel, Thomsas H. Smith, and F.J. King*

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Tamara L. Thomsen

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Note:

At the time of publication *John Evenson*, *Jennibel*, and *Thomas H. Smith* have been listed to the State Register of Historic Places and their nomination packets forwarded to the National Park Service for evaluation for inclusion on the National Register. The *F.J. King*'s nomination packet has been submitted to the Wisconsin State Historic Preservation Office and is awaiting review by the Wisconsin State Historic Preservation Review Board.

Cover photo: Wisconsin Historical Society volunteer Tim Pranke poses with the engine builder's plate on the steamboat *Thomas H. Smith*.

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We would like to thank Brendon Baillod and Robert Jaeck for providing information about the *John Evenson* and *F.J. King* sites that were discovered during survey projects associated with Wisconsin Underwater Archaeology Association (WUAA) field projects. These projects were conducted under Wisconsin Public Lands Archaeology Permits. In both cases, because of their keen research prior to going into the field and thorough, formulaic search techniques these noteworthy wreck sites were discovered. Community involvement in reporting as well as preservation is important in the stewardship of submerged cultural resources.

The survey of the tug *John Evenson* was completed with the assistance of Wisconsin Historical Society volunteers. Zach Whitrock responded with the archaeology team the day after the discovery was reported on 14 September 2024. Data analysis and research of the ship's equipment was conducted with the assistance of Wisconsin Historical Society volunteer Tim Pranke. Brendon Baillod and Robert Jaeck collected additional video of the shipwreck with ROV (remotely operated vehicle) that was used in writing the site description. Additional appreciation should be given to Brendon Baillod for providing initial research documents for the *John Evenson* and for review of the National Register of Historic Places nomination.

The wreck of the schooner *Jennibel* fouled in a fisherman's net in 1959 and was located by diver, Frank Hoffmann in 1961. The wreck site has been a popular dive site. It was investigated by archaeologists and volunteers from the Wisconsin Historical Society between 9 - 12 June 2025, with funding from a grant from the University of Wisconsin Sea Grant Institute. Thank you to volunteers Bob LaViolette, Zach Whitrock, and Robert Jaeck for their assistance with the survey.

The steambarge *Thomas H. Smith* was discovered during a NOAA Office of Coast Survey bathymetry project in Southwestern Lake Michigan between 5 August 2023 and 5 October 2023. Volunteer Zach Whitrock joined the initially investigation by archaeologists from Wisconsin Historical Society on 24 June 2024. With funding from a gift from the Racine Lighthouse and Maritime Preservation Society, Wisconsin Historical Society maritime archaeologists and volunteers Tim Pranke and Robert Jaeck completed the archaeological survey of the site between 12-15 May 2025.

The schooner *F.J. King* was discovered during a weekend project in June 2025 by WUAA. The survey of the wreck site was conducted by Wisconsin Historical Society archaeologists and volunteers during site visits on 14 August and 3 October 2025. We would like to thank Bob LaViolette, Zach Whitrock, Brendon Baillod and Bob Jaeck for their assistance with this work. Preliminary historical research for the site was conducted and provided by Brendon Baillod.

For each of the shipwrecks featured in this report (*John Evenson*, *Jennibel*, *Thomas H. Smith*, and *F.J. King*), Zach Whitrock creating a highly detailed and scaled photogrammetry model. The scaled photogrammetry model of the sites is used for visualization, public outreach, and taking overall measurements. His assistance in creating these models played an integral part in the nomination of the four wrecks to the National Register of Historic Places. These models also provide baseline information for which monitoring of these sites can be based in the future. This will allow changes to be observed over time due to environmental effects but also, as many of these wreck sites open to recreational diving, diver impact can be assessed.

Thank you to the work of two of our former co-workers at Wisconsin Historical Society. Firstly, thank you to GIS Specialist Alexander Schneider for producing maps for this report that were also dual purposed for use in the National Register of Historic Places nomination packages for all four shipwrecks presented here. And thank you to Maritime Specialist Jordan Ciesielczyk-Gibson for updating our website, [WisconsinShipwrecks.org](http://WisconsinShipwrecks.org), and for providing maritime educational opportunities highlighting these new discoveries.

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## CHAPTER ONE

### INTRODUCTION

Underwater archaeological surveys conducted by the Wisconsin Historical Society are a joint effort of several organizations and many individuals. The surveys conducted in this report are the result of a cooperative effort between the Wisconsin Historical Society and the University of Wisconsin Sea Grant Institute. Project funding was provided by gift funding through individuals to the Wisconsin Historical Foundation, from the dissolution of the Racine Lighthouse and Maritime Preservation Society, and as part of a biennial grant from the University of Wisconsin Sea Grant Institute. The surveys were organized and staffed by Wisconsin Historical Society's Maritime Preservation and Archaeology program archaeologists and volunteers, and were conducted over the 2024 and 2025 field seasons.

The Wisconsin Historical Society is the State of Wisconsin's principal historic preservation agency and charged under state statutes (44.02 and 44.30-44.31) with the research, protection, restoration, and rehabilitation of historic properties within Wisconsin. Under Wisconsin statute 44.47, the Society is also charged with the identification, evaluation, and preservation of Wisconsin's underwater archaeological resources, including submerged prehistoric sites, historic shipwrecks, and aircraft on state-owned bottomlands. Recognizing the multiple-use value of underwater archaeological sites to scientists, historians, and recreationalists, these underwater remnants of our past are broadly termed "submerged cultural resources." Submerged cultural resource management goes beyond the scope of traditional historic preservation programs, encountering diverse multiple-use concerns such as recreation and commercial salvage.

The State of Wisconsin has additional management responsibilities for submerged cultural resources under Federal law, including the National Historic Preservation Act of 1966 (Public Law 89-665) and the Abandoned Shipwreck Act of 1987 (Public Law 100-298). State legislation (1991 Wisconsin Act 269) and modifications to state law in adherence with Federal guidelines issued under the Abandoned Shipwreck Act has provided Wisconsin with a more formalized and rational framework for underwater archaeological resource management. This legislation also authorizes the Society and the Wisconsin Department of Natural Resources to designate underwater preserves for the preservation and recreational development of underwater archaeological sites.

Created in 1988, Wisconsin Historical Society's Maritime Preservation and Archaeology Program works to survey, inventory, and evaluate Wisconsin's underwater archaeological resources, develop preservation strategies, administer field management practices, and enhance public appreciation and stewardship for Wisconsin's precious and fragile maritime heritage

(Cooper 1992; 1993). The program is housed within the Wisconsin State Historic Preservation Office.

Any initiative aimed at identifying, managing, and interpreting Wisconsin's coastal cultural resources must consider these resources at both a local and a regional level. The sheer length (approximately 860 miles) and geographical, social, and cultural diversity of Wisconsin's Great Lakes coastline make this essential. Established in 2001, the Wisconsin's Maritime Trails Educational Initiative divides the state into five regions, the boundaries of each selected to encompass common resources within that area, and merges regional diversity into a statewide educational context.

Wisconsin's Maritime Trails Educational Initiative encourages the public to consider each of these unique properties within the broader context of Wisconsin's rich maritime history.

Winding above and below the waves, the Wisconsin's Maritime Trails Education Initiative forms a trail linking historic shipwrecks, lighthouses, historic waterfronts, historic vessels, museums, and shore-side historical markers and attractions. Through the WisconsinShipwrecks.org website, interpretive materials, and public presentations the program integrates archaeological research and public education to encourage divers, snorkelers, boaters, and paddlers, to responsibly visit Wisconsin's impressive collection of maritime cultural resources. Some of the major elements of the Wisconsin's Maritime Trails include:

*Archaeological Research.* The documentation of Wisconsin's submerged cultural resources, primarily historic shipwrecks, is the foundation of the Maritime Trails Education Initiative. Beyond academic and resource management applications, the result of this research forms the basis of most interpretation and outreach projects.

*Shipwreck Moorings.* With volunteer assistance, the Society maintains permanent moorings on many historic shipwrecks statewide. These moorings facilitate recreational access, provide a means of interpreting the wreck sites for visitors, provide a safe point of ascent and descent for divers, and eliminate anchor damage from recreational boaters anchoring into the site.

*Waterproof Guides.* Designed with divers and paddlers in mind, these rugged, waterproof guides contain information that places each site in its historical context and describes the site highlighting unique features that might otherwise go unnoticed. In partnership with the University of Wisconsin Sea Grant Institute, the Society has produced guides to 48 Wisconsin shipwrecks or submerged cultural sites.

*Public Presentations.* Given at a variety of venues, public presentations provide a direct, personal connection between the Society and the public. Society underwater archaeologists and

volunteers have reached audiences via public presentations since the Wisconsin's Maritime Trails Education Initiative's inception in July 2001.

*Interpretive Signage.* As of January 2020, the Society has created shore-side informational markers for 46 historic shipwrecks and waterfronts. Utilizing an identical template that unifies the signs as attractions and information points within the statewide Maritime Trails program, the markers emphasize the broader connection between Wisconsin's many coastal historic resources.

*Interpretive kiosks.* Today, interpretive kiosks or digital displays with kiosk content are (or will soon be) featured at the Wisconsin Maritime Museum in Manitowoc, the Neville Public Museum in Green Bay, the Port Washington Historical Society Resource Center in Port Washington, the Door County Maritime Museum's (DCMM's) Jim Kress Maritime Lighthouse Tower in Sturgeon Bay, the DCMM's Death's Door Maritime Museum in Gills Rock, and the Kenosha County Historical Society's Southport Light Station Museum. The kiosks reach an estimated 136,000 museum visitors annually and make archaeological research results available in a fun, interactive format while educating visitors on the importance of Wisconsin's coastal cultural resources.

*Maritime History Geocaches.* Taking participants on self-guided tours of local maritime heritage sites, or modern commercial use of the Great Lakes and their tributaries, 38 Maritime History Geocaches have been placed in the communities of Superior, Two Rivers, Manitowoc, Sheboygan, Port Washington, Milwaukee, and throughout Door County. A full listing of available geocaches under the name "WiscMaritime" can be found at [www.geocaching.com](http://www.geocaching.com).

*Website.* The wisconsinshipwrecks.org website, dedicated to Wisconsin's historic shipwrecks, underwater archaeology, and maritime history, ensures that the public has access to timely and useful information. The site serves as a unified "maritime resource" information point for Wisconsin residents, state visitors, and the public at large. Unveiled in 1996 and updated in 2014, this website features a searchable database of maritime resources and Wisconsin shipwrecks. A collaborative effort between the Society and the University of Wisconsin Sea Grant Institute, the site makes underwater archaeological research results accessible to the public and features detailed information about historically and recreationally significant shipwrecks in Wisconsin waters of Lakes Michigan and Superior. The site receives over 287,000 views annually and averages about 800 views per day.

*Partnerships.* The Society partners with Federal, State, and local agencies, chambers of commerce, private businesses, non-profits, and individuals. With core partners, dozens of volunteers, and a growing list of project-specific partners, this aspect of the initiative ensures

that all of those with a stake in Wisconsin's maritime cultural resources share in their management and interpretation.

### *Research Design and Methodology*

Nineteenth-century Great Lakes wooden ship construction and operation is poorly understood. Little is known about how vessels were built and operated during this time. As a result, much of what we know about Great Lakes merchant vessels has come from the archaeological record of vessels that now lay on the Great Lakes bottomlands. The archaeological surveys within this report were designed to provide a better understanding of historic Great Lakes commercial vessel construction and use.

Field data collection methods included traditional baseline surveys aided by digital photo and video documentation. Data from deep wreck sites was collected by a remotely operated vehicle (ROV) equipped with video and multi-beam sonar. Archaeological documentation was conducted along guidelines established by the National Park Service for submerged cultural resource survey and evaluation in determining site eligibility for the National Register of Historic Places. Research designs were directed toward formulating site descriptions and archaeological assessments with a package of management questions, some specific to the site itself (i.e., location, environmental parameters, integrity, extant features, and artifacts), as well as more general questions that place the site within its broader historical context (i.e., historical significance, archaeological potential, recreational potential, and management requirements).

Research objectives and methods included:

1. Determine the site location, environment, and parameters through visual survey of extant elements, features, artifacts and documentation and mapping of exposed remains using trilaterated survey points, and an onsite (submerged) datum. Additionally, document the site using photographs, video, and measured sketches of those architectural and archaeological elements that are diagnostic of a) vessel type, b) vessel age, c) vessel construction style and method, d) vessel propulsion, e) vessel use, f) vessel identification, g) vessel cargo, and h) shipboard human activity broadly indicative of occupation, status, ethnicity, subsistence, or other questions allied with the study of maritime anthropology and Great Lakes social and economic history.
2. Provide assessment of a site's environmental and cultural context for determining its historic significance and archaeological potential according to the National Register of Historic Places criteria, recreational potential, and management requirements.

Site evaluation and documentation was conducted using traditional and closed-circuit scuba technology as well as ROV. Documentation included photogrammetry, measured sketches,

construction schematics, digital still and video imagery, and scaled site plans for National Register-level documentation. Analysis was conducted using comparative evidence obtained from archaeological surveys of similar sites and augmented by historical documentation relating to individual sites and general Great Lakes maritime history. Where artifacts were encountered, material culture was interpreted in the context of its relevance to shipboard activities, shipboard hierarchy, shipboard activity/use areas, and other aspects of maritime anthropology.

This submerged cultural resource survey report serves as a source document for site descriptions, analysis, interpretation, and management recommendations used in cultural resource management planning, recreational development, and public education. It also serves as the source document for eligibility determination and nomination for listing in the National Register of Historic Places. Inclusion of these sites in the National Register and state resources management plans is an important step in achieving long-term site preservation. Suggested plans for management include mooring buoys to facilitate recreational access (where appropriate) and alleviate damage caused by on-site boat anchoring. Other possibilities include site interpretation for visitors through self-guided site maps and web-based pages. Site preservation ensures availability both as a future recreational resource and as an important and nonrenewable source of scientific data relating to Great Lakes underwater archaeology, maritime history, marine architecture, and maritime anthropology.

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## CHAPTER TWO

### TUG *JOHN EVENSON*

The 54-foot tug *John Evenson* was built in 1884 at Milwaukee as a harbor and towing tug and used in the off-season for commercial fishing. *John Evenson* was built by John Evenson on Jones Island, near the life-saving station, in Milwaukee over the winter of 1883-1884. John Evenson was the second Keeper of Milwaukee's Life-Saving station; he was appointed on 23 March 1880 and resigned 19 November 1884. The tug was built during his term. When the tugboat was launched on the afternoon on 21 May 1884 it became stuck on the ways. This is considered a bad omen in maritime circles. A tug from the Starke Brothers was summoned to pull the vessel into the water. Steam was first raised on the vessel on 9 August (*Chicago Tribune* 1884a, 1884b, 1884b; *Milwaukee Daily Sentinel* 1884a; *Milwaukee Journal* 1895a; *Weekly Wisconsin* 1895).

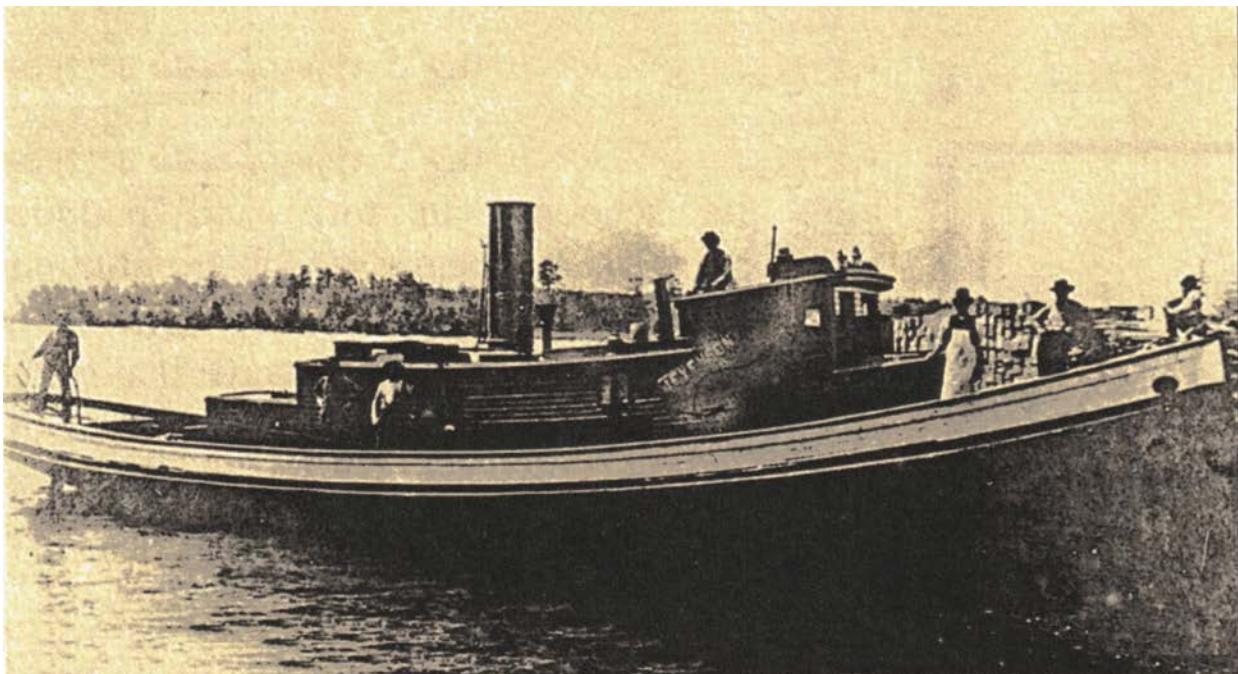


Figure 1. Tug *John Evenson*. Photographer, date, and location unknown  
(Courtesy of Harold Benash, Grandson of John Evenson)

*John Evenson* was put up for sale, but when no buyers came forward Captain Evenson put the boat into service to run as an independent in opposition to Milwaukee's regular tug line, the Milwaukee Tug Boat Company. The tug was registered at the port of Milwaukee on 21 August 1884. Milwaukee became the vessel's homeport, and Captain John Evenson was its first Master. The tug was described as measuring 54 feet long, 13 feet in beam and 7 feet deep, and it was propelled by a 15 x 17-foot engine, and a boiler 5 feet, 8 inches by 11 feet. It had 1 deck, no mast, plain head and round stern. The capacity under the tonnage deck was calculated at 32.73

tons with a deduction under the Acts of Congress on 5 August 1882 of 16.36 tons for a net tonnage of 16.37 tons. The tug was immediately put to work and took its first two schooners in tow into the port on 22 August (Bureau of Navigation 1884; *Chicago Tribune* 1884b; *Milwaukee Daily Sentinel* 1884b).

In September, newspapers reported a change at *John Evenson*'s helm. Captain Oscar Greenhalgh formerly of the tug *F.C. Maxon* took command. The change in Master went unrecorded on the vessel's enrollment document. Captain Evenson began fitting out the tug *Emma Dwyer* to run opposite the *John Evenson*. With increased competition, the Milwaukee Tug Boat Company added two additional boats to their night service and at the end of the season rumors circulated that the tug *Gregory* would also join the independent tug movement in Milwaukee (*Door County Advocate* 1884; *Milwaukee Daily Sentinel* 1884c, 1884d).

On the morning of 9 September, *John Evenson* was crowded onto a bank on the Kinnikinnic River by an unnamed steambarge causing the tug to nearly capsize. Afterwards, the steambarge helped to release the tug (*Chicago Tribune* 1884d; *Milwaukee Daily Sentinel* 1884d). On 26 September, the *John Evenson* towed the scow *J.B. Prime* to Chicago from Milwaukee with a cargo of iron ore. The tug returned to Milwaukee the same night. In October, *John Evenson* brought the schooner *C.C. Barnes* to Manitowoc from Milwaukee where the schooner was placed in winter quarters. In November the tug towed the *J.B. Prime* to Kenosha from Milwaukee with merchandise. Once unloaded the scow was towed to Chicago to collect a load of stone before returning to Milwaukee (*Inter Ocean* 1884; *Milwaukee Daily Sentinel* 1884e, 1884f).

At the beginning of the 1885-season, Captain John Griffin was placed in command of the *John Evenson*. The change in Master, however, went unrecorded on the vessel's enrollment document. On 12 February 1885, the tug was put to work breaking ice in the river to reach the schooner *F.A. Georger* which was chartered to haul 55,000 bushels of wheat from the Smith's elevator. The schooner had been moored at the St. Paul Elevator A and the ice surrounding the vessel was hand cut by a team of men while the tug was used to break a channel in the river. At the beginning of March, the tug was sent to attempt recovery of fifty nets set prior to freeze-up. As the ice stretched more than twelve miles out in the lake, the attempt was unsuccessful (*Milwaukee Daily Sentinel* 1885a, 1885b, 1885c; *Milwaukee Journal* 1885a).

By the end of May Captain Evenson chartered the tug *Kitty Smoke* to run opposite the *John Evenson* for harbor towing at the Milwaukee. The *Kitty Smoke* arrived from Muskegon, Michigan on 27 May with the coal-laden schooner *Ahira Cobb* and Captain Evenson took command of the tug for the season (*Milwaukee Daily Sentinel* 1885d, 1885e). In June Captain Betelle took over the *John Evenson*. Again, the change in Master went unrecorded on the vessel's document. Captain Betelle was hired from Buffalo and was not familiar with Milwaukee. While in the draw of the East Water Street bridge, he sounded *John Evenson*'s whistle, which was against Milwaukee city ordinance and warrant was sworn for his arrest (*Milwaukee Daily Sentinel* 1885f).

Competition for tows was so strong that by the end of June 1885, whenever the Independent Line boats went into Lake Michigan in search of a tow, a boat of the competition line would closely follow behind. The *John Evenson* moved to Port Washington to try intercept incoming schooners, and on 26 June the tugs *Holton*, *F.C. Maxon* and *Welcome* moved there as well to compete. The profitability of towing a ship 25-miles to Milwaukee was questioned and on 27 June *John Evenson* returned home with the schooner *Sophia Bonner* in tow (*Milwaukee Daily Sentinel* 1885g, 1885h, 1885m).

On the afternoon of 7 July 1885, *John Evenson* was landing the schooner *Willaim Aldrich* in Burnham's slip when the wind caught the schooner causing it to collide with the Best Brewing Company's icehouse. A large hole was torn in the icehouse and the schooner's jibboom and fore topmast was carried away. On 1 August while *John Evenson* was landing the scow *Milton*, the towline parted, and the *Milton*'s bow was forced under the jibboom of the schooner *Angus Smith*. The *Angus Smith* sustained no damage, but the *Milton* lost its jibboom, fore and main topmasts, its canvas was torn, and its port rigging and four stanchions were broken. The tug was held responsible for the \$400 in damages (*Chicago Tribune* 1885a; *Milwaukee Daily Sentinel* 1885i, 1885j). At 6 p.m. on 23 August *John Evenson* picked up the schooners *H.M. Scove* and *James Garrett* near Port Washington as a storm from the northeast was picking up. In a dense fog off Fox Point north of Milwaukee, the schooners grounded on a shallow rocky reef. The mate of the *H.M. Scove* rowed to shore and hired a farmer to drive him to Milwaukee where he arranged for the tug *Merrill* with a lighter to leave for the scene. The *John Evenson*, however, was able to pull the ships off without further assistance. The *H.M. Scove* jettisoned twenty cords of wood from its deck load to lighten the ship. Both vessels were brought to Milwaukee in leaking condition that required dry docking, and their captains filed a protest against the tug (*Chicago Tribune* 1885b; *Milwaukee Daily Sentinel* 1885k; *Milwaukee Journal* 1885b).

On 30 August 1885, the schooner *H.B. Moore* was brought into Milwaukee in a leaking condition by the tug. At 6 p.m. on the night of 7 September, *John Evenson* was in a race with the Milwaukee Tug Boat Line's tug *Dexter* to pick up the schooner *Oscar Newhouse* for a tow into Milwaukee when the two tugs collided. The *Dexter* damaged its fender strake. The *John Evenson* ultimately secured the tow. On the evening of 27 September, *John Evenson* picked up the scow *C.L. Fiek* off Port Washington competing with the tugs *Merril*, *Coe*, and *Welcome* for the job (*Chicago Tribune* 1885c; *Milwaukee Daily Sentinel* 1885l, 1885n, 1885o). In October the tug was used to release the schooner *Napoleon* that grounded on Jones Island during a strong northwest gale. On 16 October, *John Evenson* went into drydock at the Wolf & Davidson shipyard. To prepare for winter service it had iron plating added to its hull (*Inter Ocean* 1885; *Milwaukee Daily Sentinel* 1885p).

At the beginning of February 1886, the wood laden steambarge *G.P. Heath* struck ice in the inner harbor that holed the vessel at its bow. The *John Evenson* with a siphon was hired to pump the water out of its hull. On the afternoon of 11 February, the tug broke ice from Elevator A's slip to the Cassegrain's yard and towed a pile driver and scow to the gas company's dock.

Captain Richardson was placed in command of the *John Evenson* in March. He had been in command of the tug *F.C. Maxon* the prior season. This change in Master, again went unrecorded on the enrollment. Newspapers noted that Captain Evenson had fallen ill. On 17 September, the tug was chartered by Captain Oley Groh and moved to Sheboygan for harbor towing at that port for the next two months. On 17 November, Captain Gustav Gunderson took command from Captain Groh to return the vessel to Milwaukee for the winter (Bureau of Navigation 1884; *Inter Ocean* 1886; *Milwaukee Daily Sentinel* 1886a, 1886b, 1886c).



Figure 2: Captain Oley Groh 1877 (Sheboygan County Historical Research Center)

In February 1887, *John Evenson* was hired to break ice and move the steamer *Keystone* from its winter moorings near the St. Paul Elevator A to the Wolf & Davidson shipyard where it was converted into a double decked steamer. On 31 March, Captain Evenson passed away at 37-years old. His assets were left in charge of his brother-in-law, Gustav Frellson. Several suggestions and offers were made for the disposal of the *John Evenson* and *Kitty Smoke*, but the tugs were ultimately put up for sale. As the start of the season approached, a buyer was not located, so in early May the Evenson family chartered the *John Evenson* to E.S. Minor of Sturgeon Bay for \$150 per month. Repairs were made to the tug and once completed, the boat was moved to Minorville to tow vessels through the Sturgeon Bay ship canal for the duration of the season (*Door County Advocate* 1887d; *Milwaukee Daily Sentinel* 1887a, 1887b, 1887c, 1887d, 1887e; *Inter Ocean* 1887a, 1887b; *Weekly Wisconsin* 1887).

Captain D.L. Ramage took command at Sturgeon Bay. This change at the helm went unrecorded on the ship's enrollment. Competition for tows through the canal was fierce. On 26 July, twenty-four vessels passed through Sturgeon Bay of which *John Evenson* brought in only two schooners, and on 1 September, the tug was noted bringing in four lumber schooners from Menominee, Michigan (*Door County Advocate* 1887a, 1887b).

On 15 June 1887, while out in search of a tow, *John Evenson* exhausted its fuel supply and put into Ahnapee, Wisconsin to reprovision. On 23 June the tugs *John Evenson* and *Jesse Spaulding* located the recently sunken steambarge *W.L. Brown*, lost on Peshtigo Reef. The site was marked with a buoy so work could begin to recover its engine and boiler (*Ahnapee Record* 1887a, 1887b, 1887c). At 11:30 p.m. on 12 September, a fire started near the galley stove. It smoldered for hours, before it moved to the pilothouse. Captain Ramage was asleep in the pilothouse; other crew were in the aft part of the boat. The captain was woken up by the heat as flames broke through his windows. He sounded the alarm, and the men brought a hose extinguishing the fire quickly. The galley was destroyed as well as the woodwork in the pilothouse. Repairs totaled more than \$100, and were covered by insurance (*Door County Advocate* 1887c)

Captain John Walker was placed in charge of repairs to the boat. He remained as Master for the remainder of the season. This update at the helm went unrecorded in the ship's official documents. With the portly Captain Walker in the pilothouse, the tug was said to sit out of trim in the water, nosing down slightly. In October, the tug was considered for towing operations on Little Bay du Noc to be based out of Gladstone, Michigan. The move however did not occur (*Door County Advocate* 1887d, 1887e; *Independent* 1887a).

On 23 October the schooner *Frank D. Barker* grounded on Spider Island. The *John Evenson* along with the tugs *George Nelson* and *Jesse Spaulding* worked together attempting to pull the vessel free. The *John Evenson* was compelled to drop its line as the seas were threatening to engulf the tug. The signal was misunderstood, which resulted in the *Jesse Spaulding* striking the *George Nelson* amidships on its port side resulting in considerable damage. The *George Nelson* was taken to North Bay for damage assessment, and subsequently to the shipyard in Sturgeon Bay for repair. Unfortunately, the schooner could not be saved. It was stated that whenever "the wind was light, the water was too low to remove the ship" and it was ultimately left in place. The *John Evenson*'s lease expired at the end of November. On its way to winter quarters in Milwaukee, the tug towed the schooner *Pewaukee* to Manitowoc for dry docking (*Door County Advocate* 1887f, 1887g; *Independent* 1887b).

In March 1888, the *Kitty Smoke* was sold to parties in Detroit for \$3,500, but the *John Evenson* remained up for sale. Newspapers stated that if a buyer was not found, the tug would be chartered in Kenosha that season. However, the vessel was not fitted out and remained tied to the dock through the middle July. At the end of July, the Evenson family allowed the tug to be supplied with an experimental "Bangs wheel" as a test to compare the new style against the old propeller to ascertain advantages. In October *John Evenson* was chartered by C.H. Starke & Company to move dredges at Kenosha (*Inter Ocean* 1888a, 1888b, 1888c; *Milwaukee Daily Sentinel* 1888a, 1888b; *Racine Journal Times* 1888). Captain L.J. Reardon took command and remained at the helm through the next season. Again, the change in command was unrecorded in the official document (*Racine Journal Times* 1889).

At the opening of the 1890-season, the tug remained up for sale, and the family was ready to send the vessel to Green Bay under charter for the season. At the end of April Captain William

Boyd and Bernhardt Hahn of Sturgeon Bay agreed with the Evenson family upon the price of \$3,400 and put \$100 down toward the purchase of the tug. The Evenson family sent the boat to the shipyard for thorough repair and hired a crew to accompany Captain Boyd in moving the boat to Sturgeon Bay. Captain Boyd ran the boat throughout May and June in Sturgeon Bay. The tug brought several scow-loads of slab wood to Sturgeon Bay from Horseshoe Bay accumulating 3,000 cords at \$1.25 per cord in which he intended to sell to steamers and tugs for fuel. During this time, however, the remainder of payment for the vessel was not forthcoming. The Evenson family hired the law firm Williams, Bright & Friend to file suit against Boyd and Hahn to recover the balance or regain possession of the tug (*Chicago Tribune* 1890a; *Door County Advocate* 1890a, 1890b; *Independent* 1890a, 1890b, 1890c; *Milwaukee Daily Sentinel* 1890a, 1890b, 1890c, 1890d). The result of the suit is not known.

In July, *John Evenson* was chartered to tow scows for the Smith & Daley shingle mill in Menominee. On 5 July 1890, Captain Nels Olson took command at Marinette, Wisconsin. By the end of July regional newspapers reported the sale of the tug to A.S. Piper & Co. of Little Sturgeon, Wisconsin and George Spear of Nelson & Spear Bank in Sturgeon Bay, for \$3,500. The pair intended to employ the tug with miscellaneous towing. Captain David Ramage returned to command and Fred C. Wright was hired as engineer. A new enrollment was entered for the boat at Milwaukee on 29 July explaining the new ownership arrangement. George O. Spear of Sturgeon Bay owned one-third, Thomas Pryer and Seth Pryer of Chicago each owned one-fourth, and B. Lyons of Little Sturgeon owned one-sixth. Milwaukee remained its homeport. George Spear was initially listed as Master; however, the vessel's document was updated to Captain Ramage on 20 August 1890 (Bureau of Navigation 1890a; *Door County Advocate* 1890c, 1890d; *Milwaukee Journal* 1890; *Republican* 1890a, 1890b).

The tug was sent to Manitowoc during the first week in August 1890 for minor repairs and to receive a new wheel. On 8 August, the *John Evenson* with the schooner *Ada Medora* in tow encountered a heavy hailstorm with strong wind that blew so hard that the boats were blown backwards. Nearly 3 inches of hail accumulated on its deck. On the night of 11 August, while coming through the Michigan Street bridge in Sturgeon Bay with the schooner *Surprise* in tow, the tug's crew decided to shorten the towline, which caused the schooner to sheer to port. Its headgear struck the bridge and in reaction, the tug backed down driving its fantail through the side of the *Surprise*, breaking three stanchions, two stringers and a portion of its bulwarks. The schooner was brought along the wharf where repairs were made. On 12 August, the tug towed the schooners *Ellen Williams*, *David Macy*, and *America* in from the lake. On the morning of 17 September, the steambarge *C.F. Curtis* with consorts *Holland*, *Facett*, and *Reed* were compelled to hire the services of *John Evenson* to navigate through Sturgeon Bay due to a dense fog. The tug brought a scow to Sturgeon Bay from Menominee for Lawrence & Company on 13 October for its last trip of the season. It was then placed in winter quarters (*Chicago Tribune* 1890b; *Door County Advocate* 1890e, 1890f; *Republican* 1890c, 1890d).

Unexpectedly, another sale of the vessel was announced on 24 October 1890 in regional newspapers. The tug was sold to brothers John and Alex Laurie, owners of the Laurie Stone Company of Sturgeon Bay for \$3,800. *John Evenson* was put back in service, and on 4 November, *John Evenson* departed for Ahnapee with the schooners *S.B. Paige*, *W.B. Shattuck*, and a large scow in tow, all loaded with stone from the Laurie's quarry for a harbor improvement project at the port. With Captain Alex Laurie now at its helm, the *John Evenson* then steamed to Big Bay du Noc with a scow where it collected spruce wood for the pulp mill in Marinette. The tug next collected cordwood cargos from Juddville and Baileys Harbor for Menominee. The vessel was finally registered for the change in owners at the port of Milwaukee on 6 December and was returned to winter quarters on 8 December in Sturgeon Bay (Bureau of Navigation 1890b; *Door County Advocate* 1890g, 1890h; *Green Bay Press Gazette* 1890a, 1890b; *Republican* 1890e, 1890f).

Joining Captain Laurie aboard the tug for the 1891-season was engineer David Machia. The *John Evenson* towed its first scow loaded with stone for the year from the Laurie's quarry on 23 April 1891. Nine hundred cords of stone were contracted from the Laurie quarry for harbor improvement work in Waukegan, Illinois which resulted in steady employment for the tug towing barges back and forth. On 4 May, *John Evenson* and a stone scow were forced to shelter at Racine. On 8 October, the Laurie's relaunched the schooner *S.B. Paige*, which they had hauled out the prior season for repairs and to receive a new stern. This vessel became a frequent consort to the *John Evenson*. *John Evenson* brought the *S.B. Paige* to Racine on 12 October with a cargo of street pavers used for repaving Sixth Street (*Door County Advocate* 1891a, 1891b; *Milwaukee Daily Sentinel* 1891a; *Racine Journal Times* 1891a, 1891b, 1891c; *Republican* 1891a; 1891b).

On 19 October, the *John Evenson*, while towing the Laurie's big stone scow, *Sol. Averson*, encountered heavy winds and rough waves while in route to Racine. The scow parted its towline, and the line went afoul of the tug's wheel rendering the tug helpless. Another tug was called out from Sheboygan to assist the *John Evenson*, and the scow was left to go ashore. On 23 October, with the aid of a steam pump removing water from the scow, the *John Evenson* was able to pull the scow from the beach. The *S.B. Paige* and *W.B. Shattuck* were brought in to lighter the big scow. Fortunately, only a portion of the cargo was lost. On 25 October, the *John Evenson* brought the *Sol. Averson* to Racine with the load of paving stone for the Sixth Street project. The scow, however, was found to be leaking badly. Once unloaded on 28 October, the scow was taken to the Milwaukee shipyard for repair where a large hole was found in its bottom. Losses to cargo and damage to the vessel totaled \$1,000 (*Milwaukee Daily Sentinel* 1891b; 1891c; *Milwaukee Journal* 1891a, 1891b; *Racine Journal Times* 1891d, 1891e, 1891f; *Republican* 1891c, 1891d, 1891e, 1891f).

On 12 November, *John Evenson* was temporarily laid up in Sturgeon Bay for repairs to its rudder which was damaged the week prior while arriving at Waukegan. The ship remained in service for another week, and on 26 November, it was hauled out again for recaulking, other

repairs, and placed in winter quarters (*Door County Advocate* 1891c; *Milwaukee Daily Sentinel* 1891d; *Republican* 1891g, 1891h, 1891i, 1891j).

The boat was fitted out for service in early April 1892 and departed for Menominee on 19 April with a scow load of stone. In early May, 75 cords of stone were delivered to Grand Haven, Michigan for a new pier crib. On 4 May, while navigating through the draw of the Michigan Street Bridge in Sturgeon Bay, the *John Evenson* struck the north side of the structure because the bridge was not fully opened. The accident smashed in the starboard side of the pilothouse and set the roof back about a foot (*Door County Advocate* 1892a; *Grand Haven Tribune* 1892; *Republican* 1892a, 1892b).

The tug's boiler was evaluated at Sturgeon Bay by inspectors from the U.S. Steamboat Inspection Service on 23 May. At 11 a.m. on 2 June, while lying at the Merchants' dock in Sturgeon Bay, the boat caught fire. The blaze started over the boiler in dry woodwork. The crew were onboard or on the dock and quickly put water to the flames. The pilothouse sustained the most damage. All the windows were broken and the woodwork charred, but the damage (estimated at \$200) was covered by insurance. It should be noted that no alarm was sounded primarily because the whistle cord burned, but because the fire was extinguished before the fire department arrived on the scene, the Mayor issued a bill to the tug for the response of Hook & Ladder No.1 for false alarm of fire of \$10.00 (*Door County Advocate* 1892b, 1892c, 1892d; *Republican* 1892c; U.S. Customs House Wreck Report 1892).

The boat was back in service by mid-July and delivered stone to Manitowoc and Kenosha. On 18 July, while at Manistee, Michigan, the tug caught fire again. It was collecting a scow load of salt and lying alongside the dock when a spark from a passing tug landed on the aft end of the cabin again destroying the pilothouse and damaging its machinery. Also lost were 1,500 barrels of salt and several sheds on the dock. Total damages were \$1,546.25. The *John Evenson* remained in Manistee and the tug *E. Wheeler* collected the scow, which was also severely burned and brought it back to Sturgeon Bay (*Door County Advocate* 1892e, 1892f, 1892g; *Inter Ocean* 1892; *Republican* 1892d, 1892e, 1892f, 1892g, 1892h).

At the end August 1892, reports circulated that Laurie Brothers acquired a more powerful tug and sold the *John Evenson*. This proved not to be true. On 9 September, the Laurie Brothers filed a new enrollment for the vessel at the port of Milwaukee indicating the original document was lost, and naming John Laurie as the managing owner. The tug's homeport was updated to Sturgeon Bay. In addition to repairing the pilothouse, the boat received new ceiling planking down to the bilge, new stanchions all around, new deck and railing. The work was conducted at Manistee and *John Evenson* was returned to Sturgeon Bay on 12 September where it was repainted. The boat was back at work by the end of the month hauling lumber schooners from Marinette and Menominee to Manitowoc through the beginning of December. On 10 December, *John Evenson* was hauled out of the water at the Laurie's wharf for the winter where additional work on the tug was conducted (Bureau of Navigation 1892; *Door County Advocate* 1892h, 1892i, 1892j, 1892k; *Manitowoc Pilot* 1892; *Republican* 1892i, 1892j, 1892k, 1892l, 1892m).

The boat was relaunched on 24 April 1893. The Lauries also rebuilt the scows *S.B. Paige* and *W.B. Shattuck* over the winter. The tug initially engaged in hauling scows with stone to Kenosha. On a return to Sturgeon Bay on 6 May, it picked up the schooner *E.R. Williams* and towed in through the canal. U.S. Steamboat Inspectors Chipman and Fitzgerald evaluated the tug's boiler on 24 May in Sturgeon Bay. Multiple cargos of stone were towed each week to Milwaukee for a breakwater improvement project in June, July, and August, which required 9,000 cords of stone. In good weather it was said that the tug with a scow in tow could make the round trip to Milwaukee and back in two days and 5 hours. While Captain Alex Laurie was out delivering stone to Milwaukee on 27 July his wife delivered a baby boy back home in Sevastopol. At 10 p.m. on 7 August while leaving the canal with a scow and a schooner both loaded with stone in tow, the towline to the schooner, the last vessel in the chain, parted. The schooner began blowing its foghorn which was noticed by the lookout at the life-saving station. The crew on the *John Evenson* also noticed and circled around to pick up the dropped vessel (*Democrat* 1893a, 1893b, 1893c, 1893d, 1893e, 1893f, 1893g, 1893h, 1893i, 1893j, 1893k, 1893l; *Door County Advocate* 1893a; *Door County Democrat* 1893a, 1893b).

Under smokey conditions on the evening of 13 September, the schooner *Pewaukee* missed the entrance to the canal and went ashore south of the cut. The *John Evenson* went to its aid and pulled the ship off the beach. The schooner missed again and went ashore on the north side of the canal. Again, the tug came to the rescue. On 10 October, *John Evenson* came into Ahnapee and at its helm was a new Master, Captain Alex Doak. It is not known when the change in command happened; the information was not recorded on the vessel's enrollment (*Ahnapee Record* 1893; *Door County Advocate* 1893b).

In foggy weather, while the tug was towing the schooner *F.W. Gifford* in the ship canal on 11 November, the schooner collided with the steambarge *Sidney O. Neff* that was in tow of the tug *St. Joe*. The tugs were both signaling, but the information conveyed was confused by the fog whistle from the light. The *St. Joe* with the *Sidney O. Neff* continued up the lake. *John Evenson* brought the *F.W. Gifford* to Sturgeon Bay for repairs, and the life-saving service collected the lumber that fell overboard from the *F.W. Gifford* during the collision.

Stone was delivered to the canal entrance to fill in cribs in November. On 17 November, *John Evenson* towed the surfboat, apparatus, and Sturgeon Bay life-saving station crew to Northport from Ahnapee to respond to the distressed schooner *J.A. Travis* which had run ashore. The tug and surfboat arrived on the scene at 3 a.m. on 18 November and were able to remove the crew of five from the schooner and land them on the beach. On 23 November, the steambarge *Toltec* with its consort *Miztec* were towed through the canal by the *John Evenson* (*Democrat* 1893m; *Door County Advocate* 1893c).

The first shipment of stone from Sturgeon Bay for the season departed on 17 April 1894. The *John Evenson* towed a scow from the Laurie quarry to Manitowoc. The vessel's boiler was inspected again on the afternoon of 24 May by U.S. Steamboat Inspectors Chipman and Fitzgerald while at Sturgeon Bay. At the end of April, the tug was chartered to raft logs for the

William O. Brown Manufacturing Company, and its first raft of 140,000 cedar logs was brought over to Sturgeon Bay from Menominee on 24 June (*Door County Advocate* 1894a, 1894b, 1894c, 1894d, 1894e; *Democrat* 1894a). After delivering the log raft, *John Evenson* steamed to Ephraim and Horseshoe Bay to collect a scow loaded with 3,500 ties for the Ahnapee & Western Railroad (*Door County Advocate* 1894e; *Democrat* 1894b). In July the tug took a scow of paving stones to Milwaukee from Sturgeon Bay. On its return, on 12 July, it had its boiler cleaned and the following day towed the schooner *York State* with a cargo of ice from Little Sturgeon through the canal and into the lake. On the morning of 13 August, the tug towed three lumber schooners with cordwood into Sturgeon Bay from the lake. That evening *John Evenson* cleared Sturgeon Bay with the scow *O.E. Parks* loaded with paving stone bound for Milwaukee. Another trip was completed with paving stone the following week. On both trips, the boats arrived at Milwaukee, unloaded, and cleared light (without cargo) on the same day (*Door County Advocate* 1894f, 1894g; *Democrat* 1894d; *Milwaukee Daily Sentinel* 1894; *Milwaukee Journal* 1894).

A gale swept across the Door Peninsula on the night of 22 September resulting in calls for many tows through the canal. *John Evenson* answered the largest number of calls that night. On 26 September with the schooner *Butcher Boy* in tow, the tug's rudder became disabled. When abreast of the lighthouse, the bolt holding the rudder to the rudderpost dropped out. This caused the tug to shear. As the *Butcher Boy* was bearing down on the tug, a wind blew the tug's bow over avoiding a collision and kept the boats in the channel. The rudder was repaired that same afternoon (*Door County Advocate* 1894h). *John Evenson* was kept in service though the end of November and hauled out at the Laurie wharf along with the scow *S.B. Paige* during the first week of December (*Door County Advocate* 1894i).

Over the winter months, work was conducted by M. Doherty at the Leathem & Smith shipyard on *John Evenson*'s boiler to repair its flues. One end was "cut off to get new and stronger material for the 'bead' and a new piece welded on to the other end to get them back to their original length." The tug was made ready for service and relaunched during the last week of April 1895, and on 1 May, *John Evenson* took its first tow for the season, the schooner *Bertha Barnes*, through the canal (*Door County Advocate* 1895a, 1895b; *Door County Democrat* 1895a). On 31 May, the tug *Arthur Jones* (about the same size and power as the *John Evenson*) arrived in Sturgeon Bay from Chicago. The boat was moved to compete for towing jobs, but after assessing the market, the captain concluded that he would have difficulty making a profit and the next day moved the boat to Menominee (*Door County Advocate* 1895c).

Shortly after 5 p.m. on 5 June 1895, just north of Ahnapee and a few miles out in the lake, *John Evenson* was on the way back to Sturgeon Bay from Manitowoc, when the tug answered the signal of the steamer *I. Watson Stephenson* requesting assistance in entering the Sturgeon Bay ship canal with its consort schooner barges *Alert* and *Peshtigo*. *I. Watson Stephenson* remained under headway running 10-11 miles per hour as the tug approached. Just as *John Evenson*'s crew was about to take the steamer's towline, the tug ran across the bow of the much larger *I.*

*Watson Stephenson*, which struck the tug, capsized it, and sent it to the bottom in less than three minutes time. Four of the tug's crew, Captain Alex Laurie, Engineer Ashley Coffrin, Linesman Charles Risteau, and Steward Cyrus LaPlant were cast into the water. The steamer and consorts each lowered small boats to affect a rescue. After about 15 mins in the water, *John Evenson*'s crewmembers were picked up except for the tug's fireman Martin Boswell who was below deck when the accident occurred. The men in the water saw Boswell's head emerge from the cabin door as the tug was on its beam. But just as he appeared, water rushed into the tug that carried him down with the vessel, and he was lost (*Ahnapee Record* 1895a; *Door County Advocate* 1895d, 1895e; *Door County Democrat* 1895b; *Green Bay Press Gazette* 1895a, 1895b; *Inter Ocean* 1895; *Milwaukee Journal* 1895a; U.S. Customs House Wreck Report 1895; *Weekly Wisconsin* 1895). It should be noted that there is no record of a Martin Boswell on the Great Lakes at the time. The man killed in the accident is believed to have been a local French Canadian or Belgian with the name Boseau or a variant, as it appears this way in at least one news account.

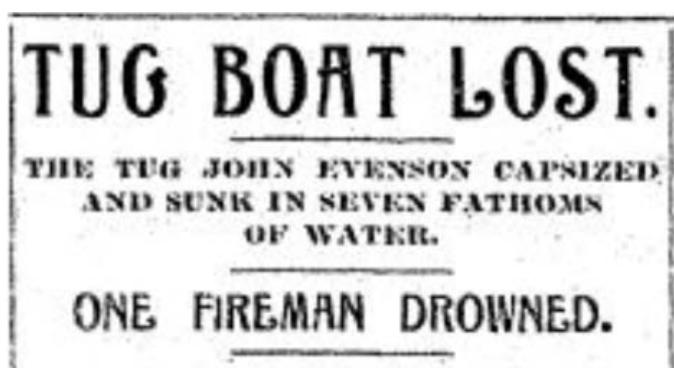


Figure 3: Headline in *Door County Advocate* 6 June 1895

The crew was taken aboard the steamer and landed at Sturgeon Bay at 10 p.m. At the time of its loss, the tug was valued at \$3,500. The Laurie brothers carried a \$3,500 fire insurance policy on the vessel, but no insurance for an accident or disaster. The vessel's enrollment was surrendered at the port of Milwaukee on 7 June indicating the ship capsized and was a total loss (Bureau of Navigation 1892; *Door County Advocate* 1895d; *Green Bay Press Gazette* 1895b; *Milwaukee Journal* 1895b).

On the morning of 15 July 1895, the body of the Martin Boswell washed ashore 6 miles south of Ahnapee. Captain Alex Laurie went to Ahnapee, but Boswell's body was so deteriorated, that it was difficult to identify him outside of clothing and items found. Boswell was from Boston with no family locally, and he was buried at Ahnapee (*Ahnapee Record* 1895b; *Door County Advocate* 1895f, 1895g, 1895h; *Door County Democrat* 1895c).

Almost immediately after the accident the Laurie brothers received questions whether they would attempt to recover the vessel themselves or sell the rights to it. The Seyk brothers of

Manitowoc as well as numerous other companies inquired about raising the tug; all were declined. The Laurie brothers hired the tug *Agnes Arnold* to finish out the season in the place of the *John Evenson*, and in 1896, they engaged the tug *Moser*. After nearly two seasons, on 21 August 1897, Captain Alex Laurie anchored the scow *S.B Paige* over the wreck site to begin work on raising the tug. Less than a week later, the Laurie brothers stopped operations and announced to the newspapers that they were postponing until the summer of 1898 when the renowned diver Captain Thomas Isabel could be hired to bring in his steam hoisting apparatus from Cleveland. Further attempts to recover the *John Evenson* never occurred (*Door County Advocate* 1895f, 1897a, 1897b; *Door County Democrat* 1896).

Although *John Evenson*'s loss was widely reported in marine newspapers, the location of its wreck varied significantly. Some stated that the vessel sank in 50 feet of water, others indicated 300 feet of water. Divers began searching for the *John Evenson* in the 1980s without success leading to the Neptune's Nimrods Dive Club of Green Bay offering a cash reward for its discovery.

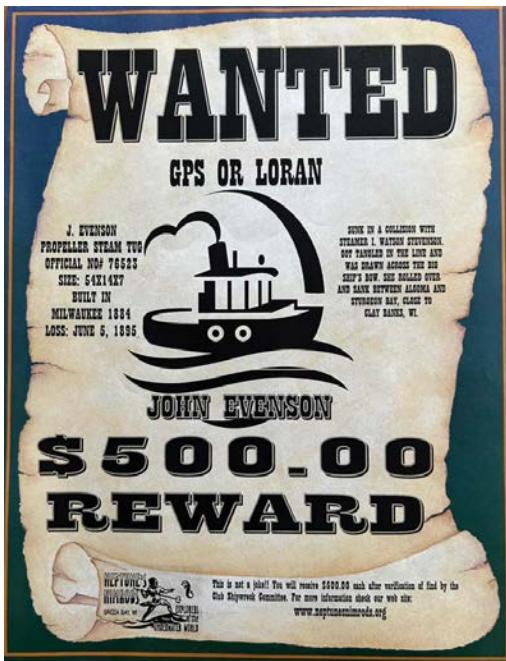


Figure 4. Reward poster for Tug *John Evenson*. (Neptune's Nimrods Dive Club)

#### *Site Description*

Located in Lake Michigan 3.61 miles northeast of the Algoma Pierhead Light in the Town of Ahnapee, Wisconsin, the remains of the tugboat *John Evenson* (47KE126) lie partially embedded in lakebed in 48 feet of water in Lake Michigan. On 13 September 2024, the site was located during an intentional search conducted by Brendon Baillod and Robert Jaeck, members of the Wisconsin Underwater Archaeology Association (WUAA).

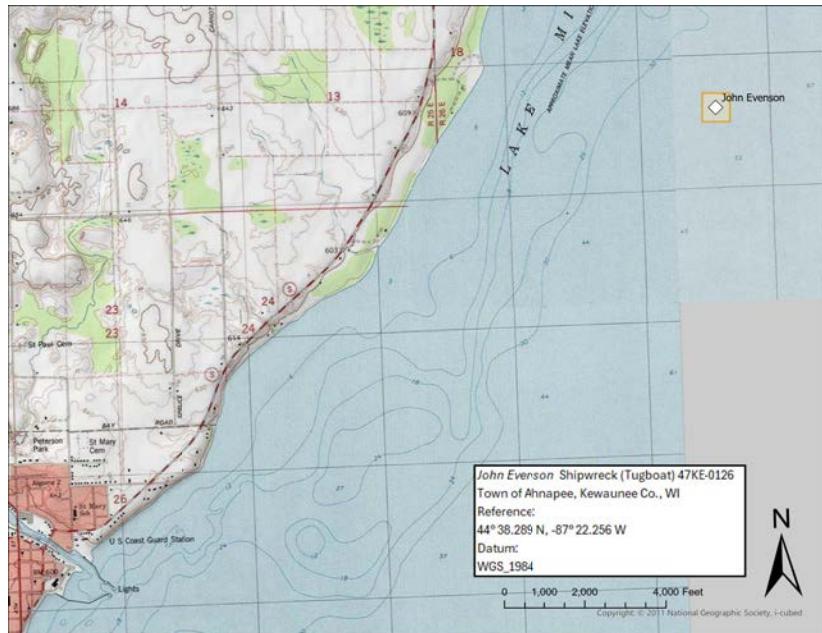


Figure 5. Location of the *John Evenson* site

Maritime historians Brendon Baillod and Robert Jaeck collected all the accounts of the tug's loss as well as an original U.S. Customs House Wreck Report prepared by Captain John Laurie. They plotted the locations given and noticed that a few clustered in the same small area as that given in the wreck report, approximately 4 miles northeast of Algoma, Wisconsin (U.S. Customs House Wreck Report 1895). At 9AM on 13 September, as the pair had just deployed their remote sensing equipment and were tuning the sonar signals, a huge boiler crawled across their screen only five minutes into what had been planned as a three-day search. They deployed a remote operated vehicle (ROV) which immediately descended on the vessel's giant propeller, steam engine and boiler. Baillod and Jaeck notified Wisconsin Historical Society whose maritime archaeologists and volunteers arrived the next day to survey and document the shipwreck. Given the wreck dimensions, location, and a comparison of vessel losses in the vicinity based on historic newspaper accounts, the vessel remains were determined to likely belong to the tug *John Evenson*.

The remains of the tugboat *John Evenson* (47KE126) rest on its port side in 48 feet of water northeast of Algoma, Wisconsin in Lake Michigan. The vessel sits on a heading of 55 degrees on a cobble and sand bottom. Its hull-bed is present along with major pieces of its machinery including boiler, steam engine, propeller and rudder. A measuring tape was stretched from forward of the boiler, even with the forward end of the broken port hull fragment, to the hub of the propeller. The stempost and much of the bow are not present on the site. The keel is broken between the boiler and engine. Only 25.6 feet of the keel remains. It measures 0.4 feet by 0.4 feet. 37.1 feet of keelson remains and measures 0.6 feet by 0.6 feet. Between the keel and keelson, filler blocks measure 0.4 feet wide, 0.3 feet thick and 1.0 feet long. They are fastened

leaving a gap for missing frames with a room of 0.4 to 0.6 feet. Most of the vessel's floors are not extant, except for reinforced floors under the engine at 35.0 feet and 36.8 feet on the baseline, and another to support the thrust bearing at 39.8 feet. The latter measures 1.7 feet long and 0.2 feet thick. Floors in the stern have been broken off even with the keel/keelson assembly.



Figure 6. *John Evenson's* boiler

The vessel's return-flue firebox boiler lays on top of a fragment of the port side bulwarks. The boiler is toppled onto its port side between 3.5 feet and 15.7 feet on the baseline. It measures 12.2 feet long, 6.8 feet wide, and would have stood 7.2 feet tall. The firebox is open to the bottom, which allowed access for measurement. It measures 5.1 feet long, 6.7 feet wide, and 4.0 feet tall. The exterior front and side firebox sheets extend 1 foot below the foundation ring to accommodate the ash pans below. The boiler has a single firebox door that is slightly oval in shape with a hinge on the port side. The door is centered on the aft end of the boiler, 1 foot up from the bottom, and measures 1.5 feet wide and 1.1 feet tall. Feedwater piping remains in front of the firebox, below the boiler barrel. Above the firebox and going forward are the flues. The flame bed runs 8.1 feet forward of the firebox. On the front of the boiler is an open access hole, centered 1.5 feet up from the bottom of the flame bed. The access hole measures 1.5 in diameter. The cover is extant on the lakebed forward of the boiler. The boiler is complete with a steam drum on top that measures 6.2 feet long and 2.9 feet in diameter. A 1.5 feet diameter pipe that funnels the steam into the drum is located 5 feet aft of the forward end of the boiler. On the back of the steam drum is a fitting for the steam to exit to the engine. Another U-shaped fitting, 0.5 feet in diameter with flanges on either end, is located on the starboard side of the steam drum. This may have been used to direct steam to a siphon for water removal while assisting stranded vessels. The exact use of the fitting is unknown.

Aft of the boiler, resting on top of the bulwark, is a feature that is likely the detached condenser discharge pipe. A steam line from the boiler to the engine also lays in this area. On the lakebed aft of the boiler are broken sections of piping associated with the bilge pump; however, the bilge pump is missing. Laying on the bottom near the break in the keel, forward of the engine, is a heavily-built iron plate. This is likely the smoke box door for the boiler. It would have allowed access to clean out the flues. There are latches on either corner of this door.

The boiler rests on top of a 19-foot fragment of the port side hull consisting of railing, bulwarks, deck plate, frames, and planking. The rail cap is missing, but rail clamps remain that measure 0.4 feet wide and 0.15 feet thick. These boards are fastened to the inside and outside of the bulwark stanchions. 11.2 feet of railing fragment is extant. The top of the rail stands 1.8 feet above the deck plate. Bulwark stanchions measure 0.3 feet wide and 0.3 feet thick. In some instances, the stanchions are doubled up and spacing is irregular, varying between 1.0, 1.1 and 1.2 feet. Two frames were accessible for measurements located in front, behind, and below the boiler. Futtocks measured 0.3 feet wide and 0.3 feet thick. They appear have been a continuation of one side of the double stanchions, but the paired futtock below the deck plate is missing. It was surmised that the vessel was double-framed, and that frames continued up through the bulwarks to the rail cap. The deck plate measures 0.4 feet wide and 0.15 feet thick. Several pieces of ceiling planking remain. These measure 0.25 feet wide and 0.05 feet thick.

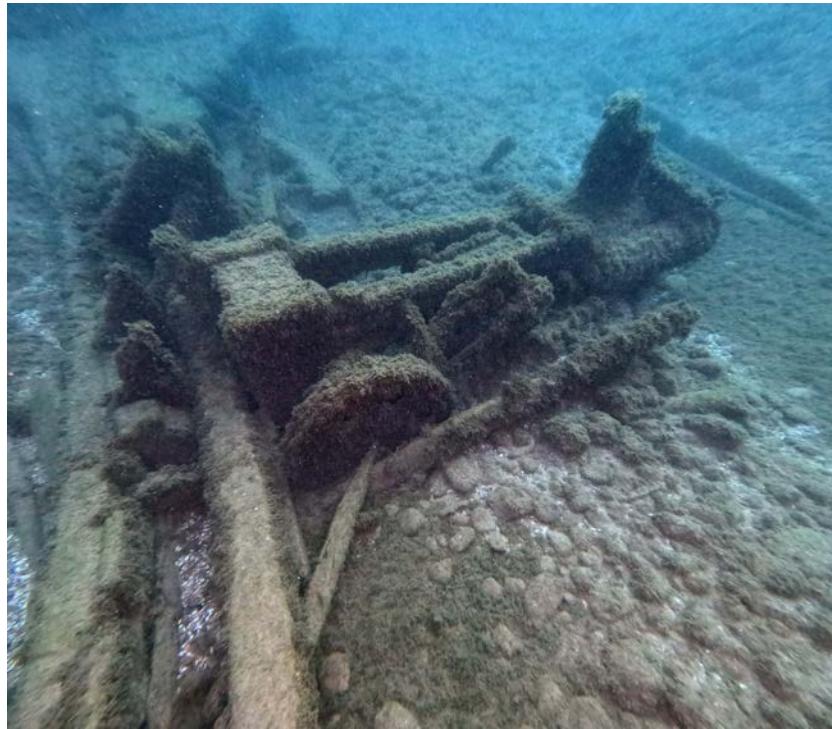


Figure 7. *John Evenson's* single cylinder, vertical steam engine

A single cylindrical, vertical steam engine is located between 32 feet and 34.5 feet on the baseline. The engine lays on its port side on the lakebed. It would have stood 9.8 feet tall. Its bedplate measures 2.5 feet fore-and-aft, 3.5 feet athwartships, and is 1.5 feet tall. The engine has

I-beam support columns that are 0.75 feet wide, 0.5 feet thick, and rise 5.0 feet above the bedplate to the cylinder. The cylinder measures 3.0 feet tall and 1.9 feet across the top. Since the vessel was underway when the accident occurred it is likely the engine ingested boiler water when it rolled over. This resulted in the upper cylinder head is blown off.

On the starboard side of the cylinder is a throttle valve. Between the engine columns is the piston crosshead which connects the piston rod to the yoke and crank below. The engine has a Stephenson-link valve gear on the forward side of the engine which would have allowed the engine to shift between forward and reverse. The engine is equipped with a piston valve on the forward side of the cylinder. The valve rod appears to be broken from the piston valve. There is a large jacking gear on the forward end of the crank shaft. Its flywheel measures 2.9 feet in diameter and is 0.3 feet thick. Notably, the jacking gear engine is not extant on the site.

The propeller shaft runs unbroken from aft of the engine to the propeller. Immediately aft of the engine is the propeller shaft coupler, and aft of this is the thrust bearing. The triangular thrust bearing mount is located above the floor frame at 39.8 feet on the baseline. The propeller shaft measures 0.5 feet in diameter. It runs through a shaft log 1.7 feet tall, 1.0 feet wide and 6.5 feet long. The tug's propeller hub and two blades of the four-bladed propeller are exposed above the sand. *John Evenson*'s propeller is a one-piece cast-iron propeller. The hub is 1.0 feet across and 1.0 feet deep. Propeller blades are 2.3 feet long and 2.4 feet wide across the distal end of the blade. A strut runs vertically in front of the propeller, from a cutlass bearing surrounding the shaft, up through the horn timber. It is held in place with a reinforcement plate on the topside of the horn timber.



Figure 8. *John Evenson*'s propeller

The deadwood defining the run for the rudder begins at 48.1 feet on the baseline. The sternpost, which measures 0.4 feet by 0.4 feet, is located at 53.1 feet on the baseline. The horn timber remains fastened above the sternpost and extends aft another 3.0 feet above the propeller.

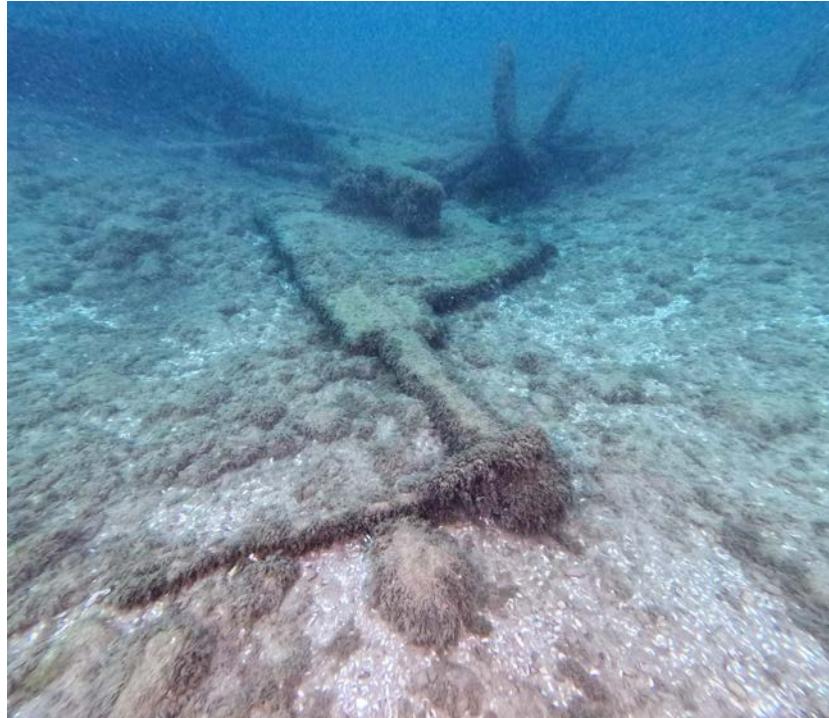


Figure 9. *John Evenson's rudder*

The vessel's rudder has separated from the tugboat and lays on the lake bottom under the horn timber and aft of the shipwreck. The rudder is 11.2 feet tall overall. The rudder post is 4.2 feet long and 0.3 feet thick. Below this the rudder stock increases to 0.4 feet thick, 1.0 feet above the blade. Fastened to the top of the rudder post with a rudder head 0.3 feet long, is a tiller arm 3.7 feet long and 0.3 feet thick. The blade is 6.0 feet tall and 0.4 feet thick. It is 3.9 feet wide for the lower 5.4 feet of the blade. There are four iron rudder braces that strengthen the rudder, fastened to the blade at 0.4 feet, 2.0 feet, and 4.7 feet from the top of the blade. An additional strap wraps the bottom of the rudder blade. The braces are flat iron measuring 0.3 feet wide. The rudder's pintle is bent and located 3.0 feet aft of the stern post and beneath the propeller. It is connected to the keel with a flat iron piece of the keel's shoe.

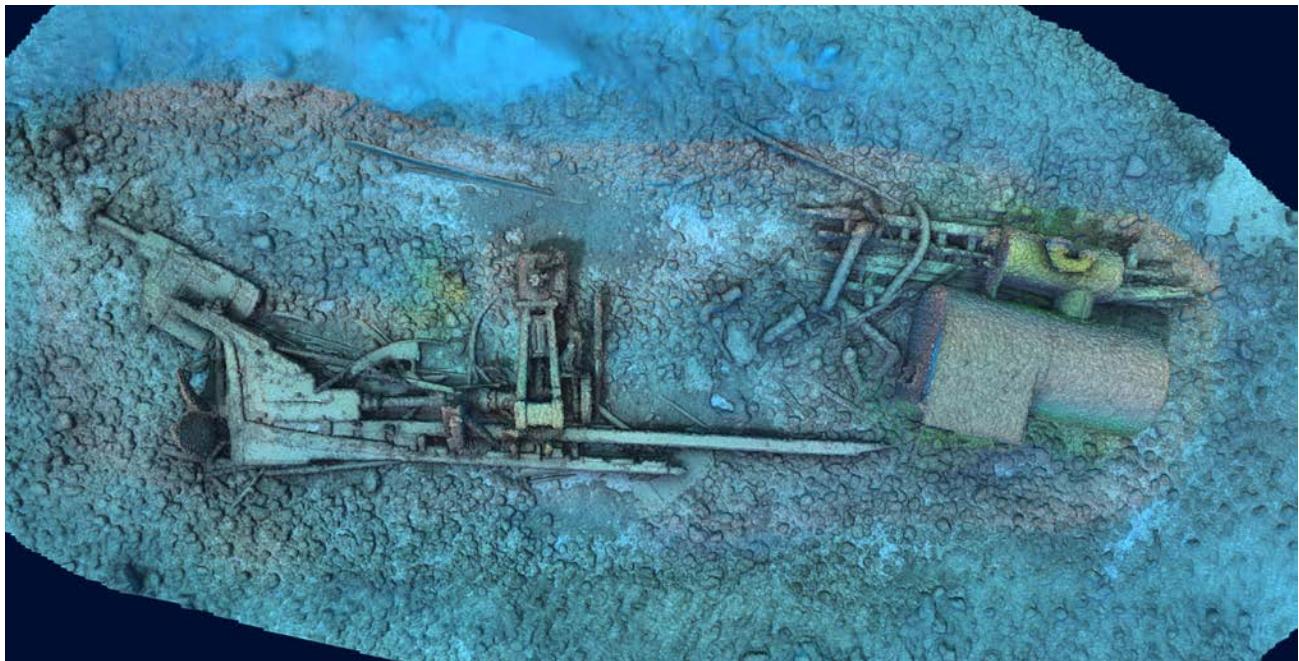


Figure 10. Photogrammetry model of *John Evenson* (Zach Whitrock)

## CHAPTER THREE

### SCHOONER JENNIBEL

The schooner *Jennibel* was constructed in 1863 by shipbuilders Amos C. Stoakes (oftentimes misspelled as Stokes) and Benjamin Locklin in Sheboygan, Wisconsin, and launched on 29 July 1863. Amos Stoakes was born on 22 October 1825 in New York and worked as ship carpenter in Portland (Sandusky), Ohio, before immigrating to Sheboygan in 1854. He was the senior, Master Shipbuilder at the Stoakes & Locklin shipyard, a company started with partner Benjamin Locklin in 1856 and the leading shipbuilding firm in Sheboygan (*Sheboygan County Herald* 1869; U.S. Census Bureau 1850, 1860).

The German Bank of Sheboygan funded the Stoakes & Locklin yard for construction of *Jennibel*. As a buyer was not identified before its launch, after fitting out was completed, the vessel was enrolled at the port of Milwaukee on 13 August 1863 by German Bank president George C. Cole. The craft was described as schooner-rigged with two masts, one deck, a square stern and figurehead. It measured 94.3 feet in length, 23.8 feet in breadth of beam, 8.4 feet depth and was calculated at 168 33/95 tons. Sheboygan was named as the vessel's homeport, and Captain John Griffith its first Master (Bureau of Navigation 1863; U.S. Census Bureau 1870b). The vessel was given an "A" insurance rating and valued at \$7,400. One trip was recorded to Buffalo, New York in October. On its return to Sheboygan on 23 October, it carried 200 barrels of salt and 120 barrels of apples (*Buffalo Commercial* 1863; Thomas 1864).



Figure 11. Advertisement for the German Bank of Sheboygan, undated  
(Sheboygan County Historical Research Center)

A buyer for the ship was secured the following spring. On 24 June 1864, a new enrollment was entered at the port of Milwaukee listing John Bertschy of Sheboygan as sole owner of the *Jennibel*. Sheboygan remained its homeport. All other information remained the same as the previous record (Bureau of Navigation 1864). John Bertschy was a grain merchant and proprietor of the Western Star Mill located on the southwest side of the Griffith Street (now 8th Street) Bridge over the Sheboygan River (Edwards 1864; U.S. Census Bureau 1870b). Although Captain John Beattie was listed on the vessel's registration as Master, contemporary newspapers report Captain Tweedy and Captain Moody in command in port entry and clearing records, and the *Register of the Ships of the Lakes and River St. Lawrence* lists Captain J.H. Mead at the helm (Bureau of Navigation 1864; Thomas 1864). Arrivals at Buffalo were recorded on 3 August and 17 November, each with 7,000 bushels of wheat from Sheboygan consigned to G.S. Hazard & Company. The ship remained in port only long enough to unload and take on 500 barrels of salt for a departure the same day for Sheboygan. On 19 September, a round trip from Sheboygan to Milwaukee was recorded. Cargos are unknown (*Buffalo Commercial* 1864a, 1864b; *Daily Milwaukee News* 1864). The ship wintered over at Milwaukee (*Daily Milwaukee News* 1865).

On 25 March 1865, a new enrollment was entered at the port of Milwaukee for change in owner. John B. Cole, George T. Cole, and John Mallmann became equal one-third owners of the schooner. John Beekman Cole was the 47-year-old older brother of German Bank president George C. Cole and owner of John B. Cole Boots & Shoes Wholesale & Retail Company. The 33-year-old George T. Cole was his nephew, the son of John B. Cole's oldest brother and land speculator Charles D. Cole. Johannes "John" Mallmann was a 41-year-old baker born in Halsenbach, Prussia. All men resided in Sheboygan. Captain Charles Butler, also hailing from Sheboygan, was named as Master (Bureau of Navigation 1865; Edwards 1868; US Census Bureau 1860). Upon registration the ship was remeasured; the new measurements were recorded as 95.2 feet in length, 24 feet breadth, 8.3 feet depth, and 8 feet height amidships. The ship's capacity under the tonnage deck was calculated at 125.2 tons and capacity of enclosures was calculated at 7.8 tons for a net tonnage of 132.82 tons (Bureau of Navigation 1865).

On 31 May 1865, the schooner ran aground at Ontonagon, Michigan, on Lake Superior laden with a cargo of oats. No other details of the incident or release were found; however, the damage to its hull cost its owners \$310 (*Buffalo Commercial* 1866a; *Buffalo Courier* 1865). On 4 August, *Jennibel* was chartered to bring 100,000 board feet of strips to Chicago with the balance of its cargo comprised of mixed, gang sawed wood. It is not known where the cargo was acquired, but the ship was recorded passing Detroit twice - down and up bound on 9 August (*Chicago Republican* 1865; *Buffalo Daily Republic* 1865). No other records were located for the season.

Captain Butler remained at the helm for the 1866-season. On 13 May 1866, *Jennibel* arrived at Chicago with 83,000 feet of lumber and 30,000 pieces of lath. The ship remained in port at Chicago until 28 May, when it cleared for Buffalo with 7,300 bushels of corn onboard

consigned to A. Sherwood & Company. It took nine days for the transit to Buffalo. There, the ship took on 180 tons of clay for Sheboygan departing Buffalo on 7 June. Another entry at the port of Buffalo was recorded on 29 June with 7,094 bushels of wheat for G.S. Hazard & Company. On its return west with a cargo of salt, the schooner sailed into a gale on Lake Huron and the crew was forced to jettison some of the cargo. The property loss totaled \$1,000 (*Buffalo Commercial Advertiser* 1866b, 1866c, 1866d, 1866e, 1867a; *Chicago Tribune* 1866a).

On 11 October 1866, as *Jennibel* was exiting the Sturgeon Slip in the Chicago River and heading for the lake, the schooner *E.M. Peck* in tow of the tug *Red Jacket* swung into the *Jennibel*, carrying away *Jennibel*'s foretopmast. 3wvc The spar was replaced and *Jennibel* continued to Buffalo. While enroute, the schooner encountered a storm on Lake Huron. Several boarding waves brought water into the vessel's cabin and forecastle. Fortunately, no water entered the hold, but the crew was compelled to jettison 5,000 bushels of grain to keep the ship from foundering. Both the staysail and jibsail were blown away and its bulwarks damaged. The vessel arrived at Buffalo on 1 November, where its remaining cargo was delivered. Loss to ship was recorded at 180 dollars with a 5,000-dollar loss in grain. The insurance payout to the owners totaled 2,000 dollars (*Buffalo Commercial Advertiser* 1866f, 1867a; *Buffalo Daily Republic* 1866a, 1866b; *Chicago Tribune* 1866b; US Customs Service 1874).

At some point during the 1866-season, John Mallmann transferred his one-third share in the vessel to John Thompson. The details of the sale are not known, and the vessel's document was not updated with the new owner's information. In January 1867, John Thompson sold his share to C.M. Olson for \$1,700, and again this sale was not recorded on the enrollment. Then in February, John B. Cole, George T. Cole, and C.M. Olson sold the *Jennibel* to Jokum (alternatively spelled Jokem, Jochum or Joachim) Christensen (alternatively spelled Christiansen or Christianson) of Milwaukee for \$9,000 (*Buffalo Courier* 1867a; *Buffalo Daily Republic* 1867a). Before a new document for the ship could be created under the new ownership, Christensen sold one-eighth share to William Cairns for 1,125 dollars (*Buffalo Courier* 1867b; *Chicago Tribune* 1867). The vessel was enrolled at the Milwaukee Customs House on 15 March 1867. Milwaukee became the ship's new homeport and Captain Benjamin West as Master. The measurements remained the same; however, in the description, the ship was characterized as having a plain head, indicating the figurehead had been removed or lost during the prior two shipping seasons (Bureau of Navigation 1867).

Captain Jokum Christensen was a career mariner, born in 1822 in Norway. His first vessel was the schooner *Souvenir*, of which he was a part owner and operator in 1856. He also purchased interests in the schooners *Republic* and *Elida* before buying the *Jennibel*. He used these vessels to fuel aspirations of becoming a dealer in wood and coal. His partner, William Cairns, worked as a baker and merchant whose business was located on Mineral and Walker Streets in Milwaukee. He also came from a sailing background (Bailey 1863; Gjerset 1979; Thickens 1868; US Census Bureau 1870a).

On 1 April 1867, the ship made its first delivery of lumber to Chicago for the 1867-season from Sheboygan. The ship was next reported clearing Milwaukee on 18 April bound for Manistee, Michigan. The schooner made multiple trips in May, delivering 100,000 board feet of lumber to Milwaukee on each entry and returning to Manistee light. In July, the ship again delivered lumber to Chicago (*Buffalo Commercial Advertiser* 1867b, 1867c; *Buffalo Daily Republic* 1867b; *Semi-Weekly Wisconsin* 1867a, 1867b). The trips and cargoes for the remainder of its season are not known. *Jennibel* overwintered at Milwaukee (*Buffalo Commercial Advertiser* 1867d; *Buffalo Daily Republic* 1867c).

*Jennibel* transported the first cargo of wheat from Milwaukee for the 1868-season, departing on 28 March for Chicago with 7,000 bushels of Number 1 grade wheat for milling (*Daily Milwaukee News* 1868a). On 19 May, the ship was chartered to bring 24,000 feet of hewn timber and 20,000 feet of joist and scantling from Paggot's Mills in Manistee to Chicago. On its return to Manistee on 29 May, it brought 300 bushels of oats. An arrival from Manistee was recorded at Milwaukee on 4 June with 110,000 board feet of lumber. The ship unloaded and cleared light on the same day for Manistee. On 1 July 1868, *Jennibel*'s official number, U.S. 12975 was assigned at Milwaukee. An arrival at Chicago was recorded on 14 August; the cargo was not reported. Similarly, an arrival was recorded at Milwaukee on 29 August, and the cargo was not reported. On 11 September, the ship delivered 100,000 feet of lumber to Milwaukee from Manistee. The vessel was unloaded and cleared with sundries for Manistee on the same day. On 15 September the schooner was chartered to bring 100,000 feet of mixed lumber from Manistee to Milwaukee. *Jennibel* became wind-bound for several days at Manistee waiting out a blow in mid-October 1868 (*Buffalo Commercial Advertiser* 1868a, 1868b; Bureau of Navigation 1867; *Chicago Evening Post* 1868; *Daily Milwaukee News* 1868a, 1868b; *Milwaukee Sentinel* 1868a, 1868b, 1868c). The vessel laid up at Milwaukee for the winter (*Buffalo Courier* 1869; *Buffalo Daily Republic* 1869a).

In February 1869, Jokum Christensen sold a one-eighth interest in the vessel to his oldest son, Christen Christensen for 1,125 dollars. On 2 April, a new enrollment was entered at the port of Milwaukee to reflect the change in ownership arrangement; Jokum Christensen owned six-eighths, Christen Christensen owned one-eighth, and William Cairns owned one-eighth. All men resided in Milwaukee, which remained the ship's homeport; 22-year-old Captain Christen Christensen took command of the vessel (*Buffalo Daily Republic* 1869b; Bureau of Navigation 1869; *Milwaukee Sentinel* 1869a; US Census Bureau 1870a). Christen Christensen was born in Norway and immigrated to Milwaukee with his parents at an early age. He began sailing on the lakes around 1861 and advanced in rank. It is likely that *Jennibel* was his first command and his first partial ownership in a vessel (Gjerset 1979).

On 16 April 1869, *Jennibel* delivered a cargo of 6,688 bushels of corn to Milwaukee from Chicago. The ship was unloaded and departed light on the same day for Manistee. The vessel returned from Manistee with 100,000 feet of lumber on 30 April. The ship then took on 300 bushels of oat and sundries and departed for Manistee on the next day (*Buffalo Commercial*

*Advertiser* 1869a; *Milwaukee Sentinel* 1869b, 1869c, 1869d). On 12 June, when entering Milwaukee harbor, *Jennibel* lost its foretopmast when it encountered the Sixth Street Bridge (*Buffalo Commercial Advertiser* 1869b; Hall 1869; *Daily Milwaukee News* 1869a; *Milwaukee Sentinel* 1869e). The spar was replaced. The vessel was loaded with sundries and departed for Manistee on 15 June (*Milwaukee Sentinel* 1869f). The ship arrived back at Milwaukee on 6 July carrying 100,000 board feet of lumber, unloaded and cleared the same day of Manistee with 40 barrels of flour, 90 bushels of oats and sundries (*Buffalo Commercial Advertiser* 1869c; *Milwaukee Sentinel* 1869g). In August, the schooner was contracted to bring scantling and long length joists from Manistee. The vessel delivered 125,000 feet of lumber on 14 August and cleared the same day light. Another delivery was made on 29 August (*Daily Milwaukee News* 1869b; *Milwaukee Sentinel* 1869h, 1869i, 1869j). In October, another contract came through to bring 100,000 feet of deck loaded timber, and hold-loaded scantling and joist for Mr. Thorsen in Milwaukee. *Jennibel* made a late season run to Chicago on 26 November, and on 30 November, the ship went into winter quarters at Milwaukee (*Buffalo Commercial Advertiser* 1869d; *Buffalo Daily Republic* 1869c; *Daily Milwaukee News* 1869c; *Milwaukee Sentinel* 1869k; *Semi-Weekly Wisconsin* 1869).

*Jennibel* was fitted out for service during the first week of April and departed Milwaukee for Manistee with 300 bushels of oats on 12 April 1870. It arrived at Milwaukee on 18 April with 110,000 board feet of lumber, unloaded, and cleared on the same day for a return to Manistee with 15 barrels of flour and 300 bushels of oats. On 22 April, the schooner took 7,000 bushels of wheat to Chicago from Milwaukee (*Chicago Tribune* 1870; *Daily Milwaukee News* 1870a, 1870b; *Milwaukee Sentinel* 1870a). Two deliveries of lumber from Manistee were made at Milwaukee in May-- on 5 May with 110,000 feet of lumber, and on 21 May with 105,000 feet of lumber, both times clearing on the same day for a return to Manistee (*Daily Milwaukee News* 1870c; *Milwaukee Sentinel* 1870b). Lumber shipments continued to Milwaukee from Manistee 9 June, 13 June, 21 June, 27 June, 22 July, 3 September, 26 September, 11 October, 17 October, 24 October, 31 October, and 27 November. On the ship's return to Manistee, it took oats, wheat, sundries and railroad ties. In the fall months, the ship cleared the same day light (*Daily Milwaukee News* 1870d, 1870e, 1870g, 1870g, 1870h, 1870i, 1870j, 1870k, 1870l, 1870m, 1870n; *Milwaukee Sentinel* 1870c, 1870d, 1870e, 1870f, 1870g, 1870h). On 26 July *Jennibel* sailed light, arriving in Manitowoc, and cleared the same day for Manistee with a cargo of hay (*Manitowoc Pilot* 1870). While in tow of the tug *Parsons* and entering Manistee harbor on the morning of 23 November the schooner struck the bar at the entrance and remained aground for a short time. Upon returning to Milwaukee, the vessel was up in winter quarters (*Buffalo Daily Republic* 1870; *Chicago Republican* 1870; *Milwaukee Sentinel* 1870i).

On 17 January 1871, Captain Christen Christensen married Anne Evensen. As a wedding gift, Jokum Christensen gave an additional share of the vessel to his son. A new enrollment was entered for the ship at the port of Milwaukee on 27 March 1871. The new arrangement showed Jokum Christiansen with five-eighths shares of the vessel, Christen Christensen with two-eighths shares and William Cairns with one-eighths share (Bureau of Navigation 1871; Gjerset

1979). Lumber shipments continued to Milwaukee from Manistee on 17 April, 24 April, 2 May, 15 May, 19 May, 24 May, and 6 June. The ship unloaded 90,000 to 110,000 board feet of lumber and cleared light on the same day. During the second week of May, the ship was chartered by E.B. Simpon & Company to transport a load of 107,923 feet of lumber from Manistee to Racine, Wisconsin (*Milwaukee Sentinel* 1871a, 1871b, 1871c, 1871d, 1871e, 1871f, 1871g 1871h). On 6 June, the ship delivered lumber to Milwaukee from Manistee but cleared the same day light for Frankfort, Michigan. On 12 June, the schooner delivered 100,000 feet of lumber from Frankfort. Additional deliveries were made at Milwaukee from Frankfort on 16 June and 18 July. On 18 July, *Jennibel* cleared light for Kewaunee, Wisconsin and collected a cargo of 100 cords of bark that was delivered to Milwaukee on 25 July (*Daily Milwaukee News* 1871a, 1871b, 1871c; *Milwaukee Sentinel* 1871i, 1871j, 1871k, 1871l, 1871m, 1871n, 1871o, 1871p). In August, the vessel returned to Manistee for a cargo of cordwood that was brought to Milwaukee on 4 August. The ship cleared that same day for Frankfort where it picked up 57,000 feet of lumber and 51 cords of bark, which were delivered on 19 August. The ship continued this route alternating Manistee-Milwaukee-Frankfort-Milwaukee though 13 October, at which point it switched back to exclusively Manistee-Milwaukee for its final two runs of the season (*Daily Milwaukee News* 1871d; *Milwaukee Sentinel* 1871q, 1871r, 1871s, 1871t, 1871u, 1871v, 1871w, 1871x, 1871y, 1871z, 1871aa, 1871ab, 1871ac, 1871ad).

In 1872, *Jennibel* ran exclusively between Manistee and Milwaukee carrying monthly contracts May through November. The vessel was hired for long lumber, short-small lumber, culls, scantling and joists, and kept busy for the entire season. At the beginning of December, the ship was laid up for the season at Milwaukee (*Milwaukee Sentinel* 1872a, 1872b, 1872c, 1872d, 1872e, 1872f, 1872g, 1872h; *Racine County Argus* 1872).

In May and June 1873, *Jennibel* brought lumber and lumber products from Filler City, Michigan, to Milwaukee fulfilling contracts 22 May, 27 May, 12 June, and 28 June (*Milwaukee Sentinel* 1873a, 1873b, 1873c, 1873d). On 30 June 1873, Captain Andrew Nickleson took command from Christen Christensen at Milwaukee. Captain Christensen returned to the helm on 16 July (Bureau of Navigation 1871). The reason for his absence is not known. In August, the vessel made one trip to the eastern lakes and was recorded passing Detroit down bound on 24 August. The reason for the trip, ports, and cargoes are unknown (*Buffalo Daily Republic* 1873). On 31 October, *Jennibel* arrived at Milwaukee from Manistee with 110,000 feet of lumber. This was its last trip of the season (*Milwaukee Sentinel* 1873e).

No port arrivals or clearings for the vessel were located for the 1874-season. The economic depression triggered by the Panic of 1873 (beginning in September 1873) diminished lumber demand for the next five years. As a result, *Jennibel* infrequently left port nor was chartered to chase after cargoes. In 1874, the ship received a B1 insurance rating and valuation of 4,000 dollars. *Jennibel* was reported wintering over at Milwaukee (BLU 1874; *Buffalo Commercial Advertiser* 1874; *Buffalo Courier Express* 1874; *Inter Ocean* 1874).

Similarly, in 1875, cargos were scarce for *Jennibel*. Records of only two trips were located for the season. On 15 May, the ship carried 101,637 feet of boards and strips from Grand Haven, Michigan to Milwaukee. Upon attempting to sail into the harbor at Manitowoc on the evening of 9 November, *Jennibel* struck the South Harbor Pier. The schooner's head gear was carried away. A tug came out and aided in clearing the vessel of further damage from the pier and towed it inside the protection of the harbor (*Semi Weekly Wisconsin* 1875; *Manitowoc Tribune* 1875).

The market continued at a slow pace in 1876, and the schooner waited at the ready in Milwaukee. The economic slump was too long and too much burden for William Cairns to bear. He could no longer wait it out and was forced to sell his share to the Christensen's in April 1876. A new registration for the ship was entered at the port of Milwaukee indicating the change in ownership. Jokum Christensen now owned two-thirds and Christen Christensen owned one-third of the vessel. The waiting game, however, continued. No records of port arrivals or clearings for the vessel were located for the 1876-season (Bureau of Navigation 1876; *Chronicle* 1876; *Inter Ocean* 1876).

With slow profits, there was limited funds to put back into the upkeep of the boat. The neglect was beginning to show on *Jennibel*'s hull and as a result the Board of Lake Underwriters dropped the vessel's insurance rating to B2 and devalued the boat to 2,800 dollars (BLU 1877). For much of the season, the schooner remained ready and waiting for cargo. Despite its reduced insurance rating, in the fall the ship was chartered to haul 22,500 bushels of wheat from Detroit to Buffalo. *Jennibel* arrived at Buffalo on 18 September 1877 for its only recorded trip of the season. By early December, the schooner was tied up in winter quarters in Milwaukee (*Buffalo Commercial Advertiser* 1877; *Buffalo Courier Express* 1877a, 1877b; *Inter Ocean* 1877).

In early May 1878, the vessel was again fitted out and made ready for service. The ship made two trips to Sister Bay, Wisconsin, in May to collect cargoes of lumber for delivery at Milwaukee. These two trips were the only movements the ship recorded in 1878 (*Daily Milwaukee News* 1878a, 1878b).

JENNIBEL,	132	Sheboygan,	Stokes,	Ap'l.'63	Christian & oths.,	Milwaukee,	Not insurable.
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Figure 12. *Jennibel*'s entry in the 1879 *Lake Hull Resister* of the Association for Lake Underwriters.

In 1879, the Association of Lake Underwriter Board of Surveyors declared *Jennibel* "Not Insurable" likely because of the schooner's continued deterioration during the ongoing depression (ALUBS 1879). Only one arrival at Milwaukee was recorded for the vessel for the season. On 11 April 1879, it came into the harbor during the night after a heavy storm. Its movements otherwise went unrecorded for the season (*Milwaukee Sentinel* 1879).

On 11 May 1880, *Jennibel* arrived at Milwaukee from Egg Harbor, Wisconsin. At Milwaukee, Captain M. Jacobson took command from Captain Christensen (Bureau of Navigation 1876; *Daily Milwaukee News* 1880a). The ship brought in another shipment of wood from Egg Harbor on 23 May and on 1 July (*Daily Milwaukee News* 1880b, 1880c). One newspaper reported that on 20 July the *Jennibel* capsized off Two Rivers. This report was not printed or confirmed elsewhere and therefore has not been verified. However, the ship disappeared from the record for several months (*Selinsgrove Times-Tribune* 1880). *Jennibel* was caught out on Lake Michigan on 15-16 October 1880 during a storm that became known as "The Big Blow." The schooner sought shelter in North Bay (Door County) where its anchors dragged, it took on water and went ashore. After the storm, the North Bay was a scene of destruction with reportedly sixteen vessels sheltering there. The schooner *Guido Pfister*, with corn from Milwaukee, was grounded. The schooner *Lem Ellsworth* with coal lost its rudder and went ashore. The schooner *Two Friends* loaded with salt also went ashore and filled with water. The schooners *George Murray* and *Montauk* collided in the tight quarters, damaging both vessels. The schooner *Louisa McDonald* collided with the schooner *Floretta*, and *Floretta* went ashore and filled with water. The schooner *Naiah* parted its anchor chain, broke its rudder, and stranded on the shore. The schooner *T.Y. Avery* lost its foresail, and its canvas was badly damaged. And the schooners *George B. Sloan*, *Shandon*, and *Brunette* also grounded in the bay. By 28 October, *Jennibel* was freed and went straight to the aid of the schooner *Lem Ellsworth*, assisting in lightering its cargo (*Buffalo Commercial Advertiser* 1880; *Chicago Daily Telegraph* 1880; *Chronicle* 1880; *Daily Milwaukee News* 1880d; *Door County Advocate* 1880, 1923).

*Jennibel* loaded cordwood for Milwaukee at Rowleys Bay, Wisconsin, during the first week of May 1881 (*Door County Advocate* 1881a). On 16 September, the schooner cleared Egg Harbor bound to Milwaukee with a hold filled with green wood and a deck load of hemlock bark. The bark was owned by J.J. Berringer and valued at 500 dollars. While sailing through Death's Door Passage on the morning of 17 September 1881, the schooner was struck by a sudden squall and capsized. The crew were on deck and managed to scale the upturned underside of the vessel. The crew of the tug *John Gregory* witnessed the incident from Plum Island where the tug had been anchored. The tug got up stream and rushed to their assistance. They took the men aboard and the capsized vessel was taken in tow, upside down. Near Ellison Bay, the schooner began to settle. Fearing the vessel would sink, Captain Jacobson urged the tug to take the schooner to Sturgeon Bay where the ship could be pumped out and repairs could be made. In rough water, about 4.5 miles southwest of Chambers Island, the weight of the water inside the hull and green wood caused the schooner to sink. In sinking, the *Jennibel* righted itself, but was left in the middle of the shipping lanes with its masts protruding ten feet out of the water. A caution regarding the hazard to navigation for ships trading at Green Bay ports was sent out to the regional newspapers (*Buffalo Courier Express* 1881a; *Chicago Tribune* 1881; *Door County Advocate* 1881b; *Inter Ocean* 1881; Creviere 1997; *Milwaukee Sentinel* 1881a, 1881b).

In the ensuing days, the tug returned to the site of the sunken schooner and made several attempts to raise the ship. The tug pulled on *Jennibel* until the line snapped, and the schooner

was ultimately abandoned after it was determined that the ship's anchors were overboard, impeding the recovery progress. The owners surrendered the vessel's enrollment document at the port of Milwaukee 30 September 1881 stating, "Total loss, foundered Green Bay." No insurance was carried on the ship's hull (Bureau of Navigation 1876; *Buffalo Courier Express* 1881b, *Door County Advocate* 1881c; *Green Bay Advocate* 1881; *Milwaukee Sentinel* 1881b, 1881c).

George O. Spear, owner of the tug *John Gregory*, sent a bill to Christen Christensen demanding 500 dollars for services rendered, but he refused to pay. Spear sued the owners in U.S. District Court to recover the fee (*Door County Advocate* 1882a, 1882b). Captain Christensen offered the sale of the derelict schooner on speculation that it could still be salvaged, but no takers came forward (*Door County Advocate* 1882c). Jokum and Christen Christensen then countersued for 3,000 dollars, the value of their vessel, claiming the ship was lost through negligence of the *John Gregory*'s crew. The litigants appeared before Judge Hamilton in the US District Court in Milwaukee on 8 and 9 November 1882. He took the depositions from both sides and several witnesses. Attorney G.M. Markham represented for George O. Spear and G.D. Van Dycke represented the Christensen's (*Door County Advocate* 1882d; *Milwaukee Journal* 1882).

The case came to trial in February 1885. Captain F.C. Burnham appeared in court to give testimony on behalf of his employer, George O. Spear. Judge Hamilton's decision was made in favor of Spear. The owners of the *Jennibel* were dissatisfied and promised to appeal however no further litigation was pursued (*Door County Advocate* 1885).



Figure 13. Frank Hoffmann (Jim Baye Collection)

In November 1959, a Green Bay commercial fisherman fouled his nets on a large, submerged obstruction off Chambers Island. Unable to retrieve the nets, he cut the lead line and buoyed it, but over winter, the ice floes carried away the marker. The next spring, Chicago scuba diver, Frank Hoffmann, was contacted to locate the obstruction and retrieve the net. Hoffmann purchased a World War II sonar and with a partner initiated an electronic search for the vessel. After nearly two years, he located the derelict vessel in 108 feet of water halfway between Green and Chambers Island. Dives on the shipwreck confirmed that the obstruction was an

intact 95-foot schooner with both masts standing. The lost commercial net stretched across the two masts creating an overhead canopy. Hoffmann became engrossed with the discovery, moved to Door County, and purchased Tracy's Tap Tavern in Egg Harbor, which he turned into a diver's resort called "Anchor Inn." Hoffmann filed for and received federal salvage rights for the vessel and made plans to pump the silt from the ship's cabin to retrieve artifacts that might confirm the vessel's identity. One of the schooner's anchors was raised in 1962, and the second in early 1964 (Boyd).

## **Salvager disappointed As schooner breaks up**

**Efforts to raise the two-masted schooner Jennie Belle from a trench off Chambers Island ended in disappointment Wednesday night when the vessel broke amidships while being raised.**

**Skin diver Francis Felhofer had put slings on the wreck and the Roen tug Purves and barge Lillian worked Tuesday and Wednesday on the project.**

**Wednesday night the derrick on the Lillian raised the schooner from 120-ft. to 80-ft. before it broke up and slid down to 150-ft. depth.**

**The shorter mast of the vessel was raised.**

**According to Frederickson's chart of Door county shipwrecks the Jennie Belle stranded in 1881 with a load of staves.**

**Felhofer was philosophical about the loss. "Chalk it up**

**to experience," he said. He added "That was a mighty expensive mast we brought up."**

**Also disturbed about the affair is Frank Hoffman, proprietor of the Anchor inn at Egg Harbor. The schooner's two anchors flank the inn. Hoffman claims ownership of the wreck by virtue of attaching a buoy to it. He says he located the wreck by sonar and marked the location with a buoy. Hoffman has taken visiting divers and diving clubs to the schooner, following the buoy line down. He went to the scene of the salvage effort this week to protest what he says is a violation of his property rights. Hoffman has sought legal counsel.**

**Felhofer says he doesn't believe Hoffman has any legal claim to the wreck.**

Figure 14. Article in *Door County Advocate* 6 August 1964

Hoffmann began the search for the wreck with partner Francis Felhofer, who left the project early condemning it as "a pointless waste of time and money." However, after Hoffmann located the wreck and filed for salvage rights, he felt that he deserved partial ownership. Felhofer envisioned that the vessel could be raised as a lucrative historical museum and planned to pursue this idea in secret. Working at night and understanding fully that his clandestine activities were illegal, on 2 August 1864, Felhofer and a partner commenced to placing cables around the ship's bow and stern. Roen Salvage Company's tug *John Purves* and the barge *Lillian* with a large derrick crane were brought to the site and attempted to lift the *Jennibel* with

a single cable encircling the bow and stern. Because the *Jennibel* was filled with silt and cordwood, and it had settled into the bottom, considerable suction resisted the lift. As more tension was applied, the schooner buckled. The aft cable tore into the stern and snapped the hull at the aft cargo hatch (*Door County Advocate* 1964a, 1964b; *Appleton Post Crescent* 1970; Boyd).

"Hoffmann took the violators to court, where they were found guilty of infringing on his salvage rights. As the matter of damages arose, the question was posed, 'What was the vessel worth?' No one could assign any meaningful value to an old sunken schooner. There was no legal precedent. Underwater archaeology was a fledgling science, and no helpful expertise was available from that discipline. Thus, the guilty parties had to pay court costs, certain expenses, but no damages of any kind -- a legal slap on the hand" (Boyd).

#### *Site description*

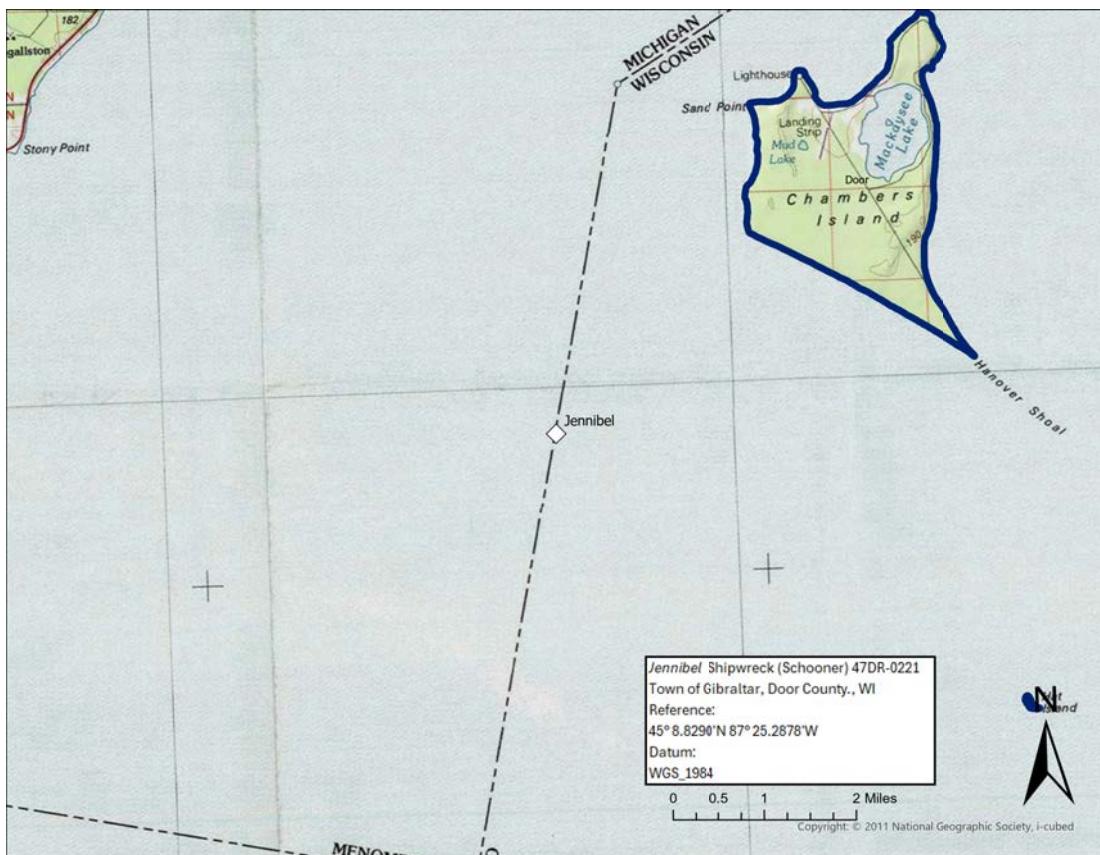


Figure 15. Location of the *Jennibel* site

The remains of the schooner *Jennibel* (47DR0221) sit on a heading of 343 degrees, 3.07 miles southwest of the Chambers Island, in Door County, Wisconsin, and rest in 108 feet of water under the surface of the waters of bay of Green Bay. The vessel is broken aft of its cabin

combing with all components of the ship present less only its ship's wheel, anchors and spars. *Jennibel*'s hull structure, cabin framing, windlass, bilge pumps, centerboard winch, cargo and rudder remain extant on the site.

The *Jennibel* was located when a fishing net fouled on the shipwreck in 1957 and since 1962 the schooner has been a popular recreational dive site in Wisconsin waters. With funding from the University of Wisconsin Sea Grant Institute, Wisconsin Historical Society maritime archaeologists and volunteer divers completed a Phase II archaeological survey 9 - 12 June 2025. Photos and videos were collected, and a scaled photogrammetry model of the wreck site was created by Wisconsin Historical Society volunteer diver Zach Whitrock. Overall measurements were taken from the photogrammetry model and are approximate. All other measurements were taken with a measuring tape on the wreck site. Given the wreck dimensions, location, cargo and comparison of vessel losses in the vicinity based on historic newspaper accounts, the vessel remains were determined to be the schooner *Jennibel*.



Figure 16. Bow of the schooner *Jennibel*.

The shipwreck can be divided into four distinct wreckage sections. The main wreckage measures 95.8 feet overall from stempost to sternpost and consists of the hull intact from keel to deck planking with a portion of the bulwarks extant, deck machinery, cargo hatches, stacked cordwood cargo and rudder. A 17.1 feet-long fragment of the port side hull, representing the port quarter of the ship from below the forward cabin framing includes a portion of the run for

the rudder. This section lays on the bottom 16.4 feet off the port side of the main wreckage. The cabin roof lays upside down 4.0 feet off the starboard side of the shipwreck. The fourth section is comprised of the transom, stern deck, and the ship wheel carriage. This section lays 8.5 feet aft of the sternpost and was carved off the ship when the lifting cable sliced through the vessel laterally at the stern above the rudder blade in 1964.



Figure 17. Load marks carved into *Jennibel*'s stempost

*Jennibel*'s hull is twisted. At the bow the ship leans 11 degrees to port with an even pitch. Amidships, the ship leans 20 degrees to port and is tipped 2 degrees toward the bow. At the cabin combing, the ship leans 18 degrees to port and is tipped 6 degrees toward the bow. The stern fragment that was torn from the ship, sits at a 90-degree angle to the main wreckage, and is balanced on its transom at 48 degrees on an even pitch from side-to-side.

The stempost measures 0.35 feet at its leading edge, 1.0 feet on the sides and 0.8 feet at its aft face. The top of the stempost is in 99 feet of water and disappears into the sand at 108 feet with 9 feet exposed above the sediment. The stempost is raked 16 degrees forward and it leans 14 degrees to port. The stempost is inscribed with load marks on its sides. There are remnants of

yellow paint within these etchings. On top of the stempost is a bowsprit bed. It is 1.4 feet wide and 1.0 feet tall. The bowsprit is not extant.

1.8 feet on either side of the stempost are hawsepipes. They are made of iron and measure 1.1 feet in outer diameter, 0.9 feet inner diameter and 0.25 feet thick. Remnants of the anchor chain penetrate the hawsepipes but are cut outside of the vessel. Both anchors were salvage (one in 1962 and the other in 1964 (Boyd)) and are currently on display at the Menominee Marina in Menominee, Michigan.



Figure 18. *Jennibel's* windlass (Zach Whitrock)

Fragments of the catheads remain on both sides of the bow, 10.4 feet along the bulwarks from the stempost. They are 3.4 feet tall beginning 0.6 feet above the deck. The catheads are tapered to a toe on the bottom end and at the top measure 0.5 feet long and 0.6 feet wide. 0.8 feet down from the top of the cathead is mounted a horizontal bitt 1.4 feet long which was used for securing an anchor by the fluke.

The Sampson post is located 9.8 feet aft of the stempost and measures 1.2 feet by 1.2 feet square. It stands 3.8 feet above the deck. On the forward-facing side, the bowsprit step is carved into the Sampson post at the deck level. It measures 0.4 feet wide, 1.2 feet tall, and is inset 0.3

feet deep. 0.6 feet down from the top of the Sampson post on the forward side is mounted the windlass crosshead. The crosshead is 2.4 feet long and its ends are squared into a socket to accept the windlass handles. No handles are extant. No purchase rods remain attached to the crosshead. The windlass pawl measures 1.1 feet long, 1.1 feet wide, and is attached 1.1 feet down from the top of the Sampson post on its aft side. Both standard knees that supported the windlass remain firmly attached to the deck. A support knee is mounted forward of the windlass on the port side that extends 2.0 feet. The knee on the starboard side is damaged and not complete. The pawl rim at the center of the windlass' barrel measures 1.3 feet wide and is flanked by purchase rims 0.3 feet wide and 0.3 feet thick. The whelps are 1.8 feet wide. The port side whelp has two wraps of chain. The starboard side whelp has one wrap of chain. The carrick bitts and cheeks together measure 1.3 feet long and 0.4 feet wide. The carrick bitts rise 1.5 feet above the windlass barrel. The warping ends measure 1.6 long and 1.2 feet in diameter measured across their distal ends. A metal band to prevent wear and splintering, 0.2 feet wide, encircles the distal ends of the gypsies.

1.4 feet aft of the windlass is the forecastle scuttle. The left side of the scuttle is aligned with centerline of the ship. It measures 2.2 feet long and 2.1 feet wide measured at its inner diameter. Surrounding the opening is a combing 0.25 feet wide and 0.4 feet tall above the deck, with 1.2 feet head ledge into the space below deck. The combing is grooved in 0.1 feet on the port and starboard sides to receive a hatch cover, which is not extant. There are two deck pots on the port side of the forecastle, and one on the starboard side. The port side pots have their covers in place. The starboard pot has remnants of anchor chain that penetrates the deck and continues into the chain locker below.

Foremast chainplates begin 18.1 feet aft of the stempost, and mainmast chainplates begin 60.8 feet aft of the stempost. Four foremast chainplates remain on the starboard side of the ship and measure 2.9 feet long and 0.35 feet wide. No deadeyes remain attached. They have a spacing between the chainplates of 1.6 feet, 1.8 feet and 2.0 feet moving aft. They are fastened at the bottom by a square through bolt and held in place by the rub rail which is laid over the top of the chainplates. On the port side, two foremast chainplates remain, one of which retains its deadeye. Three mainmast chainplates remain on the starboard side, each with deadeyes. The mainmast chainplates are 3.9 feet tall and 0.35 feet wide. There is a space of 2.1 feet between chainplates. The lower ends are fastened with a square through bolt. 1.1 feet up from the bottom, the rub rail extends over the top of the chainplates. On the port side three chainplates remain, but the deadeyes are not extant. Deadeyes measure 0.7 feet in diameter and 0.4 feet thick with three openings for the ropes that are 0.15 feet long and 0.1 feet wide. They sit on a hinge 0.6 feet long and 0.2 feet tall. As no rigging was found associated with the site it's believed that *Jennibel* was rope-rigged.

The ship's two masts have been unstepped. No fragmentary remains are present. Although the ship was found with its masts standing, neither remains on the site, and they were likely salvaged in the 1960s. The foremast hole is located 22.3 feet aft of the stempost and measures

2.0 feet in diameter. The mainmast hole is located 64.6 feet aft of the stempost and measures 1.7 feet in diameter. The deck surrounding the mainmast hole is badly broken. There is a large wooden cleat fastened to the deck 5.2 feet forward of the mainmast hole and centered on the deck 56.3 feet aft of the stempost. It is 3.6 feet wide, 0.3 feet thick and stands 0.7 feet above the deck. Forward of the cleat, 53.8 feet aft of the stempost, is the mainmast traveler. It is an iron bar that measures 1.7 feet wide, 0.25 feet thick, and stands 0.9 feet above the deck.



Figure 19. Deadeye remains along *Jennibel*'s port side hull (Zach Whitrock)

The centerboard access hole is located 41.1 feet aft of the stempost and 3.4 feet aft of the back end of the forward hatch. The opening is oval in shape, and measures 0.8 feet long and 0.3 feet wide. The hole is filled with sediment, making it impossible to determine if the centerboard was stowed or deployed at the time of sinking.

The centerboard winch is located 59 feet aft of the stempost and just forward of the midship hatch. This would have represented the aft end of the centerboard trunk. A chain from this winch would have been used to raise and lower the centerboard. At the winch's base it measures 2.6 feet wide. It stands 3.0 feet off the deck and narrows at its top to 1.5 feet wide. A cylinder, in the center of the apparatus, is 0.9 feet in diameter.

The forward cargo hatch is located 30.6 feet aft of the stempost and measures 7.0 feet long and 6.6 feet wide. A remnant of its hatch cover lays against the port side bulwarks just forward of

the hatch and measures 7.1 feet long and 3.4 feet wide. The midship cargo hatch is located 64.3 feet aft of the stempost, and measures 7.0 feet long and 6.7 feet wide. Combings on both hatches are 0.4 feet wide and rise 0.7 feet above the deck. The forward cargo hatch ledge is 1.7 feet deep. The midship cargo hatch ledge is 1.0 feet deep. The midship hold is obscured by the cordwood cargo which remains stacked within the vessel.



Figure 20. Cordwood stacked in *Jennibel*'s hold (Zach Whitrock)

A fragment of a single action bilge pump is located 1.4 feet forward of the foremast hole. Only the bottom cylinder remains mounted to the deck. This fragment is 0.3 feet in diameter and stands 1.1 feet above the deck. There may be remnants of a second bilge forward of the mainmast hole, but the area is degraded making observation difficult.

Because the bulk of the wreck is intact, measurements of internal construction details for diagnosis were measured on the broken starboard side hull and disarticulated port side fragment. The vessel is double framed with individual futtocks measuring 0.4 feet wide and 0.3 feet thick. Frames have room of 0.8 feet and space of 2.0 feet. Slightly differing measurements were found under the former position of the cabin. Measured on the starboard side near the cabin space, frames were 0.7 feet wide and 0.5 feet thick with 1.0 feet between sets. Ceiling planking measures 0.8 feet wide and 0.3 feet thick. Outer hull planking measures 0.5 feet wide and 0.3

feet thick. Deck planking is 0.45 feet wide and 0.15 feet thick. Deck beams measure 0.4 feet wide and 0.4 feet tall.

Deck knees were not used in *Jennibel*'s construction. Instead, a beam 0.7 feet wide and 0.5 feet tall runs along the length of the vessel on both sides inside its hull. This beam supported the deck beams and would have allowed dimensional lumber to be stacked throughout the entire hold space up to the underside of the deck. The deck is supported down the middle of the ship with deck stanchions 0.7 feet long, and 0.3 feet thick.

One bitt was observed on the port side rail amidships. It measures 0.9 feet wide and 0.7 feet thick and stands 0.9 feet above the rail. At the stern, bitts were located 3.4 feet outbound of the wheel carriage on both port and starboard sides, however, starboard side bitt has pulled out and its location is represented by its hole through the deck. The port side bitt remains. It measures 0.8 feet long, 0.8 feet wide and stands 2.2 feet above the deck. 1.0 feet down from the top of the bitt is a post running fore and aft to cleat lines. This sticks out 0.7 feet on either side of the bitt.

Bulwark construction was measured on the port side where more intact sections are extant. The bulwark is 3.0 feet from the deck to the top of the rail cap. The bulwark stanchions are 0.4 feet wide, 0.4 feet thick, and 2.8 feet tall. The rail measures 0.4 feet wide and 0.2 feet thick. The bulwarks have four covering boards on the inside. The top two are intact and the bottom two are highly fragmentary. Of the intact covering boards, they measure 0.6 feet wide and 0.2 feet thick.

The sternpost measures 0.8 feet square with 4.0 feet exposed above the sediment and surrounding debris. The sternpost leans 14 degrees to port. A fragment of the rudderpost remains and measures 0.85 feet in diameter with 3.9 feet exposed above the sediment. 2.9 feet of the rudder's blade is exposed above the sediment. It is comprised of three timbers. Overall, the blade measures 1.8 feet wide and is 0.7 feet thick. The rudder is turned hard over to port. One iron rudder brace is exposed above the sediment 0.4 feet from the top of the blade.

Four feet off the ship's starboard quarter is the cabin roof. It lays upside down in the sand and measures 17.3 feet by 7.9 feet. The cabin roof has a smokestack hole 0.75 feet in diameter, located 7.5 feet in from its outbound edge and one foot in from its aft facing edge. A skylight hole 1 foot wide by 1-foot-long skylight hole is located 4.5 feet from its outbound edge and 1.5 feet in from its aft facing edge. The skylight is framed 0.2 feet wide and 0.4 feet thick. The cabin roof beams measure 0.3 feet wide and 0.3 feet thick. The beams have 1.3 feet space between beams except for the ends which are 1.7 feet. A long central support measures 0.2 feet wide and 0.3 feet thick. Roof planking measures 0.3 feet wide and 0.15 feet thick. A fragment of the cabin wall lays on the deck of the ship forward of the aft hatch and rests along the port side bulwarks. It measures 5.9 feet by 3.9 feet and consists of 3 frames as well as planking. The frames measure 0.3 feet wide and 0.3 feet thick and are spaced 1.5 feet apart. Fragments of the cabin combing are extant at the break 73.4 feet aft of the stempost, and other fragments have disarticulated with the stern section. The cabin combing is 0.4 feet wide and rises 0.5 feet above the deck. From these fragments we have learned that the cabin was positioned to the starboard side of the vessel

with a companionway on the port side. The companionway down the side of the cabin was 3.7 feet wide.

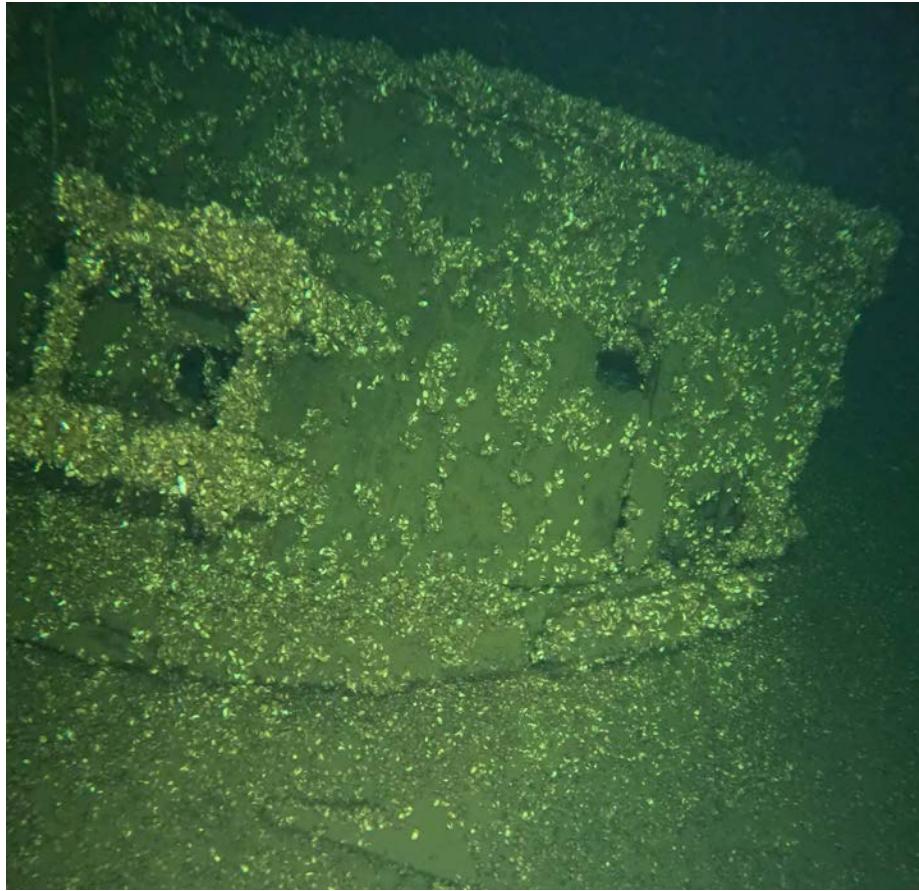


Figure 21. *Jennibel*'s stern deck with steering carriage (Zach Whitrock)

Fastened in the center of the stern deck is the carriage for the ship's wheel. The wheel is not extant. At its base it measures 3.6 feet long and 3.0 feet wide. It is 2.0 feet tall, and it narrows at its top to 2.5 feet wide. The forward and aft panels are 0.4 feet thick. It sits on four bases 0.4 feet by 0.4 feet that rise 0.4 feet from the deck. On the top four corners of the carriage are posts 0.3 feet wide, 0.2 feet long and 0.6 feet tall. Forward and aft panels of the carriage are separated with short beams at the top and bottom that measure 0.15 feet wide, 0.3 feet tall and 1.9 feet long. The carriage is centered over the rudder post hole. The hole measures 1.0 feet in diameter.

Davits extend along the side of the stern fragment, over the transom and into the sand. The davits would have been used to launch the ship's yawl which the crew escaped to following *Jennibel*'s capsizing. Overall, davits measure 6.4 feet long. There is an iron hinge 2.0 feet from the forward end which would have allowed the davit to be retracted. This feature has not been observed on other work-a-day schooners in Wisconsin. Its width forward is 0.6 feet and 0.4 feet thick, and the thickness narrows to 0.2 feet at its distal end. The hinge is 0.2 feet in diameter.

Two fairleads are located at the stern on port and starboard quarters. They are 1.9 feet long, 0.6 feet wide and 0.15 feet tall. There is a pair of through-deck pots located 0.6 feet aft of the cabin combing and 3.3 feet in from the sides. They measure 0.7 feet in outer diameter, 0.4 feet in inner diameter and are 0.3 feet tall above the deck. These may have been for deck lights and use to bring light into the below deck steerage space where there were likely bunks for the crew.

No paint was observed however remnants of caulking was found between deck planking. Its cargo of cordwood remains neatly stacked in the hold and is visible at the break. Remnants of the cargo have spilled onto the sand around the vessel's stern. Artifacts were observed around the site including two single shive blocks, several linchpins and a set of ice tongs. To the port side of the forward hatch is a white hand-applied jug-handled crock with a broken bottom. Many modern, possibly seeded, bottles were located around the side including a brown beer bottle located next to the port side hull fragment, a Ball Mason jar from 1940-60s, located aft of the amidships hatch as well as a square bottle with a seam, all which were too modern for the wreck.

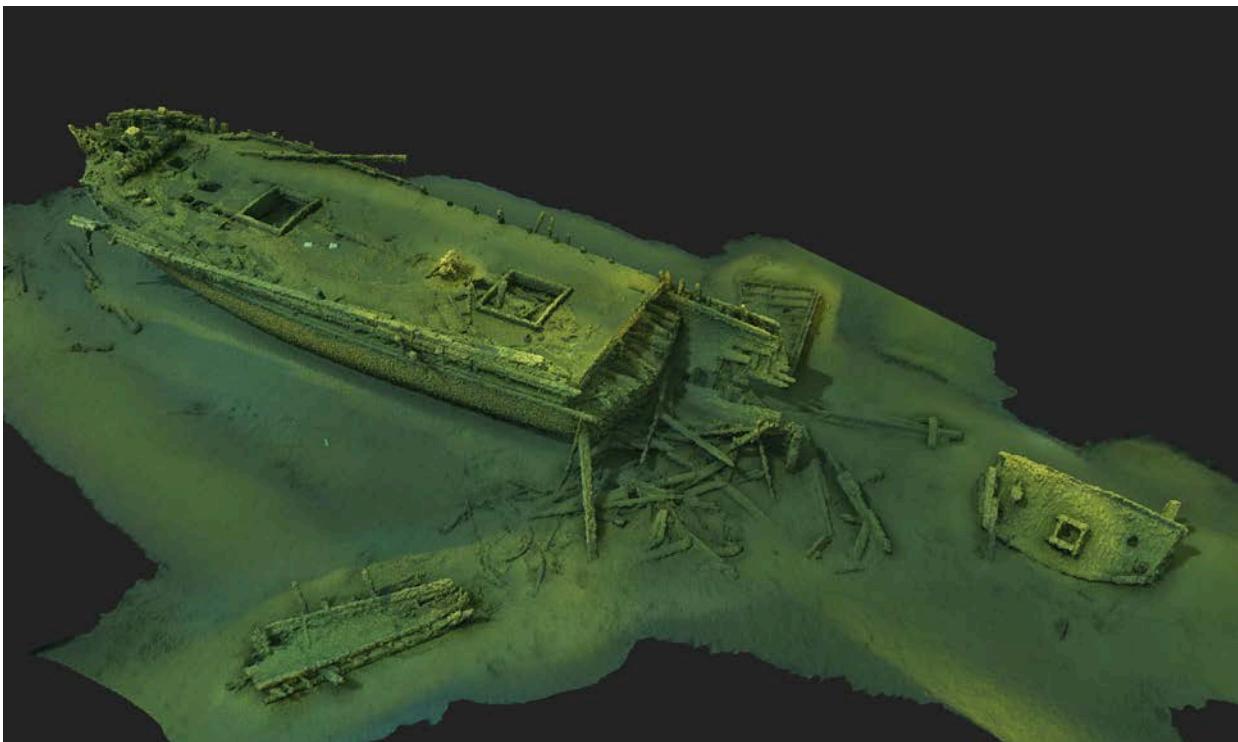


Figure 22. Photogrammetry model of *Jennibel* (Zach Whitrock)

## CHAPTER FOUR

### STEAMBARGE *THOMAS H. SMITH*

The propeller *Thomas H. Smith* was launched near the end of October 1881 from the Rand & Burger shipyard in Manitowoc, Wisconsin. It was launched without its boiler or engine, which required additional work to be completed. It was built as a steambarge for towing and freighting between Sturgeon Bay and Chicago. The vessel was named for one of its owners, Thomas H. Smith, a principal in the Sturgeon Bay firm Leathem & Smith Lumber Company, one of the largest timberland holders around the bay of Green Bay (*Cleveland Herald* 1881; *Door County Advocate* 1881a; *Milwaukee Sentinel* 1881).



Figure 23. Painting of steambarge *Thomas H. Smith* that hung in the offices of Leathem & Smith. Artist unknown (Door County Maritime Museum)

The ship was described as handsome and staunch, built of 3 and 4-inch-thick outer hull planking, and 4-inch-thick ceiling planking, through-bolted and peened with roves on its interior. The boiler and engine were made-to-order in Rondout, New York. The boiler measured 18 feet long and 8.5 feet in diameter with 136 3.5-inch tubes made of 0.5-inch iron. The boiler was constructed so that sawdust could be used as easily as slab wood or other material for fuel. This was a unique feature and a radical change from the standard for fueling steam barges. The engine was a 28-inch by 30-inch high-pressure steam engine, and the ship was outfitted with a

9-foot Sheriffs wheel. With this original machinery, it was capable of speeds from twelve to fifteen miles per hour under favorable sea conditions. Its pilothouse was placed forward, instead of aft as was typical with this class of vessel. Another novel design feature was that the cabins were partially beneath decks; this allowed less exposure to the wind. A cabin was placed over the boiler and machinery, 20 feet by 40 feet in size, which also included space for the officers and the occasional passenger. Between the pilothouse and cabin was 70 feet by 27 feet of open space for freight on its deck intended for shingles and lumber. Its hold, 80 feet by 27 feet by 11 feet deep, was reserved for perishable merchandise. The ship was brined before it went into service with over 100 barrels of salt (*Door County Advocate* 1881a, 1882e; *Milwaukee Sentinel* 1881).

*Thomas H. Smith*'s official number, U.S. 145284, was assigned at the U.S. Customs House in Milwaukee on 27 December 1881. The vessel was registered at the port of Milwaukee on 31 December 1881, listing Milwaukee as its homeport, as Sturgeon Bay was not recognized by the office as an official port. Captain C.B. Packard was named Master. The ship was measured at 130.6 feet long (134 feet overall), 27.6 feet breadth of beam, and 11.1 feet depth of hold. The vessel had a plain head, round stern, and was calculated at 281.11 tons. It received an A1 insurance rating (Bureau of Navigation 1881; *Door County Advocate* 1882i; *Inter Ocean* 1881; *Milwaukee Sentinel* 1881).

By the second week of January 1882, the price fetched for cordwood dropped significantly, and before the end of the month the steambarge was put up in winter quarters in Sturgeon Bay. During February, a sawdust hopper was constructed on Leathem & Smith's wharf to hold up to 55-cords of sawdust. The ship's owners projected that using the sawdust as fuel would save \$40 a day in fuel expenses (*Door County Advocate* 1882a, 1882b, 1882c, 1882d, 1882f).

While attempting to enter the harbor at Milwaukee on the night of 20 March 1882 to seek shelter from a violent storm from the northeast, the towline parted between the *Thomas H. Smith* and a scow it was towing. *Thomas H. Smith* was loaded with 4,000 cedar ties, and the scow carried 2,000 cedar ties from the Harris Pier in Bay View, contracted to parties in Chicago. About 500 ties were lost from the craft as the scow drifted ashore. The scow was released the next day by the tugs *J.B. Merrill* and *H.F. Bues* and taken to Chicago for repairs. The cedar ties that had been lost overboard were collected and sold in Milwaukee (*Door County Advocate* 1882g, 1882h; *Inter Ocean* 1882a, 1882b).

The vessel's next trip in April was completed in record time of four days for the round trip with a scow in tow (*Weekly Expositor Independent* 1882a). The steambarge continued the steady stream of trips with ties, shingles, and lumber to meet the high demand of the Chicago market. In mid-May, Leathem & Smith's new and large scow barge *Mentor* was towed by the steambarge with a cargo of lumber as well as the scow that went ashore previously. The scow arrived at Chicago with a bad list (leaning to one side). At the end of the month *Thomas H. Smith* delivered 2,000,000 shingles and towed two barges - the *Mentor* with 300,000 feet of square timber, and the *Major Bershaw* with 14,000 ties to Chicago in under forty hours (*Door*

*County Advocate* 1882j, 1882k; *Inter Ocean* 1882c, 1882d; *Weekly Expositor Independent* 1882b, 1882c, 1882d). In June, the vessel bested its own record and ran to Chicago with two timber laden schooners in tow in only 22 hours (*Door County Advocate* 1882l, 1882m; *Inter Ocean* 1882e, 1882f; *Milwaukee Sentinel* 1882a).

On 6 August 1882, the steambarge became lost in the fog and went ashore at Winnetka, Illinois. The tug *Union* came to its aid from Chicago and released the vessel on the same day.

Fortunately, the ship sustained no damage. On 15 August, *Thomas H. Smith* dropped the large scow outside of Milwaukee with 16,500 ties and proceeded to Chicago. The scow was then towed into Milwaukee by two tugs. On its next trip, the scow was leaking again, and the steambarge brought it to the shipyard in Milwaukee for repair (*Door County Advocate* 1882n; *Inter Ocean* 1882g, 1882h; *Milwaukee Sentinel* 1882b, 1882c).

At the beginning of October, the *Thomas H. Smith* was repainted. On 11 October 1882, the steambarge moved the schooner *Challenge* from Sturgeon Bay to the shipyard in Milwaukee to replace the mainmast, which had been lost in a collision in the Sturgeon Bay ship canal. During the first week of November, the steambarge collected ties, posts, and lumber at various ports along the shores of Green Bay. Then on 13 November, the ship picked up the barge *Mentor* at Sturgeon Bay and departed for Chicago. While at Chicago, the first mate Thomas Olson fell twelve feet into the ship's hold while attempting to free the fouled whistle-rod. He struck his head and back in the fall and was stunned, but the injury was not fatal. As the season was waning, a partial cargo of cedar was retrieved from Sandy Bay, Kewaunee County, and added to 250,000 board feet of pine timber that was previously rejected for a government pier project in lieu of cedar. These commodities were shipped to Chicago on what was said to be its last run of the season. When the vessel returned on 26 November with 3,100 bushels of corn collected at Milwaukee, it had other winter supplies onboard, and it brought in two of the company's scows. In making this trip, the consort steamed through a storm, and Captain Packard reported, his "boat had about as much as she could take care of in the big blow...the two scows being ugly brutes to handle in such weather and sea." *Thomas H. Smith* was able to complete in one more trip before its season ended. It cleared Sturgeon Bay on 4 December with the schooner *E.R. Blake* in tow, bound for Milwaukee. The trip was made in 18 hours, and it collected addition supplies before returning home (*Door County Advocate* 1882o, 1882p, 1882q, 1882r; *Inter Ocean* 1882i, 1882j; *Milwaukee Sentinel* 1882d, 1882e, 1882f, 1882g; *Weekly Expositor Independent* 1882e, 1882f).

Captain Packard was replaced at the helm by Captain William Boyd for the 1883-season. The ship's registration was not updated to reflect this change. The vessel was overhauled and received fresh paint before being put into commission the second week of April. It made its way through ice from the wharf to the canal and to the lake. It called at Whitefish Bay, Door County, Wisconsin to load wood for Chicago and Milwaukee. *Thomas H. Smith* was the first ship to depart any Green Bay port for the season, and it towed Leathem & Smith's newly acquired barge *Peoria* with them (*Door County Advocate* 1883a, 1883b, 1883c; *Inter Ocean* 1883a,

1883b; *Milwaukee Daily Sentinel* 1883a, 1883b, 1883c, 1883d; *Weekly Expositor Independent* 1883a). The pair made trips hauling lumber, lath, and shingles from Sturgeon Bay and Sheboygan to Chicago and returned with merchandise from Chicago and Milwaukee. These trips took place the last week of April and the second week of May. The return to Sturgeon Bay on the second trip was delayed by weather (*Door County Advocate* 1883d, 1883e; *Inter Ocean* 1883c, 1883d, 1883e; *Milwaukee Daily Sentinel* 1883e).

On its trip to Chicago while towing the company's large scow, the steambarge was compelled to stop enroute at Milwaukee on 6 June when the barge began leaking badly. Thomas H. Smith spent the next day pumping out the scow before proceeding to Chicago. A large fleet of vessels was already in port at Chicago, and the steambarge was delayed an entire week waiting for its cargo of shingles to be unloaded (*Door County Advocate* 1883f, 1883g). In July, Thomas H. Smith made up time accomplishing round trips (including loading and unloading) between Sturgeon Bay and Chicago in only four days. During its trip the last week of July, the steambarge encountered heavy fog and lightning between Sheboygan and Manitowoc. One flash struck so close that Mate Thomas Olson was momentarily stunned (*Door County Advocate* 1883i, 1883h).

The vessel completed three round trips to Chicago in August. A new boiler and machinery for a flouring mill was delivered to Sturgeon Bay on 30 August (*Door County Advocate* 1883j; *Inter Ocean* 1883g, 1883f, 1883h). Upon entering the Sturgeon Bay ship canal on 8 October, the two scows that were in tow of the steambarge broke loose. The steambarge was able to recover one of the scows, but the other needed to be picked up the next day by the tug Thomas Spear. There were two trips to Chicago in November. Merchandise and grains were brought on its return, shipped to both Sturgeon Bay and Leathem, Michigan. A large boiler was delivered in November to be used in the tug Charnley. The ship concluded its season having completed 28 trips and at the end of December, was put up in winter quarters at Sturgeon Bay (*Door County Advocate* 1883k, 1883l; *Inter Ocean* 1883i, 1883j; *Weekly Expositor Independent* 1883b, 1883c, 1883d).

In winter lay-up, *Thomas H. Smith* received a fresh coat of paint. It took on lumber at the Spear Brothers' dock in Sturgeon Bay and departed for Chicago on 18 April 1884 with the schooner *Westchester* and the company's large scow barge in tow. The ships encountered a storm and were forced into Manitowoc to seek shelter. While maneuvering in the harbor, the towline became entangled in the steambarge's propeller, and the crew was compelled to cut it free with chisels. The next morning, shortly after departing Manitowoc, a fire was discovered onboard the *Thomas H. Smith* near the forward hatch. A parcel of rags shipped by Alex Swartz of Sturgeon Bay was ignited by cinders from the smokestack. The blaze was promptly extinguished by the crew. On 23 April, the ship came into Milwaukee to be inspected and received tonnage deductions under the 5 August 1882 Act of Congress; it received tonnage reductions of 83.10 tons for a new net tonnage of 198.10 tons. It then proceeded to the Milwaukee Shipyard to have

a new Sheriff wheel installed at a cost of \$225 plus dockage fees (Bureau of Navigation 1881; *Door County Advocate* 1884a, 1884b, 1884c; *Milwaukee Journal* 1884; *Milwaukee Sentinel* 1884a; *Milwaukee Sentinel* 1884b; *Weekly Expositor Independent* 1884a, 1884b).

In June, July, and August, the steambarge primarily carried shingles to Chicago for Leathem & Smith; however, the demand for the product was low and the ship was forced to lay at the Chicago Lumber Market for several days each trip while sales were negotiated. The vessel then returned to Sturgeon Bay light (*Door County Advocate* 1884d; *Inter Ocean* 1884a, 1884b; *Weekly Expositor Independent* 1884c). On the morning of 17 August, the *Thomas H. Smith* and a barge both loaded lumber at Sister Bay for Clark Brothers & Company of Chicago. The steambarge went ashore on the shoal three-quarters of a mile east of Big Strawberry Island in Green Bay. The passing Goodrich steamer *Corona* attempted to free the ship, but the hawser parted. A messenger was dispatched from Baileys Harbor and two tugs, the *John Leathem* and *W.C. Tilson*, were sent from Sturgeon Bay. As the stern was hung up on the shoal, lumber was transferred to the bow of the ship and onto a scow lighter. *Thomas H. Smith* was successfully pulled free. The steambarge made its way to Sturgeon Bay to replenish fuel and have its timber head and stanchions replaced. The vessel got underway again the next morning. On 25 August, on its return trip to Sturgeon Bay from Chicago with a scow and the schooner *Westchester* in tow, the consort encountered a squall while off Clay Banks, and the steambarge lost one-quarter of its deck load of freight. The line to the *Westchester* parted, and the schooner was left to make port alone (*Buffalo Courier Express* 1884; *Door County Advocate* 1884e, 1884f; *Milwaukee Sentinel* 1884c; *Inter Ocean* 1884c; *Weekly Expositor Independent* 1884d).

The steambarge made weekly trips to Chicago from Sturgeon Bay, in October and November, with loads of timber. The ship returned light in October; in November, it brought back barrels of pork, sundries, merchandise, and salt. On its trip north from Chicago, on 27 November, while off Sheboygan with the schooner *Westchester* in tow, the vessels encountered a wild storm from the southeast, which threatened to sink both ships (*Door County Advocate* 1884g; *Inter Ocean* 1884d, 1884e, 1884f, 1884g, 1884h, 1884i, 1884j, 1884k, 1884l, 1884m, 1884n). In December, the price received for shingles at Chicago increased, and Leathem & Smith used the funds to purchase large quantities of merchandise for Sturgeon Bay. By 18 December, ice started to affect navigation. Six inches formed in the ship canal. *Thomas H. Smith* was required to break ice into Sturgeon Bay to return home, and the vessel was placed in winter quarters (*Buffalo Times* 1884; *Door County Advocate* 1884h; *Inter Ocean* 1884o; *Weekly Expositor Independent* 1884e, 1884f).

The *Thomas H. Smith* received paint inside and out before the start of the 1885-season. It steamed to Chicago with a lumber cargo the first week of May 1885, and on its way north on 10 May, the ship stopped at Milwaukee for a boiler and hull inspection. The inspection delayed the vessel's return to Sturgeon Bay, and for a few days, the local newspaper published its concern for the whereabouts of the ship. The boat delivered one more cargo of cedar posts at Chicago in May (*Door County Advocate* 1885a, 1885b; *Inter Ocean* 1885a, 1885b, 1885c; *Milwaukee*

*Sentinel* 1885a). Multiple trips were made each month from June through November between Sturgeon Bay and Chicago, delivering lumber and returning home light. When the *Thomsas H. Smith* arrived at Chicago on 5 August, it brought in a waterlogged and lumber-laden scow. The steambarge's engine became disabled when the piston bolt sheared off while entering the ship canal on 21 August. The boat was towed to the dock by the tug *Jesse Spalding*. The ship was repaired, loaded with shingles, and cleared Sturgeon Bay on 23 August. On 6 November, the steambarge with the schooner *Westchester* was forced to seek shelter at Milwaukee. Again, on 21 November, *Thomas H. Smith* with the schooner *Peoria* were put into Milwaukee to wait out a storm. On 2 December, the steambarge picked up the schooner *Annie M. Peterson* at Milwaukee and towed the vessel to Sturgeon Bay. Its last departure from Chicago was logged on 27 December, before going into winter quarters at Sturgeon Bay (*Door County Advocate* 1885c, 1886a; *Inter Ocean* 1885d, 1885e, 1885f, 1885g, 1885h, 1885i, 1885j, 1885k, 1885l, 1885m, 1885n, 1885o, 1885p, 1885q, 1885r, 1885s, 1885t, 1885u, 1885v, 1885w, 1885x, 1885y, 1885z; *Marine Record* 1885; *Milwaukee Sentinel* 1885b, 1885c; *Weekly Expositor Independent* 1885a, 1885b).

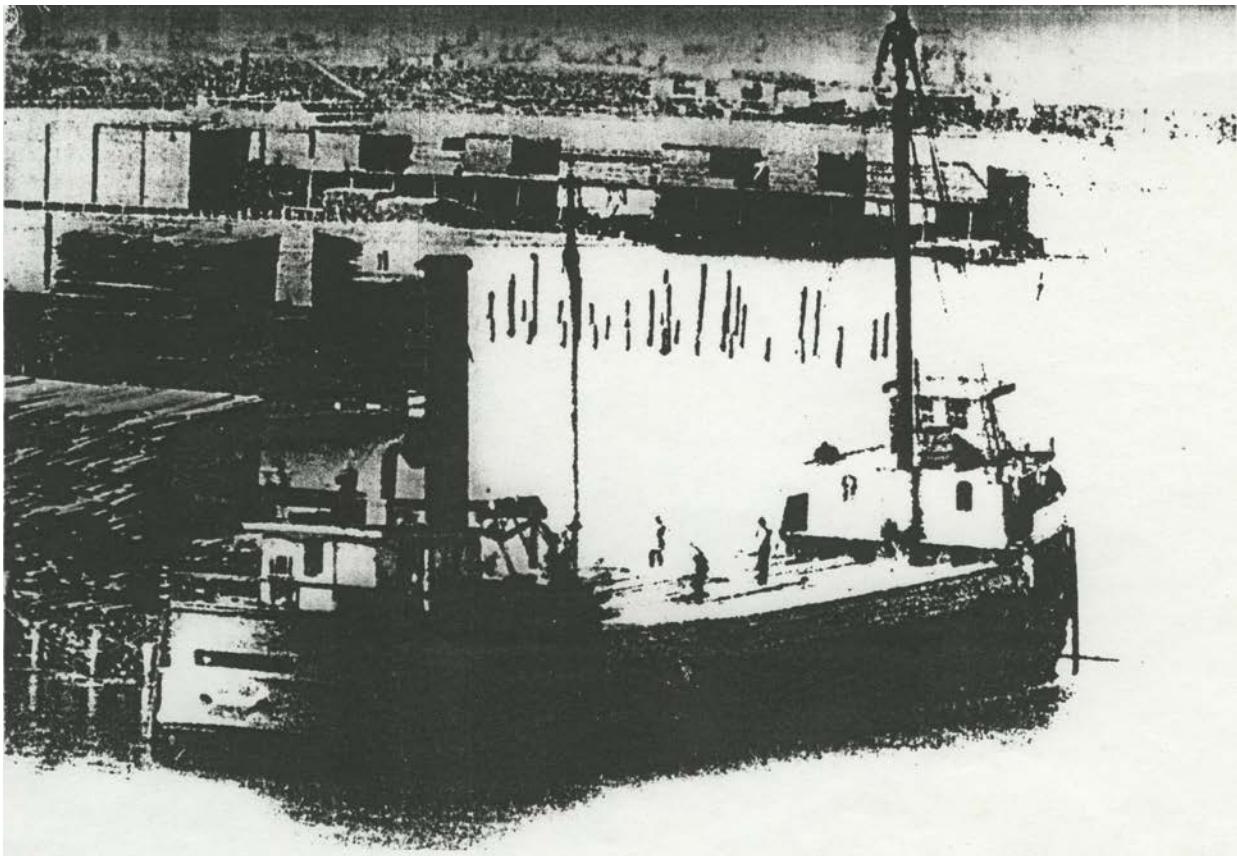


Figure 24. *Thomas H. Smith* - photographer, year, and location unknown  
(C. Patrick Labadie Collection)

*Thomas H. Smith* fitted out and cleared for its first trip to Chicago for the season on 21 April 1886. Captain Boyd retained at the helm, and John Campbell joined him as mate. The vessel shipped shingles and sundries from Whitefish Bay to Chicago and returned to Sturgeon Bay light. On its second trip with shingles, the ship was denied entry at Chicago and was sent to Milwaukee on 11 May for inspection in its home district. The steambarge returned to Chicago the next evening. Unloading at the Chicago Lumber Market was again delayed because of a workers' strike. A violent uprising between the workers and police risked the ship being set on fire. When it was finally the *Thomas H. Smith*'s turn to be unloaded, the workforce was noted to be reduced by more than half the men, which added to the delay. The ship was out for nearly three weeks on this one trip. On its next trip out at the end of May, the steambarge towed the schooners *Peoria* and *Westchester* and delivered cedar ties, posts and shingles to Milwaukee from Leathem, Michigan. The cargo was consigned to parties in Omaha, Nebraska (*Door County Advocate* 1886b, 1886c, 1886d; *Inter Ocean* 1886a, 1886b, 1886c; *Milwaukee Sentinel* 1886).

Loads of lumber and cedar were delivered to Chicago on 10 June, 7 July, 14 July, 21 July, 27 July, 3 August, 18 August, 24 August, 31 August, 7 September, 21 September, 29 September, and 12 October. The steambarge cleared for Sturgeon Bay with oats on July 7 and July 14, then returned light (*Door County Advocate* 1886e, 1886f; *Inter Ocean* 1886d, 1886e, 1886f, 1886g, 1886h, 1886i, 1886j, 1886k, 1886l, 1886m, 1886n, 1886o, 1886p, 1886q, 1886r). The vessel arrived around noon at Michigan City, Indiana, on 27 October. While unloading piles for a harbor improvement project, 24-year-old Mate Walter Halstead was killed. The 38-foot-long logs were very heavy and stacked on the bow, four to five feet above the rail. They were held in place by stanchions made of planking 3 inch thick and 10 feet tall. To unload at the wharf, the stanchions needed to be removed, and Captain Boyd was chopping them down. As the mate approached, he was warned of the danger by Engineer Sartial R. Stephenson, but in that instance, the remaining stanchion gave away and struck the mate on the right side of his head. Death was instantaneous. Colors on vessels across Lake Michigan were lowered to half-mast (*Door County Advocate* 1886g, 1886h; *Inter Ocean* 1886s, 1886t). *Thomas H. Smith* continued lumber deliveries to Chicago on 30 October, 8 November, 24 November, and 4 December. Its final arrival at Sturgeon Bay for the season was recorded on 8 December. The vessel soon afterwards went into winter quarters (*Door County Advocate* 1886i; *Inter Ocean* 1886u, 1886v; *Milwaukee Sentinel* 1886).

*Thomas H. Smith* was the first vessel to break through ice and depart Sturgeon Bay for the 1887-season. On 11 April, it used steam to break through the ice to the bridge. The next day, it reached the docks, and on 13 April, it made its way to the Harris dock in Bay View where it loaded ties for Chicago. Captain Boyd remained in command for the season; George Johnson was named Mate and S.R. Stephenson chief engineer. The steambarge delivered lumber products to Chicago from Leathem, Michigan, on 1 May, 9 May, 14 May, 25 May, and 31 May, with some trips accomplished in as little as 24 hours (*Door County Advocate* 1887a, 1887b; *Independent* 1887a; *Inter Ocean* 1887a, 1887b, 1887c, 1887d). In June, the vessel took on

lumber at Manistee, Michigan, as well as Sturgeon Bay, for Chicago. The barge *May Flower* became a standard tow of the *Thomas H. Smith* in July. The steambarge towed the *May Flower* as well as others out of Fayette and Menominee with cargoes of lumber consigned to the Spear Lumber Company throughout the season. In heavy seas on the night of 8 October, *Thomas H. Smith* was forced to set the barges *Emerald* and *May Flower* adrift eight miles southeast of Sheboygan. The barges were later recovered (*Door County Advocate* 1887c, 1887d, 1887e; *Herald-Palladium* 1887; *Inter Ocean* 1887e, 1887f, 1887g, 1887h, 1887i, 1887j, 1887k, 1887l, 1887m, 1887n, 1887o, 1887p, 1887q, 1887r, 1887s; *Milwaukee Journal* 1887; *Milwaukee Sentinel* 1887a). When sailing light, the weight and position of the steambarge's machinery caused the bow to project high out of the water, making it difficult to maneuver in rough sea conditions. As a result, a water tank was added to the bow of the *Thomas H. Smith* to stabilize the vessel while sailing light. The company announced that over the winter the *Thomas H. Smith* would be lengthened by 32 feet, extending it to 172 feet long to double its capacity and increase its seaworthiness. Alterations to the hull were to be completed at Manitowoc. However, this lengthening never took place as the subsequent enrollment did not reflect this change in length (*Door County Advocate* 1886f, 1887g).

On 19 November, *Thomas H. Smith* departed Sturgeon Bay for Chicago with the scows *Emerald* and *May Flower* in tow. The trio encountered a blinding snowstorm just north of Clay Banks. When off Sheboygan, the tow line to the *Emerald* parted. That vessel succeeded in anchoring two miles off the harbor piers, displayed distress signals, and was successful in summoning the tugs *Sheboygan* and *Nelson*. The *May Flower* anchored off Sheboygan's South Point, and its crew was removed to the *Thomas H. Smith*. The steambarge was successful in navigating inside the piers at Sheboygan where it waited until the storm abated. It then collected the barges and continued to Chicago (*Milwaukee Sentinel* 1887b). The last trip of the season from Sturgeon Bay to Chicago for the trio was recorded on 2 December (*Independent* 1887b; *Inter Ocean* 1887t, 1887u, 1887v).

During the off-season Leathem & Smith began negotiating the sale of the *Thomas H. Smith*. The sale fell through, and on 23 April 1888, the company began renovations to the steambarge's hull at Sturgeon Bay. The upper works were removed. The cabin and crew accommodations were moved to the stern between the machinery and wheel; this raised the after deck by two feet. The transformation allowed for an additional capacity of 100,000 board feet of lumber and made the vessel more seaworthy. Captain John Walker of Grand Haven was put in charge of the vessel. The change in command was not recorded in the ship's enrollment document. W.O. Helmholz came aboard as engineer. With updates completed, the vessel departed Sturgeon Bay on 26 May (*Door County Advocate* 1888a, 1888b, 1888c; *Independent* 1888a; *Inter Ocean* 1888a; *Marine Record* 1888). The steambarge continued making multiple trips each month between Sturgeon Bay and Chicago, besting record times and capacity for loads and towage (*Door County Advocate* 1888d; *Inter Ocean* 1888b, 1888c, 1888d, 1888e, 1888f, 1888g, 1888h). In August, a new spar and topmast was constructed for the *Thomas H. Smith* at Sturgeon Bay. On 31 August, it was installed on the ship, and while in port, its hull was repainted green. For much of the

season, the ship delivered lumber at Chicago and returned light. In November, grain and sundries were carried back to Sturgeon Bay (*Door County Advocate* 1888e, 1888f; *Independent* 1888b; *Inter Ocean* 1888i, 1888j, 1888k, 1888l, 1888m, 1888n, 1888o, 1888p, 1888q, 1888r, 1888s, 1888t, 1888u, 1888v, 1888w, 1888x).

During winter lay-up, *Thomas H. Smith* received new weather strakes and additional repairs to its stern house. The vessel was fitted out and departed Sturgeon Bay for its first trip of the season on 20 April 1889. Captain John Walker remained in command for the 1889-season. Upon entering Chicago during the first week of May, the steambarge assisted in the release of the coal-laden steamer *John B. Lyon* that was stuck in the draw of the South Halsted Street Bridge. Two tugs had worked on it previously, but with assistance from the *Thomas H. Smith*, the vessel was freed (*Buffalo Courier Express* 1889; *Door County Advocate* 1889a, 1889b; *Inter Ocean* 1889a).

When *Thomas H. Smith* arrived at Chicago on 31 May, the steambarge was leaking. Captain Walker sent a telegram to Leathem & Smith stating that the shaft sleeve was broken and water was entering the hold. One of the propeller flukes was damaged causing the casting to wobble. A new propeller was substituted at Milwaukee (*Door County Advocate* 1889c, 1889d). The season continued with multiple trips between Sturgeon Bay and Chicago each month without incident. When off Racine Point (Wind Point) on 5 September, the *Thomas H. Smith* with the schooners *Foster*, *Emerald*, and *May Flower* in tow encountered a storm blowing from the southeast. The strong wind was at their back all the way to the ship canal and aided in a fast steam home. Throughout September the ship returned to Sturgeon Bay with sundries, and in October and November, it brought in shipments of grain (*Door County Advocate* 1889e; *Inter Ocean* 1889b, 1889c, 1889d, 1889e, 1889f, 1889g, 1889h, 1889i, 1889j, 1889k, 1889l, 1889m, 1889n, 1889o, 1889p, 1889q, 1889r, 1889s, 1889t). On 1 December *Thomas H. Smith* left Sturgeon Bay to assist in the removal of the steamer *City of Ludington* from the beach near Eagle Bluff (Ephraim), Wisconsin. It went ashore after a machinery failure. Even with the assistance of the *Thomas H. Smith* and several tugs, the *City of Ludington* could not be removed and was left to freeze in over the winter. When the *Thomas H. Smith* returned to Sturgeon Bay, it was stripped. Everything portable was removed and the steambarge was towed across the lake to Manistee by the tug *George Nelson* for repowering at the Manistee Iron Works Company (*Door County Advocate* 1889f; *Inter Ocean* 1889u).

Captain C.B. Packard returned to the helm of the steambarge for the 1890-season. Martin Nygaard joined the ship as Mate, James Curry as First Engineer, James Oakley as Second Engineer, and Andrew Peterson as Steward (*Independent* 1890a). The *Thomas H. Smith* returned to Sturgeon Bay from refitting at Manistee on 20 April 1890. Leathem & Smith invested \$2,900 in a steeple-compound engine for the ship in which the Manistee Iron Works guaranteed a saving of 33 percent in fuel, and the work of the firemen and stokers was reduced in half. The vessel was able to make the 64-mile trip in six hours and 20 minutes using only four cords of slab wood (*Door County Advocate* 1890a, 1890b, 1890c; *Independent* 1890b).

The new engine was described in the *Detroit Free Press*:

It is a steeple compound but differs from other engines of this type in the position of the cylinders. Instead of having the high-pressure cylinder on top as usual, it has the low-pressure cylinder on top. This gives more space in the engine room and makes the valve arrangement better, and it is claimed that it does away with all of the disadvantages formerly attached to a steeple compound and retains all of the good points. By this means the engineer is able to get at both the pistons very easily for examination or repairs, as the high-pressure cylinder can be drawn up through the low-pressure cylinder, together with the two cylinder covers, without disturbing either cylinder.

The Manistee Iron Works, of Manistee, Mich., were the builders of this engine, and were the first to introduce this novel feature. When the work was completed, the boat made her trial trip from Manistee to Sturgeon Bay, a distance of sixty-seven miles, on four cords of slabs, carrying eighty pounds of steam, and the engine worked perfectly from the start and has never caused a minute's trouble. The cylinders are 19 and 36 by 30 stroke, and with eighty pounds steam she will turn up ninety-six revolutions, cutting off at twelve inches, or 106 revolutions full stroke.

The boat made one trip from Sturgeon Bay to Chicago and return on fifty cords of edgings, costing \$50, while with her former high-pressure engine she burned for the same trip forty tons of coal, costing \$120 or more (*Detroit Free Press* 1890).

On 28 April, the steambarge went to Bay de Noc, Michigan, to pick up a large scow purchased by Leathem & Smith to be used in ice freighting to Chicago. During the first week in May, the company's tug *John Leathem* was running along the pier at Port Washington, Wisconsin, when the tug's propeller struck a rock that broke the vessel's propeller shaft. The incident happened during harbor dredging, but instead of removing the stone from the water, it was dumped alongside the pier. The *Thomas H. Smith* went to the aid of the tug. The steambarge next passed through Sturgeon Bay on 7 May, on its way to Menominee towing a dredge and two scows (*Independent* 1890c, 1890d). On the evening of 15 May, *Thomas H. Smith* departed Sturgeon Bay with a scow loaded with 500 tons of ice in tow consigned to the G.H. Hammond Packing Company in Hammond, Indiana. In heavy seas off Ahnapee the crew felt a sudden lurch and realized the entire cargo of ice slid overboard taking with it the scow's deckhouse, stanchions, and railings. The scow was returned to Sturgeon Bay for repairs (*Door County Advocate* 1890b; *Kewaunee Enterprise* 1890; *Marine Record* 1890).

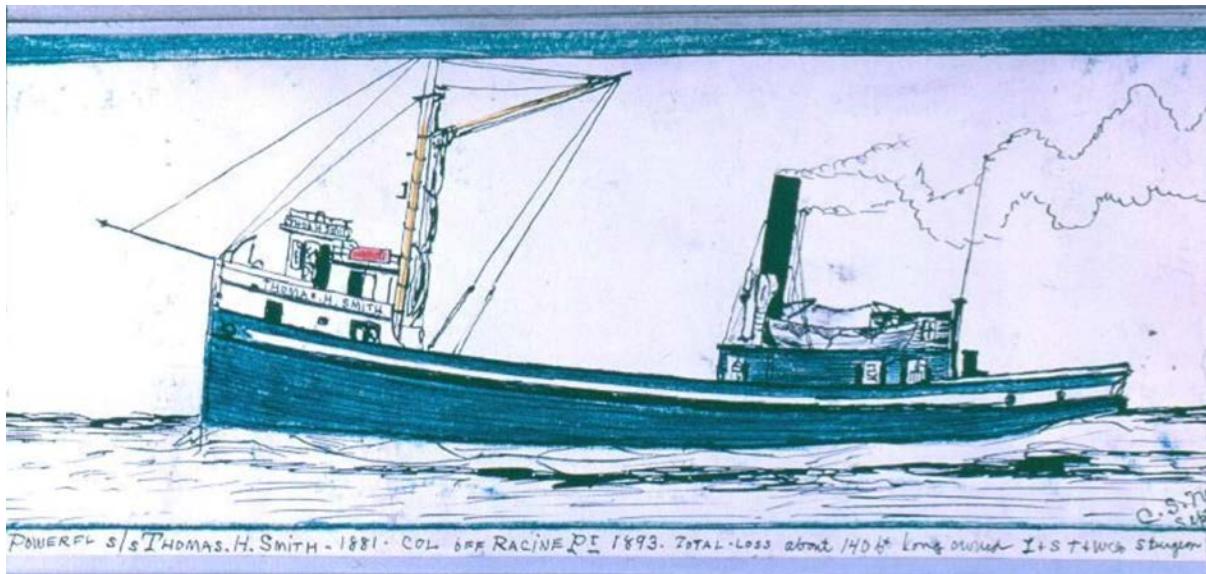


Figure 25. *Thomas H. Smith* drawn by Captain Charlie S. Neff (Fred Neff Collection)

Captain C.B. Packard, Mate Martin Nygaard, and First Engineer James Curry remained with the ship for the 1891-season and Ashley Cofrin came aboard as Assistant Engineer (*Door County Advocate* 1891a). In July, the steambarge was fitted with a wrecking outfit and went to assist in the recovery of the schooner *D. Allen* aground in Death's Door passage (*Buffalo Courier* 1891; *Inter Ocean* 1891a, 1891b). On 26 October, the *Thomas H. Smith* called at Jacksonport and loaded lumber at the Reynolds' mill. It cleared Sturgeon Bay the next day for Chicago with the schooner *John Raber* in tow (*Door County Advocate* 1891b).

With *Thomas H. Smith*'s recent involvement in wrecking, Leathem & Smith made the decision to convert the steambarge into a wrecker. The company made plans to move the engine and boiler amidships and build a housing over most of the deck space (Note: it is unlikely this modification occurred). Leathem & Smith reorganized as the Leathem & Smith Towing and Wrecking Company with their two steambarges, four tugs, one 1,200-ton lighter, two 800-ton lighters, one 400-ton lighter, and two Baldwinsville Centrifugal pumps - a 12-inch and an 8-inch. They established offices on Green Bay and Lake Michigan beginning with Sturgeon Bay and Washington Island. The steambarge *Pewaukee* had false sides added, and the deck was made 8 feet wider. The tug *John Leathem* was sent to Manistee to receive a fore-and-aft compound engine (*Marine Record* 1892a; *Marine Review* 1892a; *Milwaukee Sentinel* 1891).

On 9 April, *Thomas H. Smith* loaded lumber on Washington Island and took the scow *R.H. Becker* in tow to Chicago (*Door County Advocate* 1892a; *Republican* 1892a). The ship stopped at the Milwaukee Customs House on its return north and registered the ship in the name of the new company. All dimensions, tonnage, Master, and homeport remained the same as the previous enrollment (Bureau of Navigation 1892). Upon returning to Sturgeon Bay the vessel took on 2,400,000 shingles at the Lawrence's Dock. The cargo was consigned to the Edward Hines Lumber Company of Chicago by Whiteside, Thorkildson & Shaw (*Republican* 1892b).

On 2 May, the *Thomas H. Smith* recovered the schooner *Mediator* from Naubinway, Michigan. The schooner's seams opened during the winter to a point that a single pump could no longer keep up with the leak. A diver was sent down to check its hull, but no holes were located. A second pump was put on board by *Thomas H. Smith*'s crew for the tow to Chicago for repairs (*Republican* 1892c). In late May, the steambarge grounded outside the piers at Racine. The ship was able to back off and escape without injury. A notice of the low water at Racine was published in trade journals (*Marine Review* 1892b). On 20 June, the steambarge and three tugs formed a wrecking expedition to the schooner *H.M. Scove*, grounded on Middle Shoal in Death's Door Passage the previous winter. The team broke an 11-inch hawser without moving the boat, and it was surmised that the schooner would be declared a total loss (*Milwaukee Sentinel* 1892).

Arrivals were recorded at Chicago with cargoes from Menominee on 9 September and on 22 September. When traveling down the north branch of the Chicago River during the evening of 22 September, *Thomas H. Smith* collided with steamer *Mary Mills*. *Mary Mills*' stern was damaged in the incident and the *Mary Mills* steamed to Manitowoc the next day for repairs at the Burger & Burger shipyard. Another collision occurred on 24 October in the Chicago River. The schooner *City of Grand Rapids* was being towed upriver by the tug *Chicago* at 4 a.m. and was swung into the docked *Thomas H. Smith*. The collision carried away the schooner's jibboom and head gear. The steambarge was not damaged (*Door County Advocate* 1892b; *Inter Ocean* 1892a; *Marine Record* 1892b, 1892c). *Thomas H. Smith* continued regular shipments to Chicago through November. On 30 November, the steambarge joined five Sturgeon Bay tugs in recovery operations for the car ferry *Ann Arbor No. 1* that was stranded north of Ahnapee. With the addition of the steambarge and a wind shift that reduced the waves, the car ferry removal was successful (*Buffalo Enquirer* 1892; *Inter Ocean* 1892b).

Over the 1892-1893 winter, Leathem & Smith hired a considerable force of ship carpenters to make repairs and updates to their fleet. *Thomas H. Smith* received a new deck (*Door County Democrat* 1893a). In June, *Thomas H. Smith* delivered lumber and shingles consigned to three different parties at Chicago and traveled nearly 40 miles in the Chicago River delivering the cargo. Upon the ship's return to Sturgeon Bay on 9 August 1893, it was tied up, and the steambarge *Foster* was placed on the Menominee-Chicago route (*Door County Democrat* 1893b, 1893c; *Inter Ocean* 1893a).

On 25 September, *Thomas H. Smith* went to South Manitou Island, Michigan, to work on the release of the schooner *Adirondack* that had gone ashore during a gale on 14 September and was abandoned. However, nothing could be done for the schooner as it had nearly gone to pieces in the storm (*Door County Democrat* 1893d). On the night of 8 October during a gale, the coal-laden *City of Cleveland* ran hard aground near Shorewood Point. Leathem & Smith sent the tugs *Temple Emory* and *George Nelson*, and the *Thomas H. Smith* with a crew of men to lighter the vessel. The *City of Cleveland* was successfully released (*Journal Times* 1893a, 1893b; *Milwaukee Sentinel* 1893). During the third week of October 1893, *Thomas H. Smith* collected

50 tons of coal from Manitowoc and delivered it to the Leathem & Smith coal dock (*Door County Democrat* 1893e).

At 3:30 a.m. on 11 November in a dense fog three miles northeast of Racine Point (Wind Point), the steel steamer *Arthur Orr* collided with and sank the *Thomas H. Smith*. *Thomas H. Smith* was running light with the schooner *William Aldrich* in tow and bound from Chicago to Menominee. *Arthur Orr* was steaming from Milwaukee to Chicago. *Thomas H. Smith*'s speed was checked to half of its usual speed (about 5 miles per hour), and in the fog, it was constantly and regularly blowing its fog signal until the collision. The crew of the *Thomas H. Smith* heard fog signals from the *Arthur Orr* ten minutes before the collision, about one mile to the north of the steambarge as it was approaching on the port bow. As soon as the signals were heard, Captain Thomas Olson was called on deck and the steambarge's speed was again stepped down and vessel signaled a port to port passing. The *Thomas H. Smith* continued its fog signals and gave one blast, but the *Arthur Orr* answered this by blowing two blasts. The *Thomas H. Smith* answered with one blast and put the helm hard to port. Neither captain, however, saw the other until they were within 300 feet. As the dark figure of the other vessel emerged from the fog, the men aboard the *Thomas H. Smith* saw both red and green lights and knew a collision was imminent. *Arthur Orr* reversed its engines, but it was too late, and the *Thomas H. Smith* was struck on its port side amidships, cutting into the ship by three feet. Both steamships began blowing alarm signals. A steampipe was also severed and escaping steam contributed to the fog and confusion. Captain Thomas Olson called for the crew to take to the yawl. The *Arthur Orr* also lowered a lifeboat and sent it in search of the *Thomas H. Smith*'s crew. The crew of twelve (Captain Thomas O. Olson, Mate John Colwell, John Minor, Edward Weber, Frank Larson, Peter Torald, Henry Mashia, Henry Sorenson, Alexander Maxwell, George Hebard, Iver Voges, and Antoine Peterson) pulled the yawl away from the doomed steambarge and made their way to the *Arthur Orr* where they were taken aboard. The crew escaped with their clothes, and one carried the ship's strongbox with money and papers. *William Aldrich* cast off its towline as soon as the collision occurred but stood by and proceeded alone after ascertaining the safety of the *Thomas H. Smith*'s crew. Captain C.J. Montaque of the *Arthur Orr* was asked why he didn't take the damaged steamer in tow into shallow water. He responded that it was for fear of running up on the nearby reefs off the point. *Thomas H. Smith* stayed afloat for nearly an hour. Around 4:30 a.m. the stern slowly sank, its bow shot up in the air, and the ship went to the bottom in 90 feet of water. The crew of the *Thomas H. Smith* was taken to Chicago where depositions were acquired. Part of the men took passage to Sturgeon Bay on the *A.E. Shores* and the balance caught a train to Milwaukee where they took passage on a Goodrich steamer as far as Ahnapee (*British Whig* 1893; *Buffalo Courier Express* 1893; *Detroit News-Tribune* 1893; *Door County Advocate* 1893; *Door County Democrat* 1893f; *Inter Ocean* 1893b; *Marine Review* 1893; *Milwaukee Journal* 1893; *Racine Journal* 1893a, 1893b).

Later that morning, the steamer *Lehigh* encountered the debris field, including two empty yawls with the name "Thos. H. Smith." That afternoon the tug *Edward Gillen* towed the Racine lifesaving station's surfboat to the place where the steambarge had been lost. Nothing was found but pieces of vessel, pails, and other rubbish (*Journal Times* 1893c; *Racine Journal* 1893a).

*Thomas H. Smith* was valued at \$18,000 and was insured for fire damage and loss only. On 16 November, Leathem & Smith libeled C. W. Elphieke & Company, owners of the *Arthur Orr*, for \$25,000 for loss of the steambarge. They claimed that the *Arthur Orr* was at fault for leaving Milwaukee in a thick fog on a route frequented by many vessels while maintaining full speed, in failing to take the steamer in tow after the collision, in not keeping out of the way of the *Thomas H. Smith* that had right-of-way, in giving the *Thomas H. Smith* a cross-signal of two blasts when it was its duty to answer with one blast and to port its helm, and for not keeping sufficient lookout (*Door County Advocate* 1893; *Manitowoc Pilot* 1893). Because of the complaint, the *Arthur Orr* should have been seized by Marshals at the dock, however, David Vance & Company signed a \$25,000 bond, and the ship was allowed to continue sailing (*Door County Advocate* 1893).

The collision was investigated by United States local inspectors of steam vessels, William Fitzgerald and Daniel W. Chipman. Their report made to Supervising Inspector C.H. Westcott on 30 December 1893 concluded that:

"The testimony in this case is so conflicting that we are unable to decide which steamer was in the fault, but the evidence sustains us in our conclusions that rules 3 and 4 of the pilot rules for lakes and seaboard have been violated by the officers of the above steamers, they having given cross passing signals and other than fog signals in a dense fog instead of complying strictly with said rules. For the above violations we have suspended the master and pilot licenses of C.J. Montague, master of the steamer *Arthur Orr* and Thomas O. Olson master and John Colwell mate of the steamer *Thomas H. Smith* for a period of sixty days from this date" (*Door County Advocate* 1894a; *Door County Democrat* 1894; *Marine Record* 1894a, 1894c; *Marine Review* 1894).

Following the punishment handed down to the vessel masters, a rumor circulated in the *Door County Advocate* that C.W. Elphieke offered a settlement to Leathem & Smith of \$10,000 that was rejected. C.W. Elphieke then made a statement that "overtures for a compromise were out of the question" and that "the case must be decided upon its merits in the courts" (*Door County Advocate* 1894b; *Marine Record* 1894b). The *Thomas H. Smith*'s enrollment was surrendered at the port of Milwaukee on 31 December 1894, indicating the vessel was a total loss (Bureau of Navigation 1892).

The suit brought by Leathem & Smith against C.W. Elphieke & Company commenced on 27 April 1895 in the United States District Court at Milwaukee with Greene & Vroman representing the plaintiffs and Charles E. Kremer representing the defendants.

(CAT. NO. 363.)		149
WRECK REPORT.		
1. Date, (hour of day, day of week, day of month, year.)	30 O'clock AM Saturday Nov 11, 1893	
2. Nationality, rig, and full name of vessel, (wood or iron.)	American Sloop <i>Thomas H. Smith</i> wood	
3. Tonnage.	198 Tons register	
4. Age.	17 years built in 1881	
5. Port where registered.	Milwaukee Wis	
6. Official number.	145284	
7. Name and residence of master.	Thos. O Olson Sturgeon Bay, Wis	
8. Name and residence of owner.	Leathem & Smith " " "	
9. Port last sailed from and date of sailing.	Chicago Nov 10, 1893 at 3 PM	
10. Where bound.	Menominee, Michigan	
11. Number of passengers.	None	
12. Number of crew, including masters, mates, etc.	Twelve men	
13. Number and names of persons lost.	None	
14. Estimated value of vessel.	17000.00	
15. Estimated value of cargo.	None	
16. Nature of cargo.	None	
17. Had vessel a deck-load?	No	
18. Was she overladen?	No	
19. Weight of cargo.	None	
20. Estimated loss or damage to vessel.	Total loss	
21. Estimated loss or damage to cargo.	None	
22. Amount of insurance on vessel.	None	
23. Amount of insurance on cargo.	None	
24. Locality of casualty, (giving precise point of land or other obstruction in case of stranding.)	About 465 miles off Racine point	
25. Nature of casualty, (whether foundering, stranding, or other disaster.)	Collision with Steamer <i>Arthur Orr</i> of Chicago	
26. Cause of the casualty, (specifying particularly.)	Very thick and foggy weather	
27. Force of wind, state of weather and sea; if at night, whether moonlight, starlight, or dark.	Wind light variable, night foggy and very dark	
28. By whom and to what extent assistance was rendered.	Blew one whistle fastened to the wheel and sounded general alarm	
29. State, in detail, measures taken to avoid casualty.	By the calling boat <i>Arthur Orr</i> of Chicago, and bound for Chicago	
30. Remarks. (All particulars not included in the foregoing will be here stated.)	After the collision all hands of the <i>Thomas H. Smith</i> were taken on board the <i>Arthur Orr</i> , and brought to Chicago, where they arrived Nov 11, 1893	
Nov 11 - 1893		
Thos. O. Olson Master		

Figure 26. Wreck report of the loss of the *Thomas H. Smith*  
(Courtesy of the Association for Great Lakes Maritime History)

It was decided that the "*Arthur Orr* had been traveling too fast and was at fault in that it did not stop when it failed to clearly understand the *Thomas H. Smith*'s signals. On the other hand, the *Thomas H. Smith* failed to stop when it heard the *Arthur Orr*'s signals, and instead, had ported and swung across the *Arthur Orr*'s bow. *Thomas H. Smith* should have waited until it fully understood the *Arthur Orr*'s signals before changing course. Under the circumstances the judge could not hold that it was a maneuver in extremis, which could be excused. An interesting point was raised by counsel for the *Thomas H. Smith* to prove negligence and responsibility on the part of the *Arthur Orr*. The collision occurred, as stated, in a dense fog. The *Thomas H. Smith* left Chicago before the fog cleared, but the *Arthur Orr* left Milwaukee in the thick of it. The point raised was that the master of the *Arthur Orr* had been guilty of negligence in leaving port in a fog. Judge William Henry Seaman decided that it was not negligence. He said that he was satisfied that leaving port in a fog could not be held to be *per se* negligence. The law as he understood it allowed a vessel to leave in a fog but constrained it to the utmost care to avoid collisions."

No decision was reached, but Judge Seaman requested Commissioner Edward Kurtz, Clerk of the United State District Court at Milwaukee determine the value of the *Thomas H. Smith* and its capacity to earn money for the company (*Door County Advocate* 1895, 1896a; *Marine Review* 1895; *Marine Record* 1895a, 1895b).

Although Leathem & Smith fixed the value of the lost vessel at \$25,000, Judge Seaman agreed with the report submitted by Commissioner Kurtz which determined the value of the lost vessel at \$20,000. The judge ordered the owners of the steamer *Arthur Orr* to pay Leathem & Smith Towing and Wrecking Company half of the value of the *Thomas H. Smith* or \$10,000 damages with interest from 11 November 1893. The owners of the *Arthur Orr* were also ordered to pay half of the expenses for the lawsuit (*Door County Advocate* 1896b; *Evening Wisconsin* 1896; *Marine Record* 1896). In April of 1897, rumors circulated about the possibility of a wrecking expedition organized to raise the *Thomas H. Smith*. The expedition never came to fruition (*Advocate* 1897).

#### *Site Description*

The remains of the canaller *Thomas H. Smith* (47 RA350) sit on a heading of 310 degrees, 6.12 miles northeast of the Windpoint Lighthouse, in Racine, Wisconsin. The shipwreck rest in 90 feet of water under the surface of Lake Michigan. The remains of the steambarge *Thomas H. Smith* were located during NOAA Office of Coast Survey bathymetry project OPR-Y298-KR-23 for Southwestern Lake Michigan, Wisconsin and Illinois, conducted in 3 nautical miles east of Windpoint North Shoal between 5 August 2023 and 5 October 2023. The wreck site was initially investigated by archaeologists from Wisconsin Historical Society on 24 June 2024. Photos and videos were collected, and a scaled photogrammetry model of the wreck site was created by WHS volunteer diver Zach Whitrock. With funding from the Racine Lighthouse and Historic Preservation Society, Wisconsin Historical Society (WHS) maritime archaeologists

and volunteer divers completed a Phase II archaeological survey in May 2025. Overall measurements were taken from the photogrammetry model and are approximate. All other measurements were taken with a measuring tape on the wreck site.

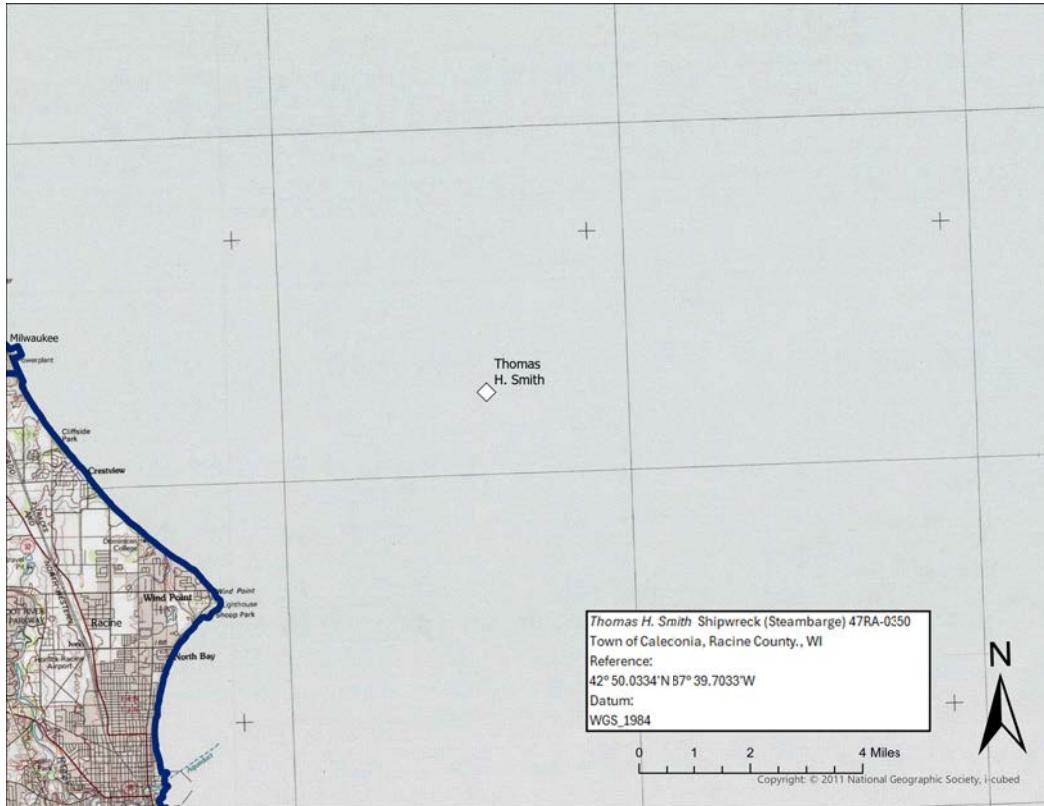


Figure 27. Location of *Thomas H. Smith*

The reported measurements of the ship are 130.6 feet long and 27.6 feet wide with 11.1 feet depth of hold. Overall, the shipwreck measures 140.1 feet from stempost to stern; this is 10 feet longer than the historic measurements, but the vessel is broken forward of the boiler, a separation likely caused by the *Arthur Orr* tearing through the vessel's hull amidships. A beam measurement of the shipwreck at its widest intact point, is 27.8 feet. The most significant damage in the collision occurred at the bow of the ship. Although remaining connected by the ship's floor, the wreck is broken into four distinct sections. The length of the starboard side hull measured from the stempost to the break is 94.6 feet long. The port side hull is broken into two pieces. The length of the forward port side section is 55.2 feet. The length of the port side amidships section is 35.7 feet. The stern section remains complete from in front of boiler to the stern and measures 58.9 feet long. The stern of the vessel sits on an even keel with a 2-degree pitch forward.

The remains are well-preserved due to its depth in the cold waters of Lake Michigan. All of *Thomas H. Smith*'s deck machinery, boiler and engine remain on the site. Given the wreck dimensions, location, damage consistent with the accident, matching engine builder's plate, and

comparison of vessel losses in the vicinity based on historic newspaper accounts, the vessel remains were determined to be the steamer *Thomas H. Smith*.

The stempost is standing upright, with 17.6 feet exposed above the sand. It is 82 feet deep at the top of the stempost and 96 feet deep at the lakebed. The false stem is 0.2 feet wide at its forward edge and 0.8 at its aft edge. Behind this is the stempost measuring 0.8 feet wide and 0.6 feet thick. These posts are broken off with the starboard side hull and are leaning 36 degrees to starboard and 2 degrees forward. Deadwood extends 9.4 feet behind the stem to the cutdown line. At the base of the stempost is a breast hook made up of two filling timbers fastened together aft of the stempost assembly. Its forward edge is 1.0 feet, with 3.0 feet on the sides and 5.5 feet across the aft edge. The combination of the stempost assembly, deadwood, and the filling timbers define the cut of the bow. At the aft edge of the filling timbers are two lodging knees. The knee bodies measure 2.7 feet long with a 2.0 feet arm and are 0.6 feet thick at its throat. The arms end in a docked foot, where the bodies end with a toe.

One wooden stock anchor is balanced against the ceiling planking of the starboard side hull at the bow. The wooden stock is 8.0 feet long and 1.0 feet in diameter at its widest. The shank is 5.5 feet long and it measures 5.0 feet across the crown from bill to bill. Each fluke measures 1.6 feet long and 1.4 feet wide. The anchor's eye raises 1.0 feet above the stock and through it is struck the anchor ring, 1.1 feet in diameter (outer dimension) and 0.2 feet thick. The framework for the cargo door or lumber port is balanced against the starboard hull aft of the anchor. It has an opening measuring 4.0 feet wide and 2.0 feet tall.

The Sampson post is 19.1 feet aft of the stempost. 10.2 feet of the Sampson post is visible above the sand, and it leans 47 degrees aft and is twisted 18 degrees to port. The Sampson post measures 1.3 feet square. One foot down from its top and attached to the forward side is the windlass crosshead. One purchase rod remains attached to the crosshead on the port side. One hand lever 4.0 feet long and 0.05 feet thick is deployed and remains connected to the starboard side of the crosshead. The hand lever is divided at its end making a handle 1.5 feet wide. 2.6 feet down from the bottom of the crosshead and attached to the aft side of the Sampson post is the windlass pawl. The pawl measures 1.2 feet long, 1.0 feet wide and 0.2 feet thick. The windlass barrel lays under the Sampson post. Both standard knees that supported the windlass have been pulled from the deck as the apparatus rolled aft. The pawl rim at the center of the barrel measure 1.6 feet wide and is flanked by purchase rims 0.4 feet wide and 0.4 feet thick. The whelps are 2.3 feet wide. The port side whelp has 3 wraps of chain. The chain extends forward though the port side hawsepope and disappears in the sediment. The starboard side whelp has 2 wraps of chain. The chain passes over the top of the standard knee and into the sediment. It appears again below the anchor, passes through the starboard side hawsepope to the outside of the ship and loops up, attaching to the anchor ring. The carrick bitts and cheeks measure 0.6 feet wide. The starboard warping end (which is the only one exposed) measure 1.5

long and 1.2 feet in diameter measured across its distal end; the port side warping end is extant but buried in sediment.



Figure 28. Thomas H. Smith's starboard side anchor and stem, looking forward

Several hanging knees that would have support the deck beams remain- eleven knees on starboard side and five on port side. The knee's body measures 3.4 feet long terminating in a toe. Its arm is 2.4 feet long, ending in a docked foot. It measures 1.3 feet across its throat. The knees are 0.45 feet sided. Spacing is irregular between extant knees, likely to accommodate hatches. Where there is regularity, they have 2.0 feet and 3.0 feet between knees. Deck beams measure 0.45 feet wide and 0.45 feet thick. Ceiling planking measures 0.6 feet wide and 0.3 feet thick; outer hull planking measures 0.8 feet wide and 0.2 feet thick, and deck planking measures 0.4 feet wide and 0.1 feet thick.

A set of bitts is extant 17 feet along the port side rail. Each of the bitts stand 1.0 feet above the rail and are composed of the two members of the bulwark stanchions measuring 0.45 wide

individually, 0.7 feet wide overall and 0.4 feet thick. The bitts are 1.6 feet apart. Leaning up against the port side hull just aft of the break is a fragment of the ship's topmast. It measures 17.3 feet long.



Figure 29. *Thomas H. Smith*'s Sampson post and windlass, looking from the starboard side across to the port side of the vessel.

At the bow the rail measures 1.5 feet wide and 0.2 feet thick. The deck plate is composed of two boards, each 0.8 feet wide and 0.3 feet thick. There is a square notch between the board that allows the bulwark stanchions to pass through. The bulwark stanchions rise 3.0 feet above the deck plate. Four covering boards, 0.6 feet in width are fastened to the outside of the stanchions. The bulwarks at the stern rise 1.9 feet above the poop deck. A monkey rail is added on top, 0.6 feet wide and raised the stern 0.8 feet above the bulwark and rail. The monkey rail starts at the poop deck and is continual around the stern. On the outside of the vessel, a rub rail wraps around the stern. It measures 0.6 feet wide and 0.2 feet thick. It is located 5 feet down

from the top of the monkey rail and sits at the level of the sand. Both the propeller and rudder of the ship are completely buried.

The ship's return flue firebox boiler is located 90.4 feet aft of the stempost. The boiler is 18.3 feet long and 8.3 feet wide, with 6.0 feet exposed above the sediment. It has 129 boiler tubes that measure 0.25 feet inner diameter. The firebox is at the forward end of the boiler as there are two depressions in the sediment at the front end of the boiler likely caused by two firebox doors which remain covered by sand.



Figure 30. Thomas H. Smith's boiler, looking aft

On top of the forward end of the boiler are various disarticulated and loose piping and valves. There is an oval manhole located on top that is 2.9 feet forward of the steam dome. The steam dome of the boiler is 4.5 feet in diameter, and its top is 5.2 feet above top of boiler. On the port side of the steam dome there is a lever-arm safety valve with a weight extant on the distal end. The safety valve lever is 3.9 feet long. Aft of the safety valve is the main steam pipe from the

boiler to the engine which consists of a 90-degree elbow pointing up and a 90-degree elbow pointing aft, followed by a globe valve. The pipe is asbestos wrapped with 0.6 feet outside diameter.

There are four boiler stays on top of the boiler. Two of the front mounts are 3.3 feet aft of the front of the boiler and are 1.2 feet apart. The rear mounts are 3.6 ft forward of the aft end of the boiler and are 1.2 feet apart. Both rear mounts and the forward port side mount retain part of the stays and turnbuckles.

Deck stanchions flank the boiler and continue forward (although toppled) and would have supported the deck alongside and separate the fuel bunkers from the boiler space. Eight stanchions remain on either side of the firebox. 4.6 feet of the stanchions are exposed above the sediment. They measure 0.6 feet wide and 0.4 feet thick with 2.8 feet space between stanchions where there is regularity. The stanchions alongside and forward of the boiler define the area of the stokehold, 6.2 feet forward of the boiler. Outside of these would have been the fuel bunkers for coal or slab wood.

It's likely that the engine operator's platform was aft of the boiler/forward of the engine, but it's estimated that the boiler slid 12 to 18 inches aft, indicated by the broken boiler stays. Its location is obscured, and its height was unable to determined.

Aft of the boiler is the vessel's steeple compound engine. The top of engine is at 85 feet of water and stands 10 feet above the surrounding deck. The engine's high-pressure cylinder is on the bottom, with the low-pressure cylinder stacked on top. The main steam pipe enters the high-pressure steam chest on the port side. The main steam pipe is bent at the throttle valve fitting. This is likely due to the boiler sliding aft in the sinking event and an indicator that the vessel sank by the stern. The intermediate steam pipe exits the high-pressure steam chest immediately aft of the inlet. Steam travels up to the port side of the low-pressure steam chest with the low-pressure exhaust exiting the starboard side. It then travels downward to a presumed condenser, which was not observed and is likely buried.

The engine support columns are round and 0.6 feet in diameter for 4.0 feet below the high-pressure cylinder. Downward from the deck level, they are square. The engine has a Stephenson link valve gear, mounted forward of the connecting rod behind the engine support columns. It is controlled by a rock shaft, 0.3 feet in diameter, mounted below the high-pressure cylinder bedplate on the starboard side. On the forward end of the rock shaft is a fitting on the top of which has a rectangular socket to accept a lever for manual control. On the front of the engine between the high pressure and low-pressure steam chests is mounted a reverser lever which is hanging downward. At its lower end is a large wingnut used to secure its position. The power reverse cylinder is 0.9 feet in diameter and 1.3 feet tall. Below the cylinder is a vertical crosshead guide 1.9 feet tall. The entire power reverse assembly stands 3.2 feet tall above the

high-pressure cylinder bed plate. Below the high-pressure cylinder is a pair of crosshead guides. The engine is at the bottom of its stroke. The top of the crosshead is just visible at the mudline. At the height of the high-pressure cylinder bed plate are two brass lubricators located on the starboard aft corner of the steam engine.

On the forward end of the high-pressure cylinder is a steam chest with a piston valve. The high-pressure cylinder measures 3.5 feet from the top of its bed plate to the top of the high-pressure cylinder head. The high-pressure cylinder bed plate is 3.7 feet square and 0.25 feet thick. The intermediate steam pipe that exits the high-pressure steam chest is 0.7 feet in diameter.



Figure 31. Starboard side of *Thomas H. Smith*'s hull amidships, looking aft

There are four struts, 4.4 feet tall and 0.2 feet in diameter, that support the low-pressure cylinder above the high-pressure cylinder. There is 0.9 feet clearance between the top of the high-pressure cylinder head and the bottom of the low-pressure cylinder bed plate. The top of the low-pressure

cylinder is 3.5 feet in diameter and has a slide valve that is on a common valve rod with the high-pressure piston valve. On the forward side of the low-pressure cylinder is a steam chest, 3.7 feet wide and 2.8 feet tall. It is trimmed with quarter-round wood trim. Mounted vertically on top of the low-pressure cylinder head at the aft end, is a pressure relief valve. Both low-pressure cylinder heads are recessed into the cylinder block. The underside of the low-pressure bed plate retains orange paint, which is likely red lead. The low-pressure cylinder exhaust pipe is 0.9 feet in diameter and disappears into the mud.



Figure 32. Builder's plate on the forward side of *Thomas H. Smith*'s steeple-compound engine, looking from the starboard side

A builder's plate is mounted on the high-pressure steam chest reading, "Built By Manistee Iron Works Co. Manistee, Mich 1890". The engine builder's plate is 1.0 feet wide and 0.7 feet tall and is inset in a wooden display panel. Below this is a thin brass strip that is 0.16 feet wide and mounted horizontally. It is unknown what was inscribed on this plate or if it was strictly decorative. There is a similar piece bent and loose on the starboard side of the engine resting on the high-pressure cylinder bed plate. The gauge panel was not located.

A deckhouse combing surrounds the engine and partially continues around the boiler. It rises 0.9 feet above the deck and is 0.15 feet thick. The deck adjacent to the steam engine is at 95 feet of water. Fuel scuttles through the deck planking flank the boiler. The location of the port side scuttle

is represented by half of the hole through the deck. The hole for the port side scuttle is present, but the combing has been torn away. A fuel scuttle with its combing is located on the starboard side at the break and abeam of the steam dome. What are likely the hatch covers for these scuttles lay on the port side of the machinery space. Two iron cover lays in the deck on the port side of the engine. It measures 1.8 feet long and 1.5 feet wide and was likely the cover for scuttle. The deck is 8.3 feet from the deckhouse combing to the edge of the vessel.

Three of the four lifeboat davits remain. The aft two davits have collapsed inward. The starboard forward davit lays on the deck on the starboard side abeam of the boiler. The port side forward davit is not extant. The davits are 11 feet long and 1.6 wide constructed of two arched metal poles arched across the top.



Figure 33. Thomas H. Smith's transverse-mounted simplex bilge pump, looking forward

Aft of the engine is a transverse-mounted simplex bilge pump. The pump consists of a steam cylinder on the starboard end with a steam chest aft. It has a common piston/pump rod. The pump is mounted midship. Its bulb is 0.7 feet in diameter and is 1.4 feet tall. On the common

piston/pump rod, is a crosshead with a yoke connecting rod leading to a crank shaft on the port end. The flywheel on the pump is 0.25 feet wide and 3.0 feet in diameter. The aft end of the crankshaft has an eccentric with a valve rod leading to the steam chest on the steam cylinder.

From the deck that flanks the machinery, there is 1.7 feet step up to the poop deck. The poop deck measures 24.3 feet from the forward edge to the stern. As this is the most intact portion of the ship, a beam measurement of 27.8 feet was taken at the farthest forward intact portion of vessel. The space beneath the poop deck had only 3.5 feet headroom.



Figure 34. *Thomas H. Smith*'s rounded stern and deck, looking forward

A hatchway is located on the starboard side 3.68 feet aft of the forward edge of poop deck. The hatch is 2.5 feet long and 2.9 feet wide. Its combing is 0.25 feet thick and rises 0.5 feet above the deck. It is notched in 0.15 feet, 0.1 feet from the top of the combing to receive a hatch cover. At the bottom of this hatch is a manual bilge pump. It is 2.5 feet tall and 1.4 feet wide. The arms are not extant.

Centered 6.24 feet aft of the forward edge of poop deck are a set of large towing bitts. The towing bitts are in line longitudinally on the centerline of the vessel and stand 4.3 feet above the deck. The posts are 1.0-foot square at the base where they are 2.0 feet apart. The posts flares at the top to 1.3 feet squared with 1.6 feet in between. Two feet up from the deck are two horizontally mounted timbers, 0.7 feet square, that were fastened to the outside of the bitts. These were added likely as a brace. On the aft end of the bitts is a standing knee. The knee's body measures 6.6 feet long terminating in a toe 0.5 feet across. Its arm is 2.0 feet long. The knee is 0.6 feet sided. Mounted to the deck at the forward end of the bitt is a step for the flagpole. It measures 1.9 feet long, 0.9 feet wide and 0.2 feet thick. It is concave at the forward end. A set of bitts is located along the rail at the forward edge of the poop deck. They measure 0.7 feet wide, 0.7 feet thick and extend 1.0 feet above the rail. There is 3.6 feet between the bitts. Two iron, chock-style fairleads are located along both port and starboard railings opposite the towing bitts. These measure 1.8 feet long and 0.6 feet wide. The lips are 0.4 feet tall and 0.2 feet long with 0.6 feet internal space. The fairleads are flush with the sides of the monkey rail.

Two openings for skylights flank the towing bitts 11.5 feet aft of the forward edge of poop deck. The skylights are 2.0 feet long and 1.9 feet wide. The combings that surround the skylights are 0.25 feet thick and rises 0.3 feet above the deck. It is notched in 0.15 feet, 0.1 feet from the top of the combing to receive a covering.

The rudder post is located 19.5 feet aft of the forward edge of poop deck. The rudder is 0.8 feet in diameter and stands 2.0 feet above the deck. A tiller arm, 0.2 feet in diameter, remains attached. It is yoked at the rudder and extends 5.0 feet. At the distal end it is through bolted. The bolts are parallel to the deck. An iron reinforcement plate surrounds the rudder post. It measures 3.8 feet long, 2.0 feet wide, and 0.25 feet thick. On the portside of the rudderpost, 19.7 feet aft of the forward edge of poop deck is the lazarette opening. The opening is 1.6 feet long and 1.3 feet wide. The combing rises 0.4 feet above the deck and is 0.3 feet thick with no notching. A metal grate is propped against the bulwarks on the port side at the stern. It measures 1.7 feet tall, 1.4 feet wide, and is 0.15 feet thick. This is likely a fresh air grate and was used to cover the lazarette opening.

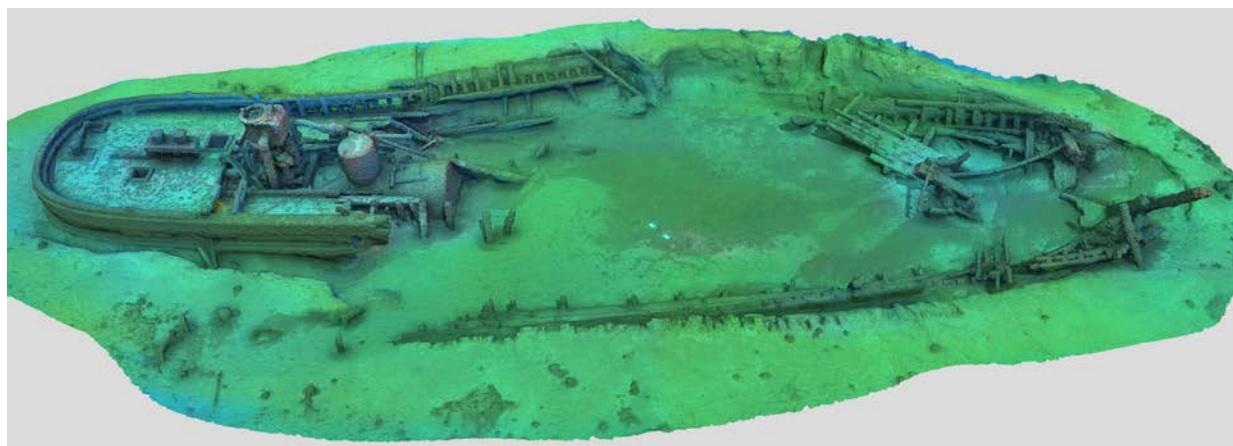


Figure 35. Photogrammetry model of the *Thomas H. Smith* wreck (Zach Whitrock)

## CHAPTER FIVE

### SCHOONER *F.J. KING*

The canaller *F.J. King* was launched at 8:30PM on 16 June 1867 from the old Columbus & Toledo Railway Dock on the east side of the Miami River in Toledo, Ohio. The ship was built by Master Builder George R. Rogers for Minot I. and Leonard Wilcox, owners of Wilcox Bros. Ship Chandlers and Grocers of Toledo. The boat was constructed as an extreme canaller, the largest class of ship capable of transiting the locks of the 2nd iteration of the Welland Canal to participate in grain, ore and timber trades between ports on the upper lakes and Lake Ontario (*Toledo Blade* 1867a, 1867b).



Figure 36. Vessel believed to be *F.J. King* in 2-masted configuration from an original stereoview in Brendon Baillod's Collection

The Wilcox Bros. chandlery, located on the water at the corner of Madison and Warner Streets in Toledo opposite the steam elevators, dealt in hemp and manila cordage, tar, pitch, and oakum. Additionally, they sold hooks and thimbles, common and patent blocks, oars, handspikes, and capstan bars as well as flour, pork, smoked meats, and kept a complete stock of ship and boat stores, and provisions according to their advertisements. The initial expense for

building the vessel was offset by Alonzo Cheesebrough of Suspension Bridge, New York (Niagara Falls, NY). As such he retained 1/2 ownership in the vessel and the Wilcox Brothers shared the other 1/2 share (*Buffalo Commercial Advertiser* 1867a, 1867b; Bureau of Navigation 1867; *Cleveland Daily Herald* 1867; *Milwaukee Sentinel* 1867a; *Toledo Blade* 1867a, 1867b).

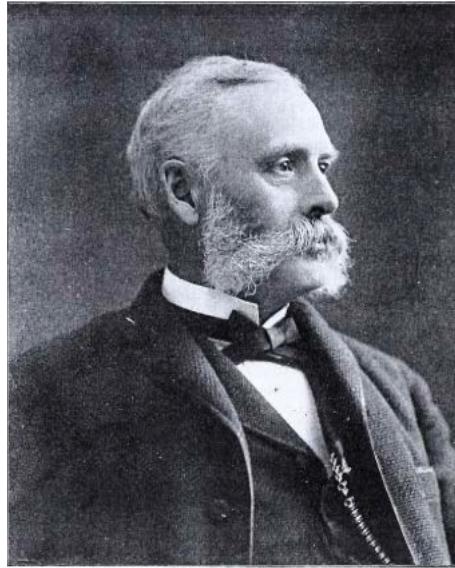


Figure 37. Minot I. Wilcox

The boat was named for Francis J. King, a Toledo commission merchant and freight forwarder. He was born in 1818 in Sackett's Harbor, New York, emigrating to Genesee (Rochester), New York prior to 1845 and shortly thereafter to Toledo. In 1859, he partnered with brother Charles A. King to form King Brothers. The firm worked as commission and storage merchants, and operated the King Grain Elevator on the water at the foot of Madison Street in Toledo. The elevator served the Toledo, Wabash & Western railroad at the Depot Middle Ground. The company was the oldest grain house in Toledo. Later, Francis J. King invested in the 2nd National Bank and served on the Chamber of Commerce. It should be noted that F.J. King's brother, Charles A. King served as Mayor of Toledo (1867-1869) and was the sitting mayor at the time of the ship's launch (Polk 1882; *Toledo Blade* 1867b; Twinning 1890; Waggoner 1888; Williams 1860; U.S. Census Bureau 1850, 1860, 1870, 1880).

*F.J. King* was described as schooner-rigged with one deck and two masts, a square stern and plain head. It measured 140 feet long (144 feet overall), 26 feet in beam, and 11 feet depth of hold. Its hull was calculated at a capacity of 280.55 gross tons of which 258.55 tons capacity was under the tonnage deck, and 22 tons capacity was between decks above the tonnage deck. Captain Charles D. Cramer was appointed as Master. Captain Cramer was described as "a gentleman of large nautical experience, a capital fellow...who of course feels very proud of his craft" (Bureau of Navigation 1867; *Toledo Blade* 1867b).

The *Toledo Blade* (1867b) provided further detail about the *F.J. King*:

"The timber used in the vessel is of a quality superior to that generally used, being free from knots, and very few pieces in her hull, are less, perhaps, than 40 feet; and we noticed in many instances her planks would measure 50, 60 or 70 feet in length. The hull is put together in the strongest manner, the planking being double bolted, and in every part the greatest attention was given to render the hull, as staunch as possible. Her "ports" are models for strength, different in many important particulars from those of any vessel on the lakes and will pass a piece of timber 44 inches in diameter. The cabin is large, well-lighted and ventilated; the shipper's quarters neat, cozy and cheerful, nicely carpeted, and the other rooms are furnished in good taste, everything bearing testimony to the skill of a master builder."

After the "wetting ceremony", the new vessel was towed to the dock in front of Wilcox Bros' chandlery, where the ship was visited by many citizens of the city, as well as dignitaries including the Mayor and Board of Trade. A Master Builder's Certificate and a Surveyor's Certificate were issued for the vessel on 18 June 1867, and its initial permanent enrollment was entered on 26 June at the Port of Toledo, Maumee Customs District (Bureau of Navigation 1867; *Toledo Blade* 1867b).

It's likely *F.J. King* made trips locally on Lake Erie during the summer and early fall, however those records have not been located. In mid-October the ship took on 91 tons of salt at Buffalo and arrived at Chicago with the cargo on 28 October. Once delivered, the vessel was chartered to carry wheat to Buffalo for H.G. Nelson. It loaded 21,042 bushels of wheat and departed on 30 October. On the return trip to Buffalo the vessel ran aground off Cheboygan, Michigan near the Straits of Mackinac. It was removed in short order, and no damage was sustained. The vessel arrived at Buffalo on 16 November (*Chicago Republican* 1867a, 1867b, 1867c; *Milwaukee Sentinel* 1867b, 1867c).

Around noon on 17 November 1867, the steamer *Antelope* was tied alongside the Reed Elevator in Buffalo with a cargo of 17,000 bushels of wheat and six hundred barrels of flour when a fire, originating from the ship's boiler, burned the vessel to its waterline - a total loss to the ship and cargo. The flames stopped shipping operations in the vicinity. The only collateral damage was sustained by *F.J. King* when sparks fell onto its foresail, burning its shrouds and scorching its foremast before fire engines directed water onto the ship and squelched the blaze (*Buffalo Commercial Advertiser* 1867c; *Buffalo Courier* 1867).

*F.J. King* departed Lake Erie for its first trip to Chicago of the season on 22 April 1868. Captain William Street was at its helm. It delivered 260,000 board feet of lumber and 5,000 pieces of lath to Chicago on 11 May. Another arrival with 240,000 feet of timber was recorded there on 22 June. While at Chicago on this trip, it was discovered that the ship's document had expired, and a Temporary Enrollment was issued at the U.S. Customs Office on 25 June 1868. The ship put in at Toledo on 29 June to update the document and receive a new permanent enrollment while enroute to Buffalo. At this time the ship's official number, U.S. 9299, was assigned. Captain Street's name was added as Master; all other information remained the same (*Buffalo*

*Commercial Advertiser* 1868a, 1868b; Bureau of Navigation 1868a, 1868b; *Chicago Republican* 1868a, 1868b, 1868c, 1868d; *Cleveland Daily Herald* 1868; *Milwaukee Sentinel* 1868a).

Arrivals at Buffalo were recorded on 29 August and 7 September from Toledo with nearly 20,000 bushels of corn on board each trip. When the ship cleared on 8 September it had a new Master reported at its helm, Captain Stewart (listed only by last name) as the ship departed for Bay City, Michigan (*Buffalo Commercial Advertiser* 1868c, 1868d; *Chicago Republican* 1868e; *Milwaukee Sentinel* 1868b, 1868c). The vessel arrived at Chicago on 23 September, and it was chartered to carry wheat to Kingston, Ontario that week. It was loaded with 5,000 bushels of wheat, then departed on 28 September for Milwaukee to collect additional cargo. The vessel was recorded as it entered Buffalo on 12 October. It immediately made another trip to Chicago, stopping enroute at Sheboygan, Wisconsin to collect 140,000 feet of lumber, and arrived on 6 November. It cleared Chicago again on 14 November with 2,863 bushels of oats and 1,507 bushels of corn for Duncan City, Michigan. The *F.J. King* wintered in Toledo (*Chicago Republican* 1868f, 1868g, 1868h; *Milwaukee Sentinel* 1868d, 1868e, 1868f, 1868g, 1868h, 1868i, 1868j).

Over the winter months, Alonzo Cheesebrough sold his share of the *F.J. King* to Captain Harvey Bissell, a timber dealer in Toledo, and at the start of April he appointed a new Master for the ship, Captain John Galloway of Toledo. Shortly thereafter the Wilcox Brothers sold their 1/2 share to the partnership of Alfred Mosher of West Troy, New York, and J.S. Dunham of Chicago for \$13,000. A new enrollment was entered for the change in ownership at the port of Toledo on 17 April 1869. Toledo remained the vessel's homeport; all other information remained unchanged. *F.J. King* completed its charter for grain from Chicago to Buffalo and was placed into the lumber trade between Toledo and Tonawanda, New York. The ship ran on the route Toledo-Tonawanda-Buffalo-Toledo through September (*Buffalo Commercial Advertiser* 1869a; *Buffalo Daily Republic* 1869; Bureau of Navigation 1869; *Chicago Republican* 1869; *Chicago Tribune* 1869; *Milwaukee Sentinel* 1869a, 1869b, 1869c, 1869d, 1869e, 1869f, 1869g; *Plain Dealer* 1869; Scott 1869).

On 2 October 1869, *F.J. King* was chartered to carry three loads of railroad iron from Buffalo to Toledo with arrivals recorded on 5, 12 and 27 October. When returning to Buffalo the ship brought wheat for Hazard & Co. Wheat from Toledo was delivered to Kingston, Ontario on 4 November. While passing through the locks of the Welland Canal at Port Colbourne, the ship's owners determined it to be slightly too long and problematic for easy passage through the lock boxes. The square corners on its stern were cut off to ease it through. By mid-December the vessel was put in winter quarters at Buffalo (*Buffalo Commercial Advertiser* 1869b, 1869c; *Milwaukee Sentinel* 1869h, 1869i, 1869j, 1869k, 1869l, 1869m, 1869n, 1869o; *Toledo Blade* 1869).

On 5 March 1870, the schooner entered Baileys shipyard at Toledo to have its stern/transom reworked into a more rounded shape to better accommodate the Welland Canal locks. Although

the boat's official measurements (length taken stempost to sternpost) remained the same, the update shortened the ship's overall length by about three feet at a cost of \$600 (*Buffalo Commercial Advertiser* 1870a; *Buffalo Courier Express* 1870a; *Buffalo Daily Republic* 1870a).

On 23 March 1870 a new enrollment for the schooner was entered at the port of Chicago. During the prior season Harvey Bissell passed away on 30 September 1869, and J.S. Dunham took on the role of managing owner. He retained his 1/4 share and Alfred Mosher retained his 1/4 share. Bissell's half share was entered on the behalf of his estate. The vessel's homeport was changed to Chicago and Captain William Griffin of West Potsdam, New York took command (Bureau of Navigation 1870).

In June and July, *F.J. King* brought two cargos of timber each from Toledo to Tonawanda for Mosher & McDougall. It called at Chicago in August where it picked up 20,336 bushels of corn for Ogdensburg, New York. In September, October and November the boat made monthly trips bringing cargos of 20,343 bushels of corn from Chicago to Buffalo for J.M. Richmond & Co. One more trip was completed for the season. Corn was brought from Chicago to Oswego, New York and delivered on 1 December. The ship was put in winter quarters in Oswego (*Buffalo Commercial Advertiser* 1870b, 1870c, 1870d; *Buffalo Courier Express* 1870b, 1870c; *Buffalo Daily Republic* 1870b; *Chicago Republican* 1870a, 1870b, 1870c, 1870d, 1870e; *Daily Milwaukee News* 1870; *Milwaukee Sentinel* 1870a, 1870b, 1870c, 1870d, 1870e, 1870f, 1870g).

From April through August 1871, *F.J. King* hauled wheat from Detroit to Oswego. On its first trip of the season, it was recognized that the vessel's license expired while out of its homeport. A temporary enrollment was issued at Port Huron on 21 April. After unloading at Oswego on 19 August, *F.J. King* was chartered to carry salt to Chicago. Upon arrival in that port on 6 September, a new permanent enrollment was entered (Bureau of Navigation 1871a, 1871b; *Chicago Republican* 1871a, 1871b; *Daily Milwaukee News* 1871a, 1871b; *Milwaukee Sentinel* 1871a, 1871b, 1871c, 1871d).

At Chicago *F.J. King* was chartered to bring 20,313 bushels of wheat to Buffalo at 7.5 cents per bushel (\$40,143.07 in 2025 dollars). It cleared Chicago on 8 September and ten days later arrived at Buffalo. The schooner was unloaded and departed light for Chicago. While upbound in the Detroit River on 28 September *F.J. King* was involved in a collision that carried away its jibboom. The name of the other vessel was not relieved in this research. Two additional cargos of wheat were delivered at Buffalo on 7 October and when the ship arrived on 2 November its bowsprit was missing having been carried away in the storm on Lake Erie. Once repaired, the boat cleared on 7 November for Black River, Ohio to collect ship lumber and planking for Buffalo. While attempting to enter Black River *F.J. King* grounded on the sandbar at the entrance to the harbor. The schooner was removed by the tug *Coe*. The lumber was delivered at Buffalo on 20 November and the ship sailed for Toledo on 25 November where it was tied up for the winter (*Buffalo Commercial Advertiser* 1871a, 1871b, 1871c, 1871d, 1871e, 1871f, 1871g, 1871h; *Buffalo Courier Express* 1871a, 1871b, 1871c; *Chicago Republican* 1871c,

1871d, 1871e, 1871f; *Cleveland Daily Herald* 1871a, 1871b; *Hall* 1871; *Milwaukee Sentinel* 1871e, 1871f, 1871g, 1871h, 1871i, 1871j).

*F.J. King* was fitted out for service in mid-April 1872. Its first trip passed Detroit was recorded upbound on 29 April. The nature of its business on the upper lakes is not known. Additional trips passed Detroit were recorded up bound on 12 June and 11 September; and down bound on 11 October. On 15 October the ship cleared Buffalo with 500 tons of coal intended for Chicago. At Chicago the schooner took aboard 21,000 bushels of corn for Buffalo and departed on 1 November. On 26 November 1872 the ship left Buffalo to take up winter quarters at Port Colbourne (*Buffalo Commercial Advertiser* 1872; *Chicago Evening Post* 1872; *Chicago Tribune* 1872; *Cleveland Daily Herald* 1872a, 1872b, 1872c; *Daily News* 1872a, 1872b; *Daily Milwaukee News* 1872; *Milwaukee Sentinel* 1872a, 1872b, 1872c, 1872d; *Plain Dealer* 1872).

*F.J. King* left Port Colbourne on 23 April 1873 on its first trip of the 1873-season, bound for Chicago. It made it as far upbound as Port Huron before becoming weather bound on 2 May. At Chicago the schooner collected 20,928 bushels of corn for F.W. Fiske & Co. which was delivered to Buffalo on 29 May. The ship ran lumber from Bay City to Tonawanda June-October. On 23 July the ship was hired to deliver a cargo of coal from Toledo to Toronto. As the ship entered Buffalo on 2 October it was discovered the boat's license expired while out of its home district and a temporary enrollment was issued. *F.J. King* sailed immediately for Chicago. A new registration was entered in the port's custom office on 20 October. It was announced the ship would immediately go into winter quarters. However, before its equipment could be removed, a charter was acquired for oats hauled from Chicago to Ogdensburg. The boat passed down bound through the Welland Canal on 8 November (*Buffalo Commercial Advertiser* 1873a, 1873b, 1873c, 1873d, 1873e, 1873f; *Bureau of Navigation* 1873a, 1873b; *Chicago Evening Post* 1873; *Cleveland Daily Herald* 1873a, 1873b; *Daily News* 1873a, 1873b; *Milwaukee Sentinel* 1873a, 1873b, 1873c, 1873d, 1873e, 1873f, 1873g, 1873h, 1873i, 1873j, 1873k; *Palladium* 1873; *Plain Dealer* 1873).

On 16 March 1874, *F.J. King*'s enrollment document was surrendered at the port of Chicago for change in owners. Harvey Bissell's estate sold his 1/2 share in the vessel to J.S. Dunham and Alfred Mosher for \$8,000. Dunham & Mosher then sold 1/3 of the ship to Captain William Griffin for \$5,333. For its new arrangement, it was owned as an equal 1/3 partnership between the men (*Bureau of Navigation* 1874; *Inter Ocean* 1874a). The ship started upbound light (without cargo) from its winter home in Clayton, New York for Bay City on 15 April. The ship cleared Bay City on 27 April with a hold full of lumber bound for Tonawanda. *F.J. King* again cleared Bay City on 23 May, 6 July and 26 July with lumber for Tonawanda (*Buffalo Courier Express* 1874a, 1874b, 1874c; *Buffalo Daily Republic* 1874a; *Cleveland Daily Herald* 1874a, 1874b, 1874c, 1874d, 1874e; *Daily News* 1874; *Inter Ocean* 1874b, 1874c, 1874d, 1874e, 1874f, 1874h; *Milwaukee Sentinel* 1874a, 1874b, 1874c, 1874d, 1874e, 1874f, 1874g).

On 10 August 1874 *F.J. King* entered Union Dry Dock in Buffalo to receive a new foremast and to have its deck caulked (*Buffalo Courier Express* 1874d; *Cleveland Daily Herald* 1874f; *Inter*

*Ocean* 1874g; *Milwaukee Sentinel* 1874h). The ship's next trip was to Chicago. It took on coal at Black Rock enroute and arrived at Chicago on 31 August (*Inter Ocean* 1874i, 1874j; *Milwaukee Sentinel* 1874i). At Chicago the boat was chartered to carry wheat to Buffalo. It was loaded with 20,000 bushels consigned to Preston & Wright and cleared on 9 September. The cargo of wheat was delivered on 22 September (*Buffalo Courier Express* 1874e, 1874f; *Cleveland Daily Herald* 1874g, 1874h; *Inter Ocean* 1874k, 1874l; *Milwaukee Sentinel* 1874j, 1874k).

On 11 October 1874 *F.J. King* delivered 211 tons of moulding sand to Milwaukee from Buffalo. A week later it was chartered to bring 20,000 bushels of wheat to Buffalo at 4 cents per bushel for William Meadows. The cargo was delivered on 27 October. The schooner then sailed for Erie, Pennsylvania and collected 567 tons of coal from Scott & Co. for M. Green of Chicago. It arrived in Chicago on 12 November. While in the Chicago River on 15 November 1874, the tug *Satisfaction* swung its tow, the barge *Marinette*, into the *F.J. King* as it was tied near the Halsted Street bridge. *F.J. King*'s owners were compelled to sue to recover damages to the ship. When the case was resolved three years later, it was found that since the *F.J. King* had its mainboom hanging 20 feet over its starboard quarter and was therefore at fault. *F.J. King* was chartered for another trip east with 11,140 bushels wheat - this time at 10 cents per bushel (a late season fee to accommodate the risk). Additionally, it carried 10,789 bushels of oats. The boat cleared Milwaukee on 20 November bound for Ogdensburg (*Buffalo Commercial Advertiser* 1874; *Buffalo Courier & Republic* 1874; *Buffalo Courier Express* 1874g, 1874h, 1874i; *Buffalo Daily Republic* 1874b, 1874c; *Cleveland Daily Herald* 1874i, 1874j; *Inter Ocean* 1874m, 1874n, 1874o, 1874p, 1874q, 1874r, 1874s, 1874t, 1875a, 1877k; *Milwaukee Sentinel* 1874l, 1874m, 1874n, 1874o, 1874p, 1874q, 1874r).

On 2 June 1875, *F.J. King* was chartered to return to Lake Michigan and made the trip west from its winter home in Oswego to Racine with coal at \$1.15 cents per ton. The schooner then collected 13,000 bushels of wheat from Milwaukee for Fish & Brown of Buffalo and departed on 21 June. On its trip downbound, while entering St. Clair Flats in the dark, *F.J. King* grounded. The lights on the old channel were not working causing the vessel to run outside of the path of navigation. A \$75 towing bill was incurred to free the ship. Captain Griffin complained to the regional newspapers, but the light remained out through July (*Buffalo Commercial Advertiser* 1875a; *Buffalo Courier Express* 1875a, 1875b; *Inter Ocean* 1875h; *Milwaukee Sentinel* 1875a, 1875b, 1875c). The vessel's next contract was to carry coal from Buffalo to Racine at \$0.60 per ton and it departed Buffalo on 1 July. 20,000 bushels of wheat were then taken aboard at Racine and shipped to Buffalo for George Sandrock, arriving there on 31 July. The schooner made monthly trips with coal west (to Chicago and Racine), and wheat east to Buffalo through the end of November. Its last clearing at the port of Buffalo was recorded on 17 November. The ship spent the winter at Toledo (*Buffalo Commercial Advertiser* 1875b, 1875c, 1875d; *Buffalo Courier* 1875; *Buffalo Daily Republic* 1875; *Buffalo Courier & Republic* 1875; *Inter Ocean* 1875b; 1875c, 1875d, 1875e, 1875f, 1875g, 1875i, 1875j, 1875k,

1875l, 1875m, 1875n, 1875o, 1875p, 1875q, 1875r, 1875s, 1875t, 1876a; *Milwaukee Sentinel* 1875d, 1875e, 1875f, 1875g, 1875i, 1875j, 1875k, 1875l, 1875m).

On 16 March 1876, *F.J. King*'s enrollment was surrendered at the port of Ogdensburg for a change in homeport. Captain Griffin assumed the role of managing owner and as such the ship's homeport as changed to Morriston, New York. All other information on the document remained the same as the last (Bureau of Navigation; *Inter Ocean* 1877a). During its first trip to the western lakes for the 1876-season, when twelve miles out of Saginaw Bay, the ship encountered a large island of floating logs more than a mile wide. This hazard to navigation was reported to regional newspapers. The schooner made monthly trips bringing timber from Duncan City, Michigan to Garden Island, Ontario (near Kingston) in May and June, and to Tonawanda, New York July through October (*Buffalo Courier* 1876; *Buffalo Courier Express* 1876a, 1876b, 1876c, 1876d, 1876e, 1876f; *Daily News* 1876; *Inter Ocean* 1876b, 1876c, 1876d, 1876e, 1876f, 1876g, 1876h, 1876i, 1876j, 1876k, 1876l, 1876m; *Milwaukee Sentinel* 1876a, 1876b, 1876c, 1876d, 1876e, 1876f, 1876; *Northern Tribune* 1876; *Plain Dealer* 1876). In mid-November 1876 the ship received several much-needed repairs. Master ship carpenter Frank Williams overhauled the vessel at Tonawanda. Its deck was recalked, its cabin updated, and new forecastle and hatch combings were constructed - all making *F.J. King* stancher and more seaworthy. The vessel took up winter quarters at Tonawanda (*Buffalo Commercial Advertiser* 1876; *Buffalo Courier Express* 1876g; *Inter Ocean* 1876n; *Milwaukee Sentinel* 1876h).

*F.J. King* was active in May 1877 with passage of Detroit downbound recorded on 15 May and 2 June. Its cargos and destinations are not known (*Inter Ocean* 1877b; *Milwaukee Sentinel* 1877a; *Plain Dealer* 1877a). On 6 June *F.J. King* cleared Cleveland and was reportedly bound for Chicago. However, the vessel called at Clinton River, Michigan where it collected a cargo of timber for Clayton, New York. From Clayton, the ship sailed light for Port Colbourn where took on a coal for Chicago. After delivering the coal, it sailed for Green Bay, Wisconsin where timber was collected for passage to St. Catharines, Ontario (*Daily News* 1877a, 1877b; *Inter Ocean* 1877c, 1877d, 1877e, 1877f; *Milwaukee Sentinel* 1877b, 1877c; *Plain Dealer* 1877b). The timber was delivered the first week of August 1877. It then sailed light for Toledo where lumber was loaded for Thorold, Ontario (*Daily News* 1877c, 1877d; *Inter Ocean* 1877g; *Milwaukee Sentinel* 1877d). Once offloaded, the schooner was moved to Cleveland on 15 September to wait on orders. In October and November, the vessel brought lumber from Toledo to Thorold. While at Thorold on 22 October 1877 Captain Griffin broke his kneecap in three places while jumping from the rail of the vessel. Captain William Reed replaced Captain Griffin at the helm. Captain Griffin was taken by train Port Colborne for medical treatment. A final trip was made from Toledo to Thorold, with an arrival at the later port recorded on 9 November with lumber (Bureau of Navigation 1876; *Daily News* 1877e, 1877f, 1877g; *Inter Ocean* 1877h, 1877i, 1877j; *Milwaukee Sentinel* 1877e, 1877f, 1877g, 1877h; *Palladium* 1877). On 16 November *F.J. King* was put up for the winter at Port Colbourne (*Buffalo Courier Express* 1877; *Inter Ocean* 1877l).

In Ogdensburg on 3 May 1878, Captain Griffin returned to command (Bureau of Navigation 1876). At the end of May the ship was chartered to haul corn from Toledo to Erie, Pennsylvania. After the load was delivered the vessel headed to Buffalo to await on further orders. The schooner made trips in June, July and August bringing coal from Toledo to Toronto. On 27 August *F.J. King* hauled merchandise from Buffalo to Cleveland. The ship arrived at Port Colborne on 1 September to wait on another charter and was moved after a few weeks to Ogdensburg. The vessel left Ogdensburg around 23 September bound for Toledo light. Trips were recorded from Ogdensburg to Cleveland in mid-October (cargo unknown) and from Charlotte, New York to Cleveland with coal in mid-November, delivered on 14 November (*Buffalo Commercial Advertiser* 1878a, 1878b, 1878c, 1878d; *Daily News* 1878a, 1878b; *Inter Ocean* 1878a, 1878b; *Milwaukee Sentinel* 1878a, 1878b, 1878c, 1878d; *Palladium* 1878; *Plain Dealer* 1878a, 1878b).

*F.J. King* departed Ogdensburg light on 11 May 1879 for its first trip of the season. Trips in June, July and August were made from Escanaba to Cleveland with iron ore. On 13 August the schooner carried coal from Black River to Prescott, Ontario. It returned to Cleveland on 26 September with ore from Ogdensburg. *F.J. King* arrived at Milwaukee on 31 October. Its cargo is unknown. It cleared for Escanaba on 6 November to collect another load of ore bound to Cleveland - the cargo was delivered on 17 November. On 27 November the boat departed Cleveland for Detroit with coal for its last run of the season. The vessel wintered over at Buffalo (*British Whig* 1879; *Buffalo Courier Express* 1879a, 1879b; *Daily News* 1879; *Inter Ocean* 1879a, 1879b, 1879c, 1879d, 1879e, 1879f, 1879g; *Iron Port* 1879; *Milwaukee Sentinel* 1879a, 1879b, 1879c, 1879d, 1879e; *Plain Dealer* 1879a, 1879b, 1879c).

A chartered was obtained to carry wheat from Detroit to Buffalo on 10 April 1880, and it was fitted out for service, clearing Detroit on 13 April with 21,000 bushels of wheat. The ship unloaded at Buffalo and cleared on 15 April for Chicago. There, it delivered 560 tons of quartz to the Joliet Steel Company to be used as a fluxing agent in the production of steel. At Chicago the boat was loaded with wheat and cleared for Buffalo on 31 May. Corn was delivered at Buffalo from Milwaukee in July. When the ship cleared Buffalo on 7 July, it carried 500 tons of coal bound for parties at Racine. An arrival was recorded at Milwaukee on 12 August. The ship cleared the next day for Escanaba. The schooner was chartered to carry ore from Escanaba to Cleveland (and Ashtabula), with a return trip of coal from Cleveland to Milwaukee at \$1 per ton. This route was repeated monthly through the end of November (*Buffalo Commercial Advertiser* 1880a, 1880b; *Buffalo Courier Express* 1880; *Chicago Tribune* 1880a, 1880b, 1880c, 1880d, 1880e, 1880f, 1880g 1880h, 1880i; *Cleveland Daily Herald* 1880a, 1880b, 1880c; *Inter Ocean* 1880a, 1880b, 1880c, 1880d, 1880e, 1880f, 1880g 1880h, 1880i, 1880j, 1880k, 1880l; *Milwaukee Sentinel* 1880a, 1880b, 1880c, 1880d, 1880e, 1880f, 1880g 1880h, 1880i, 1880j; *Plain Dealer* 1880a). When departing Escanaba on 23 November the schooner was unable to get through an ice field that blocked the harbor. The ship remained ready and waited for a south wind to blow the ice out. After three days in port, it was decided to put the vessel up for the winter in Escanaba. The ore cargo remaining in its hold (*Chicago Tribune*

1880j, 1880k; *Green Bay Advocate* 1880; *Inter Ocean* 1880m, 1880n; *Milwaukee Sentinel* 1880k; *Plain Dealer* 1880b).

The ice in the harbor at Escanaba broke up by the end of April 1881 and the ship departed the first week of May for Cleveland. On 19 May the vessel was chartered to carry coal from Cleveland to Milwaukee and return to Cleveland with pig iron. The pig iron was delivered from Marquette, Michigan on 12 June 1881. Additional trips were recorded in June, July and August (*Buffalo Courier* 1881a; *Buffalo Courier Express* 1881a, 1881b; *Chicago Tribune* 1881a, 1881b; *Cleveland Daily Herald* 1881a, 1881b, 1881c, 1881d, 1881e, 1881f; *Inter Ocean* 1881a, 1881b, 1881c, 1881d, 1881e, 1881f, 1881g, 1881h, 1881i, 1881j, 1881k, 1881l, 1881m; *Milwaukee Sentinel* 1881a, 1881b, 1881c).

The schooner arrived at Buffalo from Chicago on 16 September 1881 and about a week later received charters to haul coal from Buffalo to Racine and on its return east to carry ore from Escanaba to Black Rock. The schooner made Racine on 5 October and cleared the same day for Escanaba (*Buffalo Commercial Advertiser* 1881; *Buffalo Courier* 1881b; *Chicago Tribune* 1881c, 1881d; *Cleveland Daily Herald* 1881g; *Inter Ocean* 1881n, 1881o; *Milwaukee Sentinel* 1881d). Once back in Buffalo on 31 October it was contracted to bring coal to Cleveland. The boat cleared Buffalo on 2 November but was forced to run into Port Colbourne on 3 November to seek shelter from a storm. It was windbound for several days. At Cleveland *F.J. King* was hired to haul block stone from Kelly's Island to Milwaukee and departed on 18 November. It arrived at Milwaukee on 31 November and went into winter quarters (*British Whig* 1881; *Buffalo Courier Express* 1881c; *Chicago Tribune* 1881e, 1881f, 1881g; *Cleveland Daily Herald* 1881h, 1881i, 1881j; *Inter Ocean* 1881p, 1881q, 1881r, 1881s; *Milwaukee Sentinel* 1881e).

On 27 April 1882 *F.J. King* was fitted out and cleared Milwaukee bound for Erie by way of Escanaba (where ore was taken aboard). On its next trip upbound the boat came in to the Smith Dry Dock at Cleveland to have a leak addressed. The ship proceeded to Marquette and on 22 May collected a cargo of iron for Erie. Another arrival was recorded at Marquette on 31 May. In June and July, the vessel carried ore from Escanaba to Cleveland. In August and September three loads of timber were brought from Port Huron to Tonawanda. After dropping off its cargo on 7 September the ship collected 500 tons of coal for Racine. Before its return east, ore was collected at Escanaba on 26 September. On 10 October the ship was chartered to bring railroad iron from Toledo to Oconto, Wisconsin for the construction of the St. Paul & Eastern Grand Trunk railroad from Clintonville, Wisconsin to Oconto that connected with the Chicago & North Western lines at those cities. Before heading east again, iron ore was taken aboard at Escanaba. The ship wintered over at Buffalo (*Buffalo Commercial Advertiser* 1882a, 1882b, 1882c, 1882d; *Buffalo Courier Express* 1882; *Cleveland Daily Herald* 1882a, 1882b, 1882c, 1882d, 1882e; *Inter Ocean* 1882a, 1882b, 1882c, 1882d, 1882e, 1882f, 1882g, 1882h, 1882i; *Milwaukee Sentinel* 1882a, 1882b, 1882c, 1882d, 1882e, 1882f, 1882g, 1882h, 1882i, 1882j, 1882k; *Plain Dealer* 1882a, 1882b).

While readying for the season at Buffalo, on 13 April 1883, *F.J. King* was remeasured under the new regulations set under Section 4153 of the revised statutes, as amended by Act of 5 August 1882. Although its measurements remained the same, its tonnage was adjusted by 14.20 tons deductions for a new for a net tonnage of 266.35 tons (Bureau of Navigation 1876). At the end of April Alfred Mosher decided to retire to devote his time to his lumber firm in Bay City, Michigan. This resulted in the dissolution of the Dunham & Mosher firm of Chicago. J.S. Dunham bought out Alfred Mosher's interest in the \$110,000 worth of the firm's vessels - including schooners *F.J. King*, *Wells Burt*, *Pensaukee*, *A. Mosher*, and *Lottie Wolf*; and the tugs *Uncle Sam*, *Robert Dunham*, *A. Mosher*, and *A Miller*. A new enrollment was not immediately taken out for the vessel for this change in ownership (*Milwaukee Sentinel* 1883a).

On 28 April 1883 *F.J. King* arrived at Buffalo from Detroit in tow of the steambarge *Annie Smith* and consort *Sweetheart* and sailed the next day with coal for Truman & Cooper of Manitowoc, Wisconsin. At Manitowoc the ship took on 6,725 railroad ties for Rogers & Brown in Buffalo which were delivered on 30 May. Another cargo of coal was taken to Manitowoc in June. On 16 June the *F.J. King* loaded 25,000 bushels of malt at the Rahr elevator in Manitowoc to be shipped to Fred Betz, a Philadelphia brewer, by way of Buffalo. In August the schooner returned its previous route moving ore east from Escanaba to Cleveland and returning west with coal from Buffalo to Racine. It was noted that the coal was mined in Blossburg, Pennsylvania. In October iron ore was obtained from Marquette for Cleveland and coal was delivered to Kenosha. In November ore was collected at Escanaba and delivered to Black River, and coal was moved from Black River to Brockville, Ontario. While on Lake Ontario on 22 November, the *F.J. King* loaded grain at Clayton, New York for a short trip to Ogdensburg. Before navigation closed for the season, the ship took up winter quarters at Brockville (*British Whig* 1883; *Buffalo Commercial Advertiser* 1883a, 1883b; *Buffalo Courier* 1883a, 1883b, 1883c; *Buffalo Courier Express* 1883a, 1883b, 1883c, 1883d, 1883e; *Cleveland Daily Herald* 1883a, 1883b, 1883c, 1883d, 1883e, 1883f, 1883g; *Manitowoc Pilot* 1883a, 1883b, 1883c; *Marine Record* 1883; *Milwaukee Sentinel* 1883b, 1883c, 1883d, 1883e, 1883f, 1883g, 1883h, 1883i, 1883j, 1883k; *Palladium* 1883; *Plain Dealer* 1883; *Watertown Daily Times* 1883).

On 1 April 1884 a new enrollment was entered for *F.J. King* at the port of Ogdensburg to reflect the ownership change because of the dissolution Dunham & Mosher. As J.S. Dunham completed the buyout of Alfred Mosher's half of the business, he now owned 2/3 of the ship and Captain Griffin retained his 1/3 share. Morristown, New York remained the schooner's home port (*British Whig* 1884; Bureau of Navigation 1884). At Ogdensburg the vessel was loaded with iron ore and sailed for Cleveland. While enroute the ship was windbound overnight at Port Colborne on 10 May and arrived at Cleveland on 14 May. After dropping off its cargo the newspapers reported that the ship departed light for Chicago on 16 May. However, on 20 May the ship arrived at Toledo with coal collected at Buffalo and cleared Toledo on 27 May with lime for Clayton, New York. On its return west the schooner brought coal from Oswego to Sandusky, Ohio (*Cleveland Daily Herald* 1884a, 1884b, 1884c, 1884d, 1884e, 1884f; *Milwaukee Sentinel* 1884a, 1884b, 1884c; *Plain Dealer* 1884a, 1884b).

On 17 June 1884 oak timber was collected at Bay City for dealers in Cleveland. An additional trip was made in July. *F.J. King* was recorded on 11 August as it transited the Welland Canal upbound from Oswego to Sandusky with coal. On 22 August, the boat was chartered to carry oak timber from Toledo to Garden Island, Ontario. While passing through the Welland Canal on 4 September bound west with coal for Toledo, the schooner's jibboom hung up and was lost while entering lock twenty-three. The ship was compelled to lie at Port Colborne over night while a new boom was installed. The schooner was recorded heading east through the canal on 30 October. Its cargo and ports were not entered. The schooner took up winter quarters at Toledo (*Buffalo Commercial Advertiser* 1884; *Buffalo Courier Express* 1884a, 1884b; *Buffalo Daily Republic* 1884a, 1884b; *Cleveland Daily Herald* 1884g; *Evening Republic* 1884; *Marine Record* 1884; *Milwaukee Sentinel* 1884d, 1884e, 1884f, 1884g).

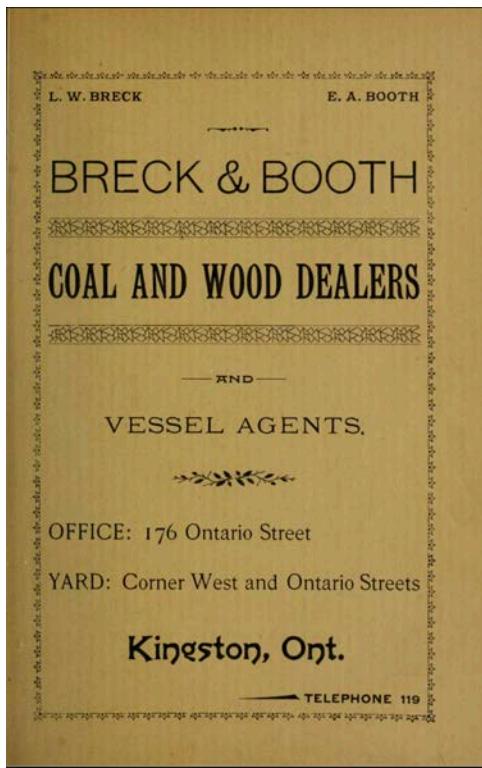


Figure 38. Advertisement for Breck & Booth in Foster's Kingston Directory 1894.

Before fitting out for the season, *F.J. King* received its first charter for the 1885-season on 25 March 1885, when Breck & Booth hired the vessel to transport timber from Toledo to Garden Island. Canvas was installed on 23 April and on 31 April its bottom was caulked, as well as other sundry repairs made at Gilmore's Dry Dock. Breck & Booth was owned by Luther W. Recek and Captain Edward A. Booth; they were coal and wood dealers in Kingston, Ontario but also vessel agents. The timber was loaded aboard the vessel, and it departed Toledo for Garden Island on 12 May. Arriving on 18 May, the ship was unloaded and sailed light to Oswego to collect coal at the Ontario & Western dock for its return trip to Toledo. In June, *F.J. King*'s owners arranged a contract to bring coal from Sandusky to Sault Ste. Marie at \$0.60 per ton. From Sault Ste. Marie, the boat sailed to Ashland, Wisconsin. On 28 June it took aboard

300,000 board feet of timber that was harvested near Penokee, Wisconsin and brought to Ashland by rail. The white pine lumber was said to have been of the highest quality and was shipped to Kingston before being transferred to another ship for a final passage to England (*British Whig* 1885a, 1885b; *Duluth Daily Tribune* 1885; *Marine Record* 1885a, 1885b, 1885c; *Milwaukee Sentinel* 1885a, 1885b, 1885c, 1885d; *Oswego Daily Times- Express* 1885; *Plain Dealer* 1885a, 1885b, 1885c, 1885d). The firm of Breck & Booth of Kingston chartered the ship to take coal from Oswego to Chicago and return with "deals" from Manistee. The vessel arrived at Chicago on 4 August. Timber collected at Manistee was delivered to Garden Island on 26 August (*Buffalo Courier Express* 1885; *Daily News* 1885a, 1885b; *Milwaukee Sentinel* 1885e; *Plain Dealer* 1885e, 1885f; 1885g).

In the fall of 1885, the ship was hauled out of the water at the Breck & Booth wharf on Garden Island and over the winter months it received \$2,631 worth of repairs including a conversion to a 3-masted schooner, a new deck, as well as other general improvements. On 16 April 1886, the vessel was towed to Cape Vincent, New York where it received a new suit of canvas sewn by sailmakers, A. Horne, R. McArthur & J. Hogan. The collector of customs at Cape Vincent assessed the owners of the ship duty on the work they had done on the ship while at a Canadian port. Captain Griffin presented receipts and a duty equal to half the value of the work was charged. J.S. Dunham immediately filed an appeal. The appeal however was rejected as the owners were unable to show the work was completed by "stress of weather or other casualty" that required it to put into Garden Island for the repairs (*British Whig* 1886a, 1886b, 1886c, 1886d, 1886e, 1886f, 1886k; *Buffalo Commercial Advertiser* 1886; *Buffalo Courier* 1886; *Buffalo Express* 1886; *Daily News* 1885c; *Marine Record* 1886a, 1886b). On 17 April 1886 a new enrollment was entered for the *F.J. King* at Ogdensburg. Its previous enrollment was surrendered for the rig change. Vessel was described as schooner-rigged with one deck, three masts, a plain head and square stern. Its measurements and tonnage remained the same reported tonnage remained the same (Bureau of Navigation 1886).

The ship cleared light for Kingston where it collected coal for Toledo. At Toledo lumber was taken on for Garden Island, and it was delivered on 28 May 1886 (*British Whig* 1886g, 1886h, 1886i; *Plain Dealer* 1886a, 1886b). On 2 June *F.J. King* entered the Goble Dry Dock at Oswego to receive minor repairs. It's unknown what work was specifically conducted there (*Oswego Daily Times- Express* 1886). It next sailed for Fair Haven, New York where it loaded coal for Chicago. On its return east the vessel picked up timber at Manistee and departed for Kingston (*Inter Ocean* 1886a, 1886b; *Milwaukee Sentinel* 1886a, 1886b; *Plain Dealer* 1886c). In July the vessel brought stone from Grindstone Island, New York to Chicago. For its return to the lower lakes, the boat moved timber from Manistee for Garden Island. In September *F.J. King* brought 560 tons of coal from Oswego to Green Bay, Wisconsin for Barkhausen & Hathaway. After dropping off the coal, the schooner sailed to Escanaba, collected a cargo of iron ore for Joliet Steel Company in Chicago and departed for Chicago at 1PM on 13 September (*British Whig* 1886j, 1886l, 1886m; *Buffalo News* 1886; *Green Bay Advocate* 1886; *Inter Ocean* 1886c,

1886d, 1886e, 1886f, 1886g; *Kenosha Telegraph* 1886; *Milwaukee Sentinel* 1886c, 1886d, 1886e, 1886f; *Plain Dealer* 1886d, 1886e, 1886f, 1886g, 1886h).

While sailing south on Lake Michigan *F.J. King* spang a leak to which its pumps could not keep up, and despite actions by the captain and crew to save the ship, about 1PM on 15 September 1886, the schooner sank in 140 feet of water 2.5 miles east of North Bay, Wisconsin. The crew of eight men was able to escape the ship in the yawl and were picked up by the passing schooner *La Petite*. The vessel was estimated at \$2500 at the time of its loss. No lives were lost (*British Whig* 1886n; *Detroit Tribune* 1886; *Inter Ocean* 1886h; *Milwaukee Sentinel* 1886g, 1886h; *Milwaukee Journal* 1886; *Springfield Globe-Republic* 1886).

*F.J. King*'s crew were landed in North Bay and made their way to Sturgeon Bay. Upon arriving at Sturgeon Bay, Captain William Griffin gave an interview to the *Door County Advocate* that provided additional details about the disaster:

"The *King* was bound for Chicago with a cargo of iron ore from Escanaba. It left the latter port about 1 o'clock on Tuesday afternoon (14 September) and was making good weather until on the following morning when the heavy wind from the southeast caused her to labor hard, and shortly afterward it was discovered that she was leaking. Orders were immediately given to come about and run before the wind, and the crew manned the pumps. The vessel was about off the canal at this time, but Capt. Griffin did not dare to run in here for fear of striking bottom as he was drawing eleven or twelve feet of water. Beside this he was not acquainted with the cut, never having been anywhere near it. He accordingly made for the foot of the lake, hoping to get into North Bay where he could obtain shelter and at the same time run the vessel aground in safety. When off this point, the wind died away and the craft became unmanageable. A heavy sea was still running, and this caused the vessel to roll so violently that the water gained on the pumps with such rapidity that it became evident that nothing could be done to save the craft. A sail was seen at some distance and the *King* signaled for her to bear down. The call for help was promptly responded to by the stranger, which proved to be the schooner *La Petite*.

The crew was ordered to secure their luggage and all hands took to the vessel's boat, the captain being the last to leave, and twenty-eight minutes after the pumps ceased working the noble craft went down head first, a loud explosion following as the confined air rushed through the companion way, some of the captain's papers being blown fifty feet or more heavenward. The crew, consisting of eight men besides the master, pulled alongside the *La Petite* soon afterward and this craft ran into North Bay the same afternoon and placed the shipwrecked men safely on the wharf. From there, they came to (Sturgeon Bay) by stage and on Thursday evening (16 September) left for Chicago" (*Door County Advocate* 1886a).

The ship's topmasts broke but its spars remained protruding above the surface some eight to ten feet out of the water. As this hazard was in the track of vessels within the shipping lanes. Regional newspapers reported the obstruction to navigation within their marine sections and called for salvagers to go to the wreck to cut down the masts. By October 1889 Captain William A. Sanderson, Keeper of the Cana Island Lighthouse reported *F.J. King*'s masts had broken by waves and ice, and were no longer visible above the surface. He reported, however, that part of one of its sails remained floating (*British Whig* 1886o; *Door County Advocate* 1886b, 1889; *Milwaukee Sentinel* 1886i, 1886j).

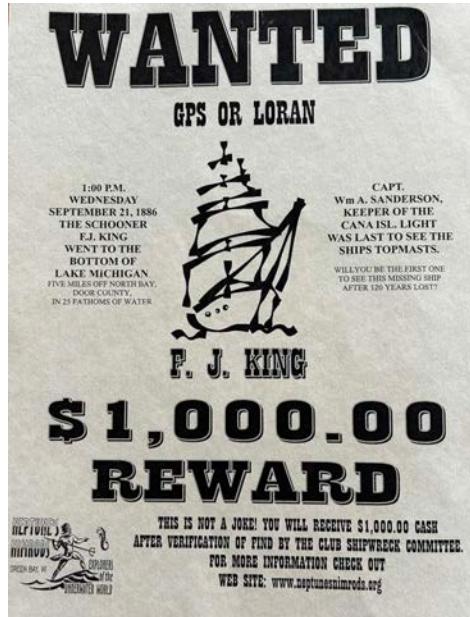


Figure 39. Rewards poster for schooner *F.J. King* (Neptune's Nimrods Dive Club)

In the 1970s, *F.J. King* was one of the most highly sought lost ships on Lake Michigan and was the subject of countless search efforts without success leading to the Neptune's Nimrods Dive Club of Green Bay offering a \$1,000 cash reward for its discovery. On 28 June 2025, Brendon Baillod was leading a Wisconsin Underwater Archaeology Association (WUAA) project, in which 20 citizen scientists and community historians from around the Midwest were learning about sidescan sonar and remote operated vehicle (ROV) technology. Using a search grid that Baillod developed for the *F.J. King* but not anticipating its discovery, two hours into the class, the group found of the remains of a shipwreck similar in size to the *F.J. King*. Remote operated vehicles were deployed from their chartered tour vessel, *The Shoreline* owned by the Friends of Plum and Pilot Islands, and WUAA's citizen scientists were able to confirm the location of the long-sought wreck site of the schooner *F.J. King*. Baillod notified Wisconsin Historical Society Maritime Archeologist Tamara Thomsen who along with volunteer diver Zach Whitrock surveyed and documented the shipwreck in August 2025.

## Site Description

The remains of the schooner *F.J. King* (47DR0494) rest in 140 feet of water, 2.8 miles east southeast of the Cana Island Lighthouse, in Door County, Wisconsin. It sits on a heading of 142 degrees. *F.J. King*'s hull is twisted. At the bow the ship leans 2 degrees to port. At the cabin combing, the ship leans 4 degrees to port and is tipped 4 degrees toward the stern. Its stern and transom lean 8 degrees to the starboard side.

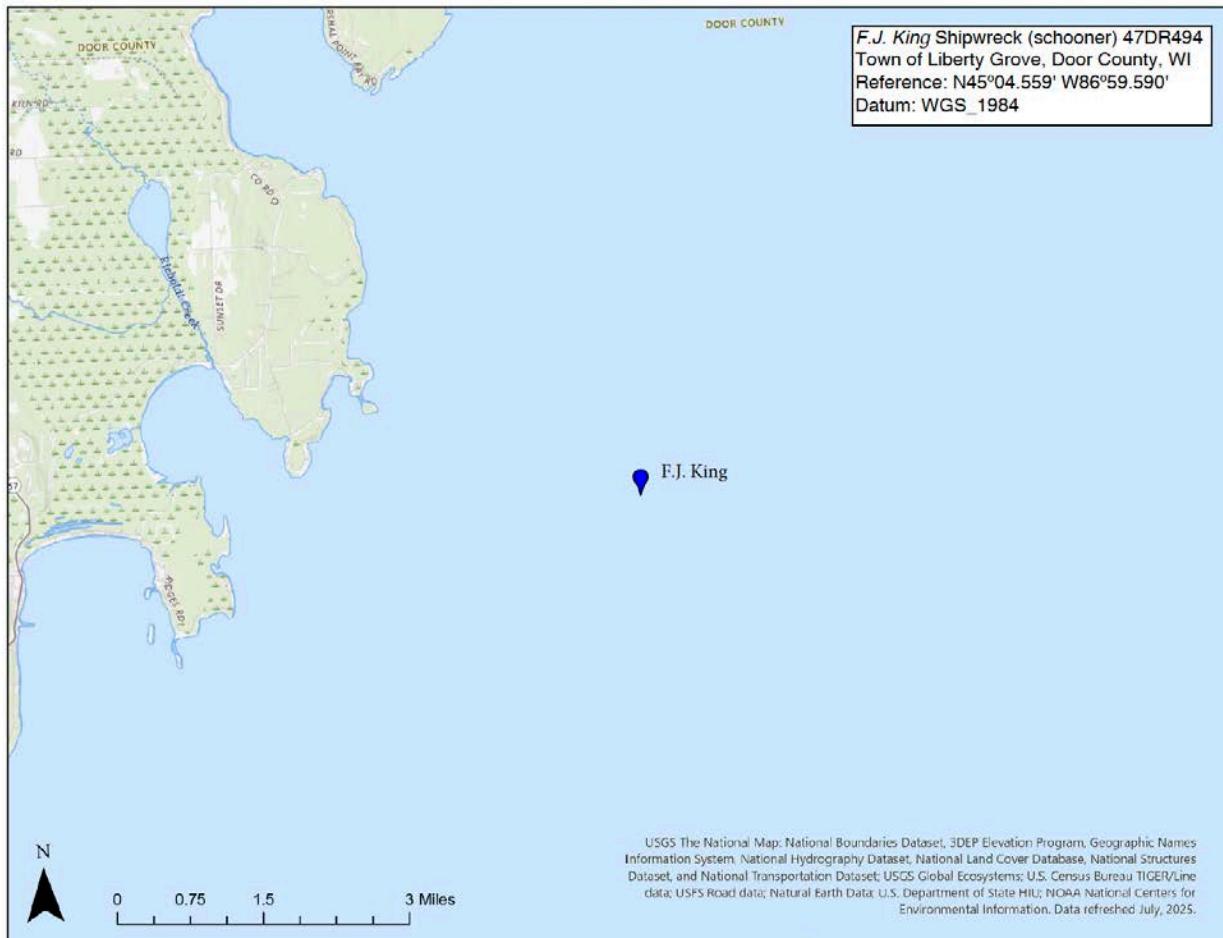


Figure 40. Location of the *F.J. King* shipwreck site

The *F.J. King* was constructed by Master shipbuilder George R. Rogers in Toledo, Ohio in 1867. *F.J. King* is representative of a unique class of sailing vessels called canal schooners or, interchangeably, canallers. Canallers were a unique vessel type to the Great Lakes, designed to transit the locks of the Welland Canal, the canal that bypassed Niagara Falls, while carrying the maximum amount of cargo through the locks with only inches to spare. Grain, collected from the farmlands of the Midwest, was transported from ports on western Lake Michigan to eastern ports on Lakes Erie and Ontario (largely the cities of Buffalo, New York; Oswego, New York; and Kingston, Ontario). Vessels returning to Lake Michigan were often loaded with coal, used

for heating Midwestern cities and powering factories. As an integral part of the maritime transportation system, many features of this vessel type were common to other canallers on the Great Lakes. As mentioned in the Multiple Property Documentation Great Lakes Shipwrecks of Wisconsin (Cooper and Kriesa 1992), schooners were fore-and-aft rigged and had two or more masts, carrying square-rigged topsails on their foremasts augmented with a triangular, raffee sail. Most Great Lakes schooners were single decked and had only a small cabin structure above the deck.



Figure 41. *F.J. King*'s stempost and port hull looking aft

On 15 September 1886, the *F.J. King* sank southeast of North Bay, Wisconsin after it began taking on water while the canaller was sailing toward Chicago, Illinois with a cargo of iron ore. The vessel provides historians and archaeologists with the unique opportunity to study the construction techniques and features of Great Lakes canallers, used in the Great Lakes grain, coal, lumber and other bulk cargo trades. The *F.J. King* shipwreck site has yielded significant information about wooden canal schooner construction and has great potential to yield further archaeological information in future years.

The remains of the *F.J. King* were located on 28 June 2025 during a class in the use of sonar and remote operated vehicle (ROV) technology conducted for citizen scientists by Wisconsin Underwater Archaeology Association (WUAA). With gift funding from a donor to the Wisconsin Historical Foundation, Wisconsin Historical Society maritime archaeologists and volunteer divers completed a Phase II archaeological survey during site visits in August and October 2025. Photos and videos were collected, and a scaled photogrammetry model of the wreck site was created by Wisconsin Historical Society volunteer diver Zach Whitrock. General measurements were taken from the photogrammetry model and are approximate. Detailed measurements were taken with a measuring tape on the wreck site. The length of the ship is 145 feet; the vessel's beam, measured at its widest point, is 26 feet. Given the wreck dimensions, location, the cargo of iron ore that remains in the hold and scattered on the lakebed around the site, and comparison of vessel losses in the vicinity based on historic newspaper accounts, the vessel remains were determined to belong to the schooner *F.J. King*.

The vessel is double framed with individual futtock measuring 0.45 feet sided and 0.7 feet moulded with 0.8 feet between frames, or 1.8 feet spaced. Ceiling planking measures 0.9 feet wide and 0.25 feet thick. Outer hull planking measures 0.6 feet wide and 0.25 feet thick. Deck beams measure 0.95 feet wide and 0.7 feet thick with a space of 2.8 between beams. Deck planking is 0.4 feet wide and 0.15 feet thick. The stanchions that support the deck measure 0.7 feet wide and 0.6 feet thick.

The stempost measures 0.8 feet at its leading edge and together with the apron measures 2.0 feet on the sides and 1.4 feet at its aft face. The top of the stempost is in 117 feet of water and disappears into the sand at 131 feet with 13.9 feet exposed above the sediment. The stempost is nearly vertical with only a 3-degree rake but has separated with the port side hull. On top of the stempost is the bowsprit bed. The bowsprit is unstepped and disarticulated. The rods that would have held the bowsprit in place remain on the bow. The starboard quarter is damage from the ship's collision with the bottom. The railing, bulwarks and hull side have fallen away on the starboard side from the stempost to 30.8 feet aft of the stempost. This damage exposes the interior of the forecastle where an iron stove and fragments of bunks remain in what was likely a crew berthing area.

The bulwarks remain continuous along the port side of the vessel from the bow to the hull break 119 feet aft of the stempost. The bulwarks are missing on the starboard side at the forward quarter along the area that impacted the lake bottom upon sinking. The starboard side bulwarks remain in place from 30.8 feet to 70.5 feet aft of the stempost. Bulwark stanchions measure 0.6 feet sided and 0.6 feet moulded, and are spaced 3.4 feet, with 2.8 feet between bulwark stanchions. Atop the stanchions sit the cap rail which measures 1.5 feet wide, 0.4 feet thick and stands 3.9 above deck. The deck shelf is constructed of two boards. The outbound board is notched to receive the back side of the bulwark stanchions, and the inbound board is notched to receive the inward facing side of the bulwark stanchions. These boards both measure 0.4 feet wide and 0.15 feet thick. There is a top rail stacked on top of the rail cap that runs from the bow

to 30.5 feet aft of the stempost. It measures 0.55 feet wide and 0.2 feet tall and raises 0.8 feet over railing at the bow to 4.4 feet above the deck. A monkey rail is present atop the railing and extant on the bulwarks that separated with the hull fragments at the stern. The monkey rail begins 119 feet aft of the stempost. It measures 0.55 feet wide, 0.2 feet thick and raises the railing around the stern of the ship 0.9 feet above the main rail or 4.0 feet above the deck.



Figure 42. *F.J. King*'s Samson post and windlass looking across ship and slightly forward

Remnants of a lightly constructed forecastle deck remain on the port side at the bow just forward of the windlass. One partial support beam for the forecastle deck extends from the rail to the aft corner of the Samson post. Four pieces of forecastle deck planking remain and measure 0.35 feet wide and 0.1 feet thick. On the weather deck forward of the Samson post is a deck box 1.5 feet wide, 1.2 feet deep and 1.5 feet tall. This box would have sat under the forecastle deck and may have provided additional support for the bowsprit. The lid could not be opened.

The port side cathead has been dislodged from the railing and hangs from a cable alongside the outside of the hull 9.6 feet aft of the stempost. The cathead is 10.3 feet long, 0.7 feet wide and 0.3 feet thick. It is tapered to a toe on what would have been the inbound end.

Because the port side cathead is disarticulated, the port side anchor is hanging by one fluke from the ship's top rail 15 feet aft of the stempost. The anchor has a wooden stock measuring 11 feet long. Its shaft is 7.1 feet from stock to crown with arms measuring 3.0 feet from shaft to bill. Its flukes measure 1.6 feet across the palm and 2.3 feet long. Twenty-three feet of anchor chain runs from the anchor and penetrates the hawsepipe. The starboard side anchor is likely under the hull. Its chain runs from the windlass, across the damaged deck, through the hawsepipe that was ripped from the hull, and down into the sand angling back under the wreckage.

The vessel's Samson post is located 10.3 feet aft of the stempost. It stands 5.8 feet above the deck with 7.9 feet exposed below the deck. It measures 1.5 feet wide and 1.4 feet thick. The top of the Samson post is convex. On the forward-facing side of the Samson post, 3.0 feet down from its top is carved a step that would have accepted the heel of the bowsprit. The step measures 1.4 feet long, 0.5 feet wide and 0.7 feet deep. The windlass crosshead is mounted 0.7 feet down from the top of the Samson post on its forward face. The crosshead is 2.5 feet long and its ends are squared into sockets to accept the windlass handles. No handles are extant. Purchase rods are 4.0 feet long and remain attached to the crosshead. The ship's windlass is located 12.6 feet aft of the stempost. Overall, the windlass is 12.3 feet wide. The windlass pawl has detached and is sprung upward. The pawl rim at the center of the windlass' barrel measures 1.5 feet wide and is flanked by purchase rims 0.45 feet wide and 0.3 feet thick. The whelps are 2.0 feet wide. The port side whelp has three wraps of chain. One end of the chain loops over the strongback and is flaked on the deck along the portside bulwarks amidships before continuing to the anchor. The other end extends through a deck pot into the chain locker below. The starboard side whelp also has three wraps of anchor chain. Carrick bitts rise 4.3 feet above deck and measure 0.8 feet wide and 1.3 feet long. Above the windlass barrel, the top of the carrick bitts are widened to an oval 1.3 feet long and 1.2 feet wide. A strongback spans the 6.5 feet gap between the two carrick bitts above the windlass. Both standard knees that supported the windlass remain firmly attached to the weather deck. They measure 2.6 feet tall, extend 3.2 feet forward and are 0.5 feet thick, and are 1.1 feet across the throat. The warping ends of the barrel measure 2.0 feet long and 1.6 feet in diameter measured across their distal ends. One covered deck pot is located between the windlass and forecastle scuttle.



Figure 43. Lower portion of a single action bilge pump and foremast mast looking forward

Four feet aft of the windlass the deck has collapsed into the hold at the forward edge of the forecastle scuttle. The collapse extends to the forward edge of the first cargo hatch. The forecastle scuttle would have been aligned with centerline of the ship. The combing has detached from the deck and lies on top of debris below. The opening for the forecastle scuttle measures 3.2 feet long and 2.6 feet wide measured at its inner diameter. Its surrounding combing is 0.2 feet wide and would have risen 0.7 feet above the deck. The weather cover for the forecastle scuttle was found on the deck under spars and rigging aft of the scuttle. Its top is broken but the outside framing is extant and measures 5.5 feet wide and 3.8 feet long. A scuttle is located at the stern 4.5 feet forward of the rudderpost that would have offered below deck access. It is centrally located. Its opening is 2.1 feet long and 2.5 feet wide. The combing surrounding the scuttle measures 0.35 feet wide and 0.5 feet tall. The deck surrounding the scuttle has collapsed and it has pitched forward.

The cargo hold was accessed by four cargo hatches. None of the cargo hatched have covers extant. The forward cargo hatch is located 40 feet aft of the stempost and measures 8.4 feet long and 7.6 feet wide. The second midships cargo hatch is transversed by the centerboard trunk. It is located 60 feet aft of the stempost, and its opening measures 6.0 feet long and 7.6 feet wide. The third midships cargo hatch is located 84.8 feet aft of the stempost, and measures 8.4 feet long and 7.6 feet wide. The fourth and aftmost cargo hatch is located 101 feet aft of the stempost, and measures 4.5 feet long and 7.6 feet wide. Combings on all hatches are 0.5 feet wide and rise 0.9 feet above the deck. The cargo hatch ledges are 1.7 feet deep.

Fragments of wire rigging are deposited at various locations around the site. The ship's three masts are no longer standing. The foremast is unstepped. The foremast hole remains intact through the deck and is located at 37.5 ft. aft of the stempost. The opening measures 2.4 feet in diameter. The foremast hole is surrounded by a mast table that stands 3.0 feet above the deck. The table measures 0.7 feet wide and is 0.35 feet thick. It is supported by six stanchions measuring 0.4 feet wide, 0.6 feet thick and spaced 1.7 feet apart. Four belaying pins remain positioned around the foremast table. The mainmast is located 81.8 feet aft of the stempost and has broken at the deck level. The stub measures 1.9 feet in diameter. The mainmast table stands 3.0 feet above deck. The mast table is 0.7 feet wide and 0.35 feet thick. It is supported by six stanchions. Four belaying pins remain positioned around the mast table. The mizzenmast would likely have penetrated the cabin roof. A fragment of the cabin roof is located off the port side aft quarter in the sand but does not retain evidence of the mast hole, so its location on the ship cannot be determined.

Foremast chainplates begin 31.9 feet aft of the stempost, and mainmast chainplates begin 78.4 feet aft of the stempost. Although the sides of the hull have fallen away at the stern, the location of the mizzenmast chainplates is estimated at 118 feet aft of the stempost. Four foremast chainplates remain in place on the port side of the ship. Three foremast chainplates remain in place on the starboard side of the ship; the fourth chainplate has become disconnected and hangs alongside the hull. Foremast chainplates are 3.8 feet long, 0.4 feet wide and 0.1 feet thick. They have a spacing between the chainplates of 1.6 feet, 2.4 feet and 2.0 feet moving aft. They are held in place by the upper channel that measures 9.5 feet long, 0.3 feet wide and 0.2 feet thick, which is laid over the top of the chainplates board even with the top of the rail. All deadeyes remain attached and measure 0.8 feet wide and 0.4 feet thick. Five mainmast chainplates remain on both the port and starboard sides, each with deadeyes. The mainmast chainplates are 4.4 feet tall and 0.4 feet wide and 0.1 feet thick. They have a spacing between the chainplates of 1.8 feet, 2.0 feet, 2.0 feet and 0.5 feet moving aft. They are also held in place by an upper channel which is laid over the top of the chainplates board even with the top of the rail. As both sides of the hull have fallen away at the stern and lay ceiling up, the mizzenmast chainplates were not accessible for survey. Belaying pin racks remain intact inbound of the port side foremast chainplates, and inbound of both sets of the mainmast chainplates.

Forward of the foremast hole are two spar fragments. One is 16.1 feet long and 0.8 feet in diameter. This may have been part of the foretopmast as a lower mast-cap remains connected. The other is 16.7 feet long and 1.3 feet in diameter. Both spar fragment lay in the collapsed deck section at the bow on top of the damaged forecastle cover. Just aft of the collapsed deck and to the starboard side of the centerline is the bottom portion of the foremast that includes the foremast heel. Spar fragments also lay in the sand on the port side. One is 27.6 feet long and 1.1 feet in diameter. Underneath this is another fragment 15.6 feet long and 1.1 feet in diameter. The foremast boom lies on the deck on the starboard side of the forward hatch. It measures 42.6 feet long, 2.8 feet across the jaws and is 0.8 in diameter, measured in front of the jaws.

Aft of the second cargo hatch a spar fragment lies across the deck and is balanced on top of the starboard rail. This spar measures 35.1 feet long, 0.9 feet in diameter. The spar retains degraded fragments of battens would have secured a trestle tree. On the port side of the second hatch and laying across the deck forward of the mainmast stub is the mainmast boom. It measures 37.2 feet long, 2.6 feet across its jaws and 0.9 feet diameter, measured in front of the jaws.

Two additional spar fragments are outside of the hull and propped against the portside rail. The forwardmost of these two spars is the main topmast. It measures 34.6 feet long with a squared end, 0.95 feet on all sides. On the upper face a slot 0.8 feet from the squared end is cut into the spar, fashioned to accept a fid. The slot measures 0.9 feet long by 0.4 feet wide. This spar retains an iron band, batten fragments and the mast cap. The mast cap retains remnants of the lower topsail yard with loose fragments of the iron stays 16.3 feet from the square end. The other spar balanced against the rail and entwined in rigging behind the main topmast is 27.5 feet long and 0.9 feet in diameter. Under this spar on the lakebed is yet another fragment 16.5 feet long and 0.6 feet in diameter at its end that includes two blocks.

The mainmast lays on the deck against the portside bulwarks. It measures 62.5 feet long and 2.0 feet in diameter. It is squared to 1.0 feet at the top. The trestle tree remains attached 10.0 feet from its top end. The trestle trees measure 5.5 feet long, 0.85 feet wide and 0.5 feet thick. The front plate is 1.75 feet long, 0.9 feet wide and 0.5 feet thick. Cheeks that supported the trestle trees measure 4.5 feet long, 2.0 feet wide at the top edge and 0.4 feet thick. The end of the mainmast is broken and splintered.

Off the stern of the ship and laying on the lakebed is the mizzenmast. The mizzenmast unstepped during the wrecking event and its heel, although splintered, remains on the mast's end. The mizzenmast measures 65.0 feet long and 1.6 feet in diameter. It is squared to 1.0 feet at the top end. Mast partners remain attached 6.5 feet up from its base. The mast partners are 0.3 feet wide and 0.6 feet thick. This would have stabilized the mast inside the mast hole. The mizzenmast's trestle tree remains attached to the spar 8.0 feet down from its top. A 10.4 feet fragment of the topmast remains fastened to the trestle tree as well as a mast cap. The mast cap is 0.4 feet wide. Cheeks that supported the mizzenmast's trestle tree measure 5.5 feet long and 0.85 feet wide and 0.5 feet thick.

Under the mizzenmast is a boom 34.3 feet long, 2.2 feet across the jaws and 0.8 feet in diameter measured forward of the jaws. To the starboard side of mizzen boom is a gaff boom that measures 26.7 feet long, 2.1 feet across the jaws and 0.8 feet in diameter forward of the jaws. Two blocks remain attached to the gaff.

The vessel's centerboard trunk is located 47.8 feet aft of the stempost and measures 30.1 feet long with 8.6 feet height exposed between the deck and the sediment. The end boards of the trunk measure 1.5 feet wide. Individual boards that make up the sides of the centerboard trunk are 1.1 feet wide and 0.6 feet thick. The centerboard trunk's forward access hole is located 50.7 feet aft of the stempost. The opening is oval shaped, and measures 0.8 feet long and 0.4 feet wide. The hole is filled with sediment; as such we were unable to determine if the centerboard was stowed or deployed at the time of sinking.



Figure 44. *F.J. King*'s capstan with the second hatch combing in the background looking forward

The lower portion of a single action bilge pump is located 37.7 feet aft of the foremast hole. Only the bottom cylinder remains mounted to the deck. It stands 1.3 feet above the deck. The top is 1.3 feet in diameter at the top flange. The hole through the deck measures 1.0 feet in diameter. The ship's capstan is located 54 feet aft of the stempost. It stands 3.2 feet above the deck and is 2.3 feet in diameter. The mainmast's boom cradle remains 70.5 feet aft of the stempost. It stands 4.6 feet above the deck. It is constructed of two boards that make up the lateral sides of the cradle. These measure 0.8 feet wide, 0.4 feet thick and spaced 0.8 feet. The cradle is 1.6 feet thick overall. The centerboard winch is located 72.5 feet aft of the stempost and aft of the second hatch. A chain from this winch would have been used to raise and lower the aft end of the centerboard. At the winch's base the device measures 2.2 feet wide and 1.8 feet long. It stands 3.4 feet above the deck.



Figure 45. *F.J. King*'s centerboard winch and mainmast boom cradle

A remnant of the forward edge of the cabin combing remains connected to the deck. Its placement indicates that the cabin had been centrally located at the stern and that there were companionways of 3.6 feet on either side of the cabin. The combing is located 111 feet aft of the stempost. The combing measures 15 feet wide, 0.4 feet thick and 0.5 feet tall. The cabin blew off with expanding air pressure trapped inside the hull during the sinking. A 6.3 feet remnant of the cabin wall is located on the sand off the starboard stern quarter. The wall frames are 0.2 feet wide, 0.2 feet thick and spaced 1.4 feet on center. There are frames for three windows associated. A fragment of the cabin roof is in the sand off the port side in the sand. 0.2 feet wide, 0.3 feet thick and are spaced 1.4 feet on center. Planks that make up the roof are 0.4 feet wide and 0.15 feet thick.



Figure 46. Port side of *F.J. King*'s disarticulated hull fragment with hanging knees and salt channels

The cabin explosion also blew out 52.6 feet of the hull side and bulwarks on the port side and 49.2 feet on the starboard side. These fragments are limited to the bulwarks and hull sides that include the run for the rudder. The port side hull fragment lays at a 20-degree angle to the keelson and rests ceiling up. Three hanging knees and one partial knee remains attached to the hull section. Knees measure 2.8 feet long, 2.2 feet high, 0.6 feet thick and 1.0 feet across the throat. The knees are spaced 3.2 feet with 2.6 feet between knees. The starboard side hull fragment rests at a 15-degree angle to the keelson. Three complete hanging knees and one fragment remain attached to the hull section as well. As seen on both hull fragments, oval-shaped salt channels cut into the second ceiling plank down from the top of the deck knee. Although noted on these fragments, salt channels are cut into the ceiling planking at this position between each frame for the length of the vessel.



Figure 47. *F.J. King*'s stern with loose hanging lumber port cover

The transom and the ship's buttock remain intact. The transom measures 21 feet wide and 5.0 feet tall and remains attached to the ship with lodging knees at the corners. The lodging knees

measure 3.3 feet long, 3.3 feet wide, 0.7 feet thick and 1.2 feet across the throat. Both corners of the transom are cut out with openings 3.5 wide and 2.7 feet tall. These openings likely facilitated deck-loading of dimensional lumber but also may have aided in easing the vessel through the locks of the Welland Canal, which was noted to be problematic given its extreme length. The covers for these ports, which are not extant, but would have been comprised of bulwarks and rail cap. Their fastening mechanism was not determined. Additionally, lumber ports are located on the ship's buttock on either side of the stempost. Each of these lumber ports measures 4.5 feet wide and 6.5 feet tall. The openings are covered with hatch covers that are hinged at the top corners. Additionally, two iron straps add support down the length. The covers measure 7 feet long and 5 feet wide and are curve shaped to fit the trim of the hull.

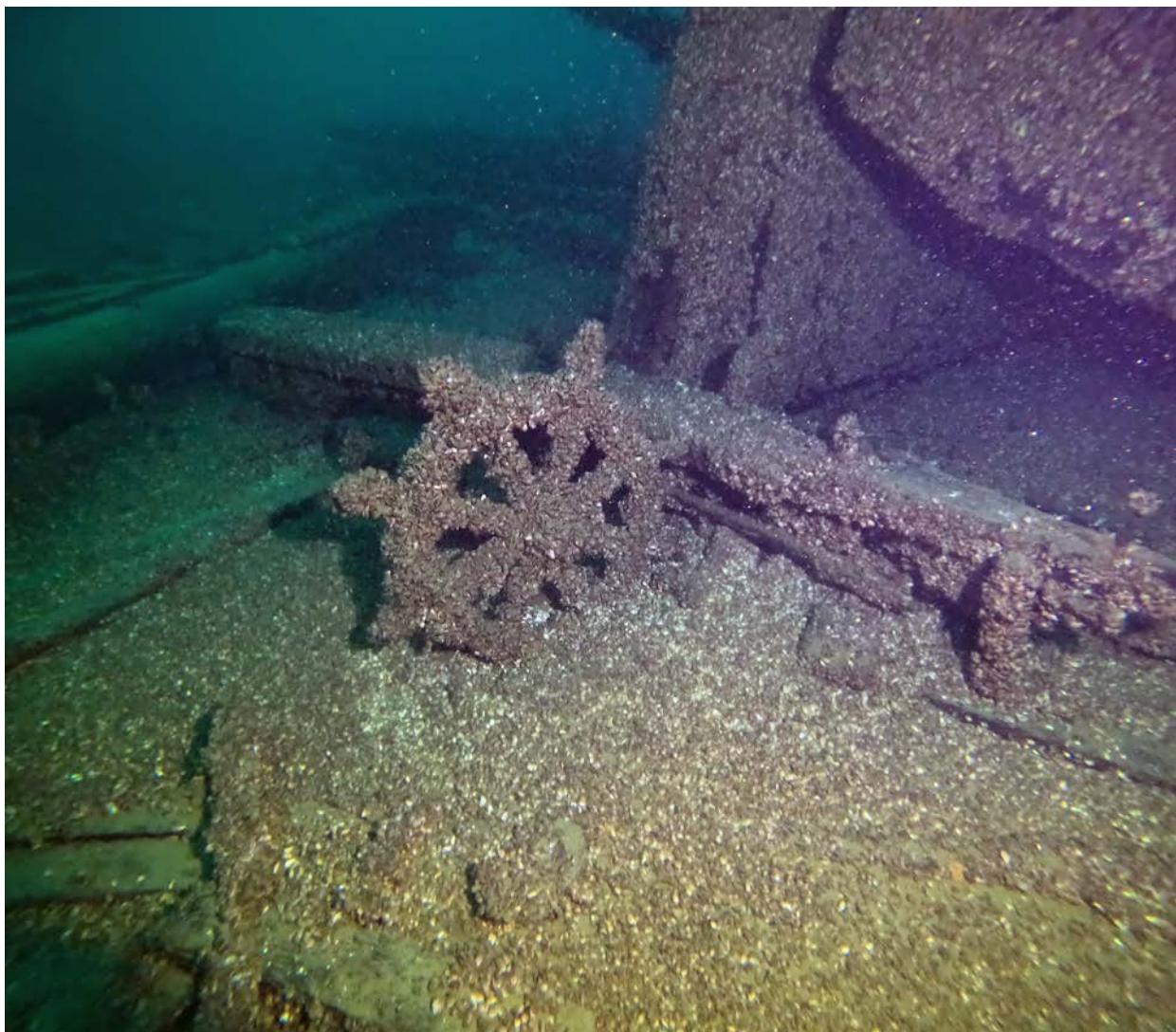


Figure 48. *F.J. King*'s ships wheel in the sand off the stern with rudder in background

The steering carriage for the ship's wheel remains centered at the stern along the transom 144 feet aft of the stempost. It stands 3.0 feet tall and measures 3.0 feet wide at the top and 3.8 feet

wide at its base. Timbers that comprise the carriage are 0.4 feet thick. The carriage surrounds the rudderpost and extends 2.3 feet forward from where it is fastened to the stern bulwark. The ship's wheel remains attached to the worm gear; the mechanism was knocked free during the sinking and lies on the lakebed at the stern of the vessel. The wheel measures 3.6 feet across from spoke to spoke. The worm gear measures 5.2 feet from its base to the wheel hub.

*F.J. King* came to rest on the bottom with its rudder on an even keel. The rudder blade is comprised of four timbers that measure 4.5 feet long overall. The terminal end of the rudder is imbedded in the sediment; portion which is exposed stands 9.6 feet tall and is 0.9 feet thick. An iron preventer hinge 1.5 feet long and 0.3 feet wide, is located 3.5 feet up from the base of the rudder and the rudder is hinged to the sternpost. The sternpost measures 0.9 feet wide and 0.9 feet thick. The rudderpost is 1.0 feet in diameter.

As most of the port side rail is complete, the location of bitts along the vessel's railing was determined on this side of the vessel. Sets of bitts are located along the rail 6.0 feet, 25.8 feet aft, 70.8 feet and 108 feet aft of the stempost. Railing bitts are all in pairs. Each bitt individually measures 0.9 feet wide, 0.6 feet thick with 1.3 feet of space between the pair. They stand 1.7 above the rail and 4.6 feet above the deck. Between the last set of bitts and forward of the cabin 108 feet aft of the stempost is a single post located centrally on the deck. It stands 6.0 feet above the deck and is 0.9 feet wide and 0.7 feet thick. At the stern, one stern bitt remains on the starboard side. The bitt stands 7 feet above the deck. 2.2 feet down from its top is bar that penetrates the post and sticks out 0.7 feet on either side (fore and aft). The bar is 0.3 in diameter.

A set of fairleads is located 19 feet along the port side rail and aft of the anchor. It measures 2.3 feet long, 0.4 feet wide, stands 0.4 feet above the rail. The opening to accept the line is 0.2 feet at the top. It is likely a matching set remains with the starboard side rail that has fallen into the debris at the bow.

The lakebed surrounding the shipwrecked vessel is covered with its cargo of iron ore that escaped from breaks in the hull. Ceramic pieces remain intermixed within the area of the collapsed cabin. No paint was observed however remnants of caulking was found between deck planking.

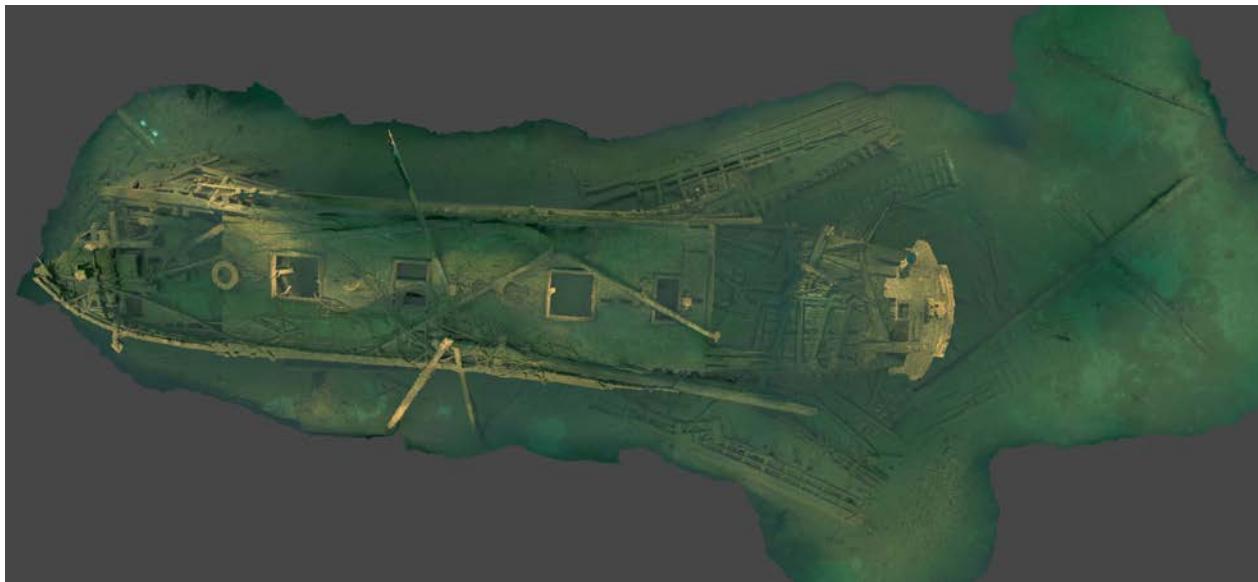


Figure 49. Photogrammetry model of *F.J. King* (Zach Whitrock)

## CHAPTER SIX

### CONCLUSIONS AND RECOMMENDATIONS

This field report is a component of the ongoing research conducted by Wisconsin Historical Society's maritime archaeologists and contributes to the ever-increasing body of knowledge collected about historic shipwrecks and submerged cultural sites. Archaeological surveys conducted by the program are also designed to follow the standards and guidelines established by the National Park Service for submerged cultural resources. As such, the goals of the surveys are to positively identify the site through unique marks or artifacts, to analyze the site for its significance in Wisconsin's history as well as a more overarching view of its regional and national importance, to determine its eligibility for listing to the National Register of Historic Places, and to recommend best management and visitation through buoys, signage, interpretation, and outreach.

#### *JOHN EVENSON*

As an early wooden tugboat built in an informal shipbuilding effort, the *John Evenson* survey was designed to provide positive vessel identification through identifying marks or artifacts and to document features of early Great Lakes harbor tugs.

The first objective, to provide positive vessel identification through identifying marks or artifacts, was not achieved. The ship's nameboards were not present, and painted areas and identifying marks were covered with quagga mussels. Although the location and evidence of the wrecking event match, a complete archaeological documentation of *John Evenson* site will be a continuing process for years to come. The information gathered during the 2024 survey should serve as a baseline for monitoring the *John Evenson* site for changes caused by environmental effects as well as increased visitation by divers.

The second objective was achieved, and *John Evenson* was listed on the State Register of Historic Places in August 2025. Its nomination has been forwarded to the National Park Service for consideration for listing on the National Register of Historic Places.

Its hull is broken and as such visitation by divers to the *John Evenson* site is predicted to be light. A state-sponsored mooring buoy is not planned for the site. If visitation by divers increases in future years, the need for a mooring buoy should be revisited. If a mooring buoy is installed at the site, the anchor should be an offsite deadweight or helix-type screw anchor, as any mooring anchored to the wreck itself could cause significant damage to the site.

Although the hull is broken, a considerable amount of the *John Evenson*'s hull components is extant. To many divers, a broken hull such as the *John Evenson* holds less appeal compared to more intact vessels - even vessels that are entirely stripped of gear, and artifacts. To an

analytical eye, however, the *John Evenson* site presents a prime opportunity to study and learn about wooden tugboat construction. The advantage of a broken hull like the *John Evenson* is that it offers an unobstructed view the ship's equipment and many construction details that are hidden in more intact vessels. It is easier to document the structural components integral to vessel construction when a shipwreck is broken in pieces. Additionally, as more of these early wooden tugboats are documented by the Wisconsin Historical Society, a greater understanding of the features and nuances of this vessel type can be achieved and the greater the necessity to return to sites for comparative analysis.

The site lies more than 3.5 miles offshore, although easily reached by boat, diving the wreck should only be attempted in the best of conditions without risk of being caught out in weather that can blow up on Lake Michigan. Information gathered during the survey will be used for website updates, public outreach, and educational materials for the surrounding community.

#### *JENNIBEL*

The *Jennibel* survey was designed to provide positive vessel identification through identifying marks or artifacts, and to document Great Lakes schooner construction and use in the bulk cargo trades.

The first objective, to provide positive vessel identification through identifying marks or artifacts, was not achieved. The vessel's size and location, construction details, and details of its loss all support the identification as *Jennibel*. However, from the current breadth of archaeological material on the site, precise positive identification of the wreck was not possible. A complete archaeological documentation of the *Jennibel* site will also be a continuing process. The vessel's size, location, and construction support the identification as the *Jennibel*.

The second objective was achieved. In November 2025 the *Jennibel* site was evaluated under the standards of the National Park Service and listed to the State Register of Historic Places. Its nomination has been forwarded to the National Park Service for consideration for listing on the National Register of Historic Places.

A state-sponsored mooring buoy has been placed on the site for several years. A local dive shop places and removes the buoy seasonally. Information gathered during the survey will be used for website updates, public outreach, and educational materials for Door County, and the surrounding community.

#### *THOMAS H. SMITH*

As a small-sized steambarge, the *Thomas H. Smith* survey was designed to document Great Lakes steambarge construction and provide positive identification through identifying marks or artifacts.

The first objective, to provide positive vessel identification through identifying marks or artifacts, was not achieved. A complete archaeological documentation of the *Thomas H. Smith* site will be a continuing process for years to come. The information gathered during the 2025 survey should serve as a baseline for monitoring the *Thomas H. Smith* site for changes caused by environmental effects as well as increased diver visitation.

The second objective was achieved, and *Thomas H. Smith* was listed to the State Register of Historic Places in November 2025. Its nomination has been forwarded to the National Park Service for consideration for listing on the National Register of Historic Places. Site interpretation and public outreach for *Thomas H. Smith* have been achieved through the update of the Wisconsin Shipwrecks website and through various public presentations.

As one of only a few small wooden steam barges in Wisconsin waters, the *Thomas H. Smith* provides historians and archaeologists the rare chance to study the construction of the vessel, and adaptation for lumber transportation as well as wrecking service throughout the Great Lakes. *Thomas H. Smith* was one of only three vessels known to have been built with an engine designed by the Manistee Iron Works. Some aspects of the vessel's construction are unusual in American ship construction; further analysis of the hull construction could shed some light on the builder's methodology and the small construction variations that occur in primitive shipbuilding facilities.

The *Thomas H. Smith* site is easily accessible advanced divers by boat although a considerable distance from the nearest harbors in Milwaukee or Racine. It is within recreational diving limits, located on a hard clay bottom. Due to its depth and its location, visibility at the site is oftentimes very good, although weather patterns and currents on occasion reduce visibility. A mooring buoy on site would greatly facilitate diving activities and would protect the wreck from anchor damage. A state-sponsored mooring buoy is not planned for the site but if visitation by divers increases in future years, the need for a mooring buoy should be revisited. If a mooring buoy is installed at the site, the anchor should be an offsite deadweight or helix-type screw anchor, as any mooring anchored to the wreck itself could cause significant damage to the site.

The information gathered during the survey will be used for website updates, public outreach, and educational materials for Racine County.

## *F.J. KING*

As a wooden canal schooner, the *F.J. King* survey was designed to provide positive vessel identification through identifying marks or artifacts and to document features of early sailing vessels of the Great Lakes bulk cargo trades.

The first objective, to provide positive vessel identification through identifying marks or artifacts, was not achieved. The ship's nameboards were not present, and painted areas and identifying marks were covered with quagga mussels. Although the length, beam, location and evidence of the wrecking event match, a complete archaeological documentation of the *F.J. King* site will be a continuing process for years to come. The information gathered during the 2025 survey should serve as a baseline for monitoring the *F.J. King* site for changes caused by environmental effects as well as impact by diver visitation.

The *F.J. King* site retains a high degree of hull integrity. In most cases it is easier to document the structural components integral to vessel construction when a shipwreck is broken in pieces. When intact there is slower process of discovery and evaluation of the resource that is required. Additionally, as more canal schooners are documented by Wisconsin Historical Society, a greater understanding of the features and nuances of this vessel type can be achieved and the greater the necessity to return to sites for comparative analysis.

The second objective was achieved. *F.J. King* has been nominated to the State and National Registers of Historic Places and at the time publication is pending review at the state level. The *F.J. King* site retains excellent archaeological integrity with only a small portion of the vessel broken and all components remain on site. Sites such as *F.J. King* present a rare opportunity under pristine, undisturbed conditions to study and learn about early Great Lakes canal schooners, their construction, and their use.

The *F.J. King* site is deep and lies just beyond the recreational diving depths. As technical diving increases in popularity, and as charter boats establish in the region and draw in more visitation, the site will only become more accessible to an increasing number of divers. Although easily reached by boat, diving the wreck should only be attempted in the best of conditions without risk of being caught out in weather that can blow up on the lake during the summer months. Because of the depth and the long distance from shore, it is not recommended for a mooring buoy.

Advances in Remotely Operated Vehicle technology have made access to sites like the *F.J. King* easier and given people of various experience and skill means and incentive to visit some of these sites. With that in mind, intact sites such as *F.J. King* are fragile sites and can easily be damaged by anchor drag and grappling hooks. They also contain many features that could cause hang-ups to ROV tethers potentially causing damage to the site. Information gathered during the

survey will be used for website updates, public outreach, and educational materials for Door County and the surrounding communities.

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1887b *Independent*. December 2.  
1888a *Independent*. June 1.  
1888b *Independent*. August 3.  
1890a *Independent*. April 11.  
1890b *Independent*. April 25.  
1890c *Independent*. May 2.  
1890d *Independent*. May 9.

Inter Ocean (Chicago, Illinois)  
1881 *Inter Ocean*. November 30.  
1882a *Inter Ocean*. March 22.  
1882b *Inter Ocean*. March 25.  
1882c *Inter Ocean*. May 3.  
1882d *Inter Ocean*. May 16.

1882e *Inter Ocean*. June 13.  
1882f *Inter Ocean*. June 17.  
1882g *Inter Ocean*. August 1.  
1882h *Inter Ocean*. August 17.  
1882i *Inter Ocean*. October 18.  
1882j *Inter Ocean*. November 17.  
1883a *Inter Ocean*. April 24.  
1883b *Inter Ocean*. April 27.  
1883c *Inter Ocean*. May 12.  
1883d *Inter Ocean*. May 13.  
1883e *Inter Ocean*. May 16.  
1883f *Inter Ocean*. August 3.  
1883g *Inter Ocean*. August 12.  
1883h *Inter Ocean*. August 24.  
1883i *Inter Ocean*. September 17.  
1883j *Inter Ocean*. September 18.  
1884a *Inter Ocean*. July 6.  
1884b *Inter Ocean*. August 13.  
1884c *Inter Ocean*. August 29.  
1884d *Inter Ocean*. October 7.  
1884e *Inter Ocean*. October 15.  
1884f *Inter Ocean*. October 16.  
1884g *Inter Ocean*. October 24.  
1884h *Inter Ocean*. November 1.  
1884i *Inter Ocean*. November 2.  
1884j *Inter Ocean*. November 9.  
1884k *Inter Ocean*. November 17.  
1884l *Inter Ocean*. November 18.  
1884m *Inter Ocean*. November 24.  
1884n *Inter Ocean*. November 27.  
1884o *Inter Ocean*. December 6.  
1885a *Inter Ocean*. May 12.  
1885b *Inter Ocean*. May 13.  
1885c *Inter Ocean*. May 22.  
1885d *Inter Ocean*. June 15.  
1885e *Inter Ocean*. July 8.  
1885f *Inter Ocean*. July 15.  
1885g *Inter Ocean*. August 5.  
1885h *Inter Ocean*. August 12.  
1885i *Inter Ocean*. August 20.  
1885j *Inter Ocean*. August 25.  
1885k *Inter Ocean*. August 26.  
1885l *Inter Ocean*. August 27.  
1885m *Inter Ocean*. September 17.  
1885n *Inter Ocean*. September 22.  
1885o *Inter Ocean*. October 9.  
1885p *Inter Ocean*. October 16.

1885q *Inter Ocean*. October 17.  
1885r *Inter Ocean*. October 23.  
1885s *Inter Ocean*. October 29.  
1885t *Inter Ocean*. November 8.  
1885u *Inter Ocean*. November 10.  
1885v *Inter Ocean*. November 20.  
1885w *Inter Ocean*. November 21.  
1885x *Inter Ocean*. November 22.  
1885y *Inter Ocean*. November 30.  
1885z *Inter Ocean*. December 18  
1886a *Inter Ocean*. January 7.  
1886b *Inter Ocean*. April 24.  
1886c *Inter Ocean*. May 4.  
1886d *Inter Ocean*. June 11.  
1886e *Inter Ocean*. July 7.  
1886f *Inter Ocean*. July 14.  
1886g *Inter Ocean*. July 21.  
1886h *Inter Ocean*. July 22.  
1886i *Inter Ocean*. July 27.  
1886j *Inter Ocean*. August 3.  
1886k *Inter Ocean*. August 18.  
1886l *Inter Ocean*. August 24.  
1886m *Inter Ocean*. August 31.  
1886n *Inter Ocean*. September 7.  
1886o *Inter Ocean*. September 21.  
1886p *Inter Ocean*. September 29.  
1886q *Inter Ocean*. October 6.  
1886r *Inter Ocean*. October 12.  
1886s *Inter Ocean*. October 30.  
1886t *Inter Ocean*. November 8.  
1886u *Inter Ocean*. November 24.  
1886v *Inter Ocean*. December 4.  
1887a *Inter Ocean*. May 1.  
1887b *Inter Ocean*. May 9.  
1887c *Inter Ocean*. May 25.  
1887d *Inter Ocean*. May 31.  
1887e *Inter Ocean*. June 22.  
1887f *Inter Ocean*. June 23.  
1887g *Inter Ocean*. June 14.  
1887h *Inter Ocean*. June 15.  
1887i *Inter Ocean*. July 9.  
1887j *Inter Ocean*. August 17.  
1887k *Inter Ocean*. August 23.  
1887l *Inter Ocean*. September 7.  
1887m *Inter Ocean*. September 8.  
1887n *Inter Ocean*. September 19.  
1887o *Inter Ocean*. October 18.

1887p *Inter Ocean*. October 25.  
1887q *Inter Ocean*. November 1.  
1887r *Inter Ocean*. November 10.  
1887s *Inter Ocean*. November 11.  
1887t *Inter Ocean*. November 18.  
1887u *Inter Ocean*. November 27.  
1887v *Inter Ocean*. November 29.  
1888a *Inter Ocean*. May 26.  
1888b *Inter Ocean*. June 1.  
1888c *Inter Ocean*. June 4.  
1888d *Inter Ocean*. June 7.  
1888e *Inter Ocean*. June 14.  
1888f *Inter Ocean*. June 15.  
1888g *Inter Ocean*. July 3.  
1888h *Inter Ocean*. July 24.  
1888i *Inter Ocean*. August 7.  
1888j *Inter Ocean*. August 13.  
1888k *Inter Ocean*. August 16.  
1888l *Inter Ocean*. September 10.  
1888m *Inter Ocean*. September 11.  
1888n *Inter Ocean*. September 19.  
1888o *Inter Ocean*. October 6.  
1888p *Inter Ocean*. October 7.  
1888q *Inter Ocean*. October 11.  
1888r *Inter Ocean*. October 23.  
1888s *Inter Ocean*. October 25.  
1888t *Inter Ocean*. October 30.  
1888u *Inter Ocean*. November 15.  
1888v *Inter Ocean*. November 22.  
1888w *Inter Ocean*. November 23.  
1888x *Inter Ocean*. November 29.  
1889a *Inter Ocean*. April 21.  
1889b *Inter Ocean*. June 28.  
1889c *Inter Ocean*. June 29.  
1889d *Inter Ocean*. July 17.  
1889e *Inter Ocean*. July 18.  
1889f *Inter Ocean*. July 31.  
1889g *Inter Ocean*. August 10.  
1889h *Inter Ocean*. August 15.  
1889i *Inter Ocean*. August 21.  
1889j *Inter Ocean*. August 28.  
1889k *Inter Ocean*. September 27.  
1889l *Inter Ocean*. September 28.  
1889m *Inter Ocean*. October 17.  
1889n *Inter Ocean*. October 21.  
1889o *Inter Ocean*. October 24.  
1889p *Inter Ocean*. October 30.

1889q *Inter Ocean*. November 19.  
1889r *Inter Ocean*. November 21.  
1889s *Inter Ocean*. November 25.  
1889t *Inter Ocean*. November 26.  
1889u *Inter Ocean*. December 2.  
1890 *Inter Ocean*. October 28.  
1891a *Inter Ocean*. July 15.  
1891b *Inter Ocean*. July 16.  
1892a *Inter Ocean*. September 9.  
1892b *Inter Ocean*. November 25.  
1893a *Inter Ocean*. August 8.  
1893b *Inter Ocean*. November 12.

Journal Times (Racine, Wisconsin)  
1893a *Journal Times*. October 9.  
1893b *Journal Times*. October 10.  
1893c *Journal Times*. December 6.

Manitowoc Pilot (Manitowoc, Wisconsin)  
1893 *Manitowoc Pilot*. November 16.

Marine Record (Cleveland, Ohio)  
1885 *Marine Record*. August 6.  
1888 *Marine Record*. May 17.  
1890 *Marine Record*. May 22.  
1892a *Marine Record*. January 21.  
1892b *Marine Record*. September 29.  
1892c *Marine Record*. October 27.  
1894a *Marine Record*. January 11.  
1894b *Marine Record*. January 25.  
1894c *Marine Record*. May 10.  
1895a *Marine Record*. July 25.  
1895b *Marine Record*. November 28.  
1896 *Marine Record*. November 12.

Marine Review (Detroit, Michigan)  
1892a *Marine Review*. January 21.  
1892b *Marine Review*. May 26.  
1893 *Marine Review*. December 14.  
1894 *Marine Review*. May 10.  
1895 *Marine Review*. July 18.

Milwaukee Journal (Milwaukee, Wisconsin)  
1884 *Milwaukee Journal*. May 7.  
1887 *Milwaukee Journal*. October 4.  
1890 *Milwaukee Journal*. October 27.  
1893 *Milwaukee Journal*. November 11.

Milwaukee Sentinel (Milwaukee, Wisconsin)  
1881 *Milwaukee Sentinel*. December 22.  
1882a *Milwaukee Sentinel*. June 12.  
1882b *Milwaukee Sentinel*. August 16.  
1882c *Milwaukee Sentinel*. August 23.  
1882d *Milwaukee Sentinel*. September 11.  
1882e *Milwaukee Sentinel*. October 12.  
1882f *Milwaukee Sentinel*. October 15.  
1882g *Milwaukee Sentinel*. December 5.  
1883a *Milwaukee Sentinel*. February 10.  
1883b *Milwaukee Sentinel*. March 18.  
1883c *Milwaukee Sentinel*. April 21.  
1883d *Milwaukee Sentinel*. April 25.  
1883e *Milwaukee Sentinel*. May 23.  
1884a *Milwaukee Sentinel*. April 24.  
1884b *Milwaukee Sentinel*. April 27.  
1884c *Milwaukee Sentinel*. August 18.  
1885a *Milwaukee Sentinel*. May 11.  
1885b *Milwaukee Sentinel*. November 7.  
1885c *Milwaukee Sentinel*. December 3  
1886 *Milwaukee Sentinel*. May 12.  
1886 *Milwaukee Sentinel*. December 8.  
1887a *Milwaukee Sentinel*. October 4.  
1887b *Milwaukee Sentinel*. November 20.  
1891 *Milwaukee Sentinel*. December 30.  
1892 *Milwaukee Sentinel*. June 26.  
1893 *Milwaukee Sentinel*. October 9.

Racine Journal (Racine, Wisconsin)  
1893a *Racine Journal*. November 11.  
1893b *Racine Journal*. November 12.

Republican, The (Sturgeon Bay, Wisconsin)  
1892a *Republican*. April 14.  
1892b *Republican*. April 21.  
1892c *Republican*. May 5.

Weekly Expositor Independent (Sturgeon Bay, Wisconsin)  
1882c *Weekly Expositor Independent*. May 19.  
1882d *Weekly Expositor Independent*. May 26.  
1882e *Weekly Expositor Independent*. October 6.  
1882f *Weekly Expositor Independent*. December 8.  
1883a *Weekly Expositor Independent*. April 13  
1883b *Weekly Expositor Independent*. November 2  
1883c *Weekly Expositor Independent*. November 23  
1883d *Weekly Expositor Independent*. December 14

1884a *Weekly Expositor Independent*. April 18.  
1884b *Weekly Expositor Independent*. May 9.  
1884c *Weekly Expositor Independent*. June 13.  
1884d *Weekly Expositor Independent*. August 29.  
1884e *Weekly Expositor Independent*. December 12.  
1884f *Weekly Expositor Independent*. December 19.  
1885a *Weekly Expositor Independent*. July 3.

## Chapter 5: *F.J. KING*

British Whig (Kingston, Ontario)  
1879 *British Whig*. August 13.  
1881 *British Whig*. November 4.  
1883 *British Whig*. December 7.  
1884 *British Whig*. April 14.  
1885a *British Whig*. March 25.  
1885b *British Whig*. May 18.  
1886a *British Whig*. January 19.  
1886b *British Whig*. February 15.  
1886c *British Whig*. February 22.  
1886d *British Whig*. March 8.  
1886e *British Whig*. March 30.  
1886f *British Whig*. April 16.  
1886g *British Whig*. May 5.  
1886h *British Whig*. May 26.  
1886i *British Whig*. May 28.  
1886j *British Whig*. July 8.  
1886k *British Whig*. July 14.  
1886l *British Whig*. August 21.  
1886m *British Whig*. August 23.  
1886n *British Whig*. September 20.  
1886o *British Whig*. November 20.

Buffalo Commercial Advertiser (Buffalo, New York)  
1867a *Buffalo Commercial Advertiser*. June 18.  
1867b *Buffalo Commercial Advertiser*. June 19.  
1867c *Buffalo Commercial Advertiser*. November 18.  
1868a *Buffalo Commercial Advertiser*. July 21,  
1868b *Buffalo Commercial Advertiser*. July 22.  
1868c *Buffalo Commercial Advertiser*. September 7.  
1868d *Buffalo Commercial Advertiser*. September 8.  
1869a *Buffalo Commercial Advertiser*. April 10.  
1869b *Buffalo Commercial Advertiser*. October 14.  
1869c *Buffalo Commercial Advertiser*. October 16.  
1870a *Buffalo Commercial Advertiser*. April 19.  
1870b *Buffalo Commercial Advertiser*. August 1.  
1870c *Buffalo Commercial Advertiser*. August 19.

1870d *Buffalo Commercial Advertiser*. October 11.  
1871a *Buffalo Commercial Advertiser*. September 18.  
1871b *Buffalo Commercial Advertiser*. October 2.  
1871c *Buffalo Commercial Advertiser*. October 7.  
1871d *Buffalo Commercial Advertiser*. November 3.  
1871e *Buffalo Commercial Advertiser*. November 4.  
1871f *Buffalo Commercial Advertiser*. November 7.  
1871g *Buffalo Commercial Advertiser*. November 21.  
1871h *Buffalo Commercial Advertiser*. November 27.  
1872 *Buffalo Commercial Advertiser*. October 16.  
1873a *Buffalo Commercial Advertiser*. May 29.  
1873b *Buffalo Commercial Advertiser*. June 12.  
1873c *Buffalo Commercial Advertiser*. June 14.  
1873d *Buffalo Commercial Advertiser*. July 3.  
1873e *Buffalo Commercial Advertiser*. July 21.  
1873f *Buffalo Commercial Advertiser*. July 22.  
1874 *Buffalo Commercial Advertiser*. October 27.  
1875a *Buffalo Commercial Advertiser*. June 29.  
1875b *Buffalo Commercial Advertiser*. July 31.  
1875c *Buffalo Commercial Advertiser*. November 16.  
1875d *Buffalo Commercial Advertiser*. November 18.  
1876 *Buffalo Commercial Advertiser*. November 27.  
1878a *Buffalo Commercial Advertiser*. May 28.  
1878b *Buffalo Commercial Advertiser*. August 15.  
1878c *Buffalo Commercial Advertiser*. October 15.  
1878d *Buffalo Commercial Advertiser*. November 14.  
1880a *Buffalo Commercial Advertiser*. April 13.  
1880b *Buffalo Commercial Advertiser*. July 7.  
1881 *Buffalo Commercial Advertiser*. September 23.  
1882a *Buffalo Commercial Advertiser*. August 2.  
1882b *Buffalo Commercial Advertiser*. August 21.  
1882c *Buffalo Commercial Advertiser*. September 5.  
1882d *Buffalo Commercial Advertiser*. September 8.  
1883a *Buffalo Commercial Advertiser*. May 30.  
1883b *Buffalo Commercial Advertiser*. October 2.  
1884 *Buffalo Commercial Advertiser*. September 5.  
1886 *Buffalo Commercial Advertiser*. June 24.

Buffalo Courier (Buffalo, New York)  
1867 *Buffalo Courier*. November 18.  
1875 *Buffalo Courier*. June 26.  
1876 *Buffalo Courier*. September 22.  
1881a *Buffalo Courier*. June 29.  
1881b *Buffalo Courier*. September 14.  
1883a *Buffalo Courier*. May 1.  
1883b *Buffalo Courier*. June 26.  
1883c *Buffalo Courier*. July 21.

1886 *Buffalo Courier*. June 23.

Buffalo Courier & Republic (Buffalo, New York)

1874 *Buffalo Courier & Republic*. November 19.

1875 *Buffalo Courier & Republic*. July 26.

Buffalo Courier Express (Buffalo, New York)

1870a *Buffalo Courier Express*. April 20.

1870b *Buffalo Courier Express*. July 29.

1870c *Buffalo Courier Express*. October 15.

1871a *Buffalo Courier Express*. September 19.

1871b *Buffalo Courier Express*. October 9.

1871c *Buffalo Courier Express*. November 22.

1874a *Buffalo Courier Express*. May 01.

1874b *Buffalo Courier Express*. May 23.

1874c *Buffalo Courier Express*. July 10.

1874d *Buffalo Courier Express*. August 10.

1874e *Buffalo Courier Express*. September 12.

1874f *Buffalo Courier Express*. September 23.

1874g *Buffalo Courier Express*. October 19.

1874h *Buffalo Courier Express*. October 28.

1874i *Buffalo Courier Express*. November 21.

1875a *Buffalo Courier Express*. June 29.

1875b *Buffalo Courier Express*. June 30.

1876a *Buffalo Courier Express*. May 4.

1876b *Buffalo Courier Express*. July 21.

1876c *Buffalo Courier Express*. August 5.

1876d *Buffalo Courier Express*. August 24.

1876e *Buffalo Courier Express*. September 8.

1876f *Buffalo Courier Express*. September 23.

1876g *Buffalo Courier Express*. November 28.

1877 *Buffalo Courier Express*. December 11.

1879a *Buffalo Courier Express*. June 23.

1879b *Buffalo Courier Express*. November 17.

1880 *Buffalo Courier Express*. April 15.

1881a *Buffalo Courier Express*. July 6.

1881b *Buffalo Courier Express*. July 30.

1881c *Buffalo Courier Express*. November 7.

1882 *Buffalo Courier Express*. August 17.

1883a *Buffalo Courier Express*. May 2.

1883b *Buffalo Courier Express*. June 2.

1883c *Buffalo Courier Express*. June 26.

1883d *Buffalo Courier Express*. August 25.

1883e *Buffalo Courier Express*. August 28.

1884a *Buffalo Courier Express*. September 5.

1884b *Buffalo Courier Express*. October 31.

1885 *Buffalo Courier Express*. August 20.

Buffalo Express (Buffalo, New York)  
1886 *Buffalo Express*. June 23.

*Buffalo Daily Republic* (Buffalo, New York)  
1869 *Buffalo Daily Republic*. April 19.  
1870a *Buffalo Daily Republic*. March 5.  
1870b *Buffalo Daily Republic*. December 21.  
1874a *Buffalo Daily Republic*. April 20.  
1874b *Buffalo Daily Republic*. October 22.  
1874c *Buffalo Daily Republic*. November 19  
1875 *Buffalo Daily Republic*. July 26.  
1884a *Buffalo Daily Republic*. July 15.  
1884b *Buffalo Daily Republic*. September 5.

Buffalo News (Buffalo, New York)  
1886 *Buffalo News*. July 28.

Bureau of Navigation  
1867 *F.J. King* Permanent Enrollment No. 74. Port of Toledo, Maumee Customs District, Record Group 41. U.S. National Archives, Washington, D.C.  
1868a *F.J. King* Temporary Enrollment No. 11. Port of Chicago, Chicago Customs District, Record Group 41. U.S. National Archives, Washington, D.C.  
1868b *F.J. King* Permanent Enrollment No. 7. Port of Toledo, Maumee Customs District, Record Group 41. U.S. National Archives, Washington, D.C.  
1869 *F.J. King* Permanent Enrollment No. 49. Port of Toledo, Maumee Customs District, Record Group 41. U.S. National Archives, Washington, D.C.  
1870 *F.J. King* Permanent Enrollment No. 11. Port of Chicago, Chicago Customs District, Record Group 41. U.S. National Archives, Washington, D.C.  
1871a *F.J. King* Temporary Enrollment No. 9. Port of Huron, Huron Customs District, Record Group 41. U.S. National Archives, Washington, D.C.  
1871b *F.J. King* Permanent Enrollment No. 31. Port of Chicago, Chicago Customs District, Record Group 41. U.S. National Archives, Washington, D.C.  
1873a *F.J. King* Temporary Enrollment No. 5. Port of Buffalo, Buffalo Creek Customs District, Record Group 41. U.S. National Archives, Washington, D.C.  
1873b *F.J. King* Permanent Enrollment No. 69. Port of Chicago, Chicago Customs District, Record Group 41. U.S. National Archives, Washington, D.C.  
1874 *F.J. King* Permanent Enrollment No. 135. Port of Chicago, Chicago Customs District, Record Group 41. U.S. National Archives, Washington, D.C.  
1876 *F.J. King* Permanent Enrollment No. 1. Port of Ogdensburg, Oswegatchie Customs District, Record Group 41. U.S. National Archives, Washington, D.C.  
1884 *F.J. King* Permanent Enrollment No. 5. Port of Ogdensburg, Oswegatchie Customs District, Record Group 41. U.S. National Archives, Washington, D.C.  
1886 *F.J. King* Permanent Enrollment No. 8. Port of Ogdensburg, Oswegatchie Customs District, Record Group 41. U.S. National Archives, Washington, D.C.

Chicago Evening Post (Chicago, Illinois)

1872 *Chicago Evening Post*. November 1.  
1873 *Chicago Evening Post*. May 31.

Chicago Republican (Chicago, Illinois)  
1867a *Chicago Republican*. October 29.  
1867b *Chicago Republican*. October 30.  
1867c *Chicago Republican*. October 31.  
1868a *Chicago Republican*. April 23.  
1868b *Chicago Republican*. May 12.  
1868c *Chicago Republican*. June 23.  
1868d *Chicago Republican*. July 7.  
1868e *Chicago Republican*. September 11.  
1868f *Chicago Republican*. September 30.  
1868g *Chicago Republican*. November 7.  
1868h *Chicago Republican*. November 16.  
1869i *Chicago Republican*. May 3.  
1870a *Chicago Republican*. August 4.  
1870b *Chicago Republican*. August 17.  
1870c *Chicago Republican*. September 28.  
1870d *Chicago Republican*. September 29.  
1870e *Chicago Republican*. October 25.  
1871a *Chicago Republican*. April 27.  
1871b *Chicago Republican*. May 5.  
1871c *Chicago Republican*. September 9.  
1871d *Chicago Republican*. September 22.  
1871e *Chicago Republican*. September 29.  
1871f *Chicago Republican*. November 24.

Chicago Tribune (Chicago, Illinois)  
1869 *Chicago Tribune*. April 22.  
1872 *Chicago Tribune*. June 12.  
1880a *Chicago Tribune*. April 16.  
1880b *Chicago Tribune*. May 30.  
1880c *Chicago Tribune*. June 13.  
1880d *Chicago Tribune*. August 7.  
1880e *Chicago Tribune*. August 30.  
1880f *Chicago Tribune*. September 7.  
1880g *Chicago Tribune*. October 18.  
1880h *Chicago Tribune*. October 21.  
1880i *Chicago Tribune*. November 5.  
1880j *Chicago Tribune*. November 24.  
1880k *Chicago Tribune*. November 25.  
1881a *Chicago Tribune*. June 29, 1881  
1881b *Chicago Tribune*. September 25.  
1881c *Chicago Tribune*. September 27.  
1881d *Chicago Tribune*. October 1.  
1881e *Chicago Tribune*. November 1.

1881f *Chicago Tribune*. November 3.

1881g *Chicago Tribune*. November 4.

Cleveland Daily Herald (Cleveland, Ohio)

1867 *Cleveland Daily Herald*. June 19.

1868 *Cleveland Daily Herald*. April 24.

1871a *Cleveland Daily Herald*. September 15.

1871b *Cleveland Daily Herald*. November 20.

1872a *Cleveland Daily Herald*. September 12.

1872b *Cleveland Daily Herald*. November 11.

1872c *Cleveland Daily Herald*. November 28.

1873a *Cleveland Daily Herald*. July 8.

1873b *Cleveland Daily Herald*. Nov. 6.

1874a *Cleveland Daily Herald*. May 13.

1874b *Cleveland Daily Herald*. May 21.

1874c *Cleveland Daily Herald*. May 30.

1874d *Cleveland Daily Herald*. June 17.

1874e *Cleveland Daily Herald*. July 1.

1874f *Cleveland Daily Herald*. July 14.

1874g *Cleveland Daily Herald*. August 26.

1874h *Cleveland Daily Herald*. September 17.

1874i *Cleveland Daily Herald*. October 23.

1874j *Cleveland Daily Herald*. November 7.

1880a *Cleveland Daily Herald*. June 5.

1880b *Cleveland Daily Herald*. August 26.

1880c *Cleveland Daily Herald*. September 16.

1881a *Cleveland Daily Herald*. June 13.

1881b *Cleveland Daily Herald*. July 27.

1881c *Cleveland Daily Herald*. July 30.

1881d *Cleveland Daily Herald*. August 8.

1881e *Cleveland Daily Herald*. August 9.

1881f *Cleveland Daily Herald*. September 10.

1881g *Cleveland Daily Herald*. September 21.

1881h *Cleveland Daily Herald*. November 12.

1881i *Cleveland Daily Herald*. November 18.

1881j *Cleveland Daily Herald*. November 21.

1882a *Cleveland Daily Herald*. September 12.

1882b *Cleveland Daily Herald*. September 26.

1882c *Cleveland Daily Herald*. October 2.

1882d *Cleveland Daily Herald*. October 10.

1882e *Cleveland Daily Herald*. October 16.

1883a *Cleveland Daily Herald*. June 21.

1883b *Cleveland Daily Herald*. August 22.

1883c *Cleveland Daily Herald*. October 4.

1883d *Cleveland Daily Herald*. October 27.

1883e *Cleveland Daily Herald*. October 30.

1883f *Cleveland Daily Herald*. November 15.

1883g *Cleveland Daily Herald*. November 16.  
1884a *Cleveland Daily Herald*. May 6.  
1884b *Cleveland Daily Herald*. May 10.  
1884c *Cleveland Daily Herald*. May 16.  
1884d *Cleveland Daily Herald*. May 21.  
1884e *Cleveland Daily Herald*. May 28.  
1884f *Cleveland Daily Herald*. June 11.  
1884g *Cleveland Daily Herald*. June 27,

Daily Milwaukee News (Milwaukee, Wisconsin)  
1870 *Daily Milwaukee News*. November 9.  
1871a *Daily Milwaukee News*. April 15.  
1871b *Daily Milwaukee News*. May 6.  
1872 *Daily Milwaukee News*. December 18.

Daily News (Kingston, Ontario)  
1872a *Daily News*. November 27.  
1872b *Daily News*. December 9.  
1873a *Daily News*. April 24.  
1873b *Daily News*. November 10.  
1874 *Daily News*. April 16.  
1876 *Daily News*. June 19.  
1877a *Daily News*. June 20.  
1877b *Daily News*. June 29.  
1877c *Daily News*. August 6.  
1877d *Daily News*. August 15.  
1877e *Daily News*. September 8.  
1877f *Daily News*. November 9.  
1877g *Daily News*. November 17.  
1878a *Daily News*. July 29.  
1878b *Daily News*. September 26.  
1879 *Daily News*. May 13.  
1885a *Daily News*. July 23.  
1885b *Daily News*. August 26.  
1885c *Daily News*. September 11.

Detroit Tribune (Detroit, Michigan)  
1886 *Detroit Tribune*. September 17.

Door County Advocate (Sturgeon Bay, Wisconsin)  
1886a *Door County Advocate*. September 23.  
1886b *Door County Advocate*. September 30.  
1889 *Door County Advocate*. October 14.

Duluth Daily Tribune (Duluth, Minnesota)  
1885 *Duluth Daily Tribune*. June 30.

Evening Republic (Buffalo, New York)  
1884 *Evening Republic*. September 5.

Green Bay Advocate (Green Bay, Wisconsin)  
1880 *Green Bay Advocate*. December 2.  
1886 *Green Bay Advocate*. September 16.

Hall, J.W.

1871 *Marine Disasters on the Western Lakes*. Captain J.W. Hall Scrapbook. Detroit, Michigan.

Inter Ocean (Chicago, Illinois)

1874a *Inter Ocean*. Apr. 2.  
1874b *Inter Ocean*. Apr. 18.  
1874c *Inter Ocean*. May 13.  
1874d *Inter Ocean*. May 30.  
1874e *Inter Ocean*. July 1.  
1874f *Inter Ocean*. July 8.  
1874g *Inter Ocean*. July 15.  
1874h *Inter Ocean*. July 28.  
1874i *Inter Ocean*. August 26.  
1874j *Inter Ocean*. September 1.  
1874k *Inter Ocean*. September 10.  
1874l *Inter Ocean*. September 16.  
1874m *Inter Ocean*. October 22.  
1874n *Inter Ocean*. October 31.  
1874o *Inter Ocean*. November 13.  
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1875t *Inter Ocean*. November 15.  
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1876d *Inter Ocean*. July 1.  
1876e *Inter Ocean*. July 4.  
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1876m *Inter Ocean*. October 27.  
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1877a *Inter Ocean*. Jan. 2.  
1877b *Inter Ocean*. May 16.  
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1877i *Inter Ocean*. September 18.  
1877j *Inter Ocean*. October 23.  
1877k *Inter Ocean*. October 29.  
1877l *Inter Ocean*. December 15.  
1878a *Inter Ocean*. July 30.  
1878b *Inter Ocean*. September 2.  
1879a *Inter Ocean*. June 13.  
1879b *Inter Ocean*. July 11.  
1879c *Inter Ocean*. July 16.  
1879d *Inter Ocean*. November 1.  
1879e *Inter Ocean*. November 6.  
1879f *Inter Ocean*. November 17.  
1879g *Inter Ocean*. November 28.  
1880a *Inter Ocean*. April 14.  
1880b *Inter Ocean*. May 6.  
1880c *Inter Ocean*. May 26.  
1880d *Inter Ocean*. May 31.  
1880e *Inter Ocean*. August 13.  
1880f *Inter Ocean*. August 14.  
1880g *Inter Ocean*. August 26.  
1880h *Inter Ocean*. August 30.

1880i *Inter Ocean*. September 7.  
1880j *Inter Ocean*. September 23.  
1880k *Inter Ocean*. October 18.  
1880l *Inter Ocean*. October 26.  
1880m *Inter Ocean*. December 4.  
1880n *Inter Ocean*. December 6.  
1881a *Inter Ocean*. April 13.  
1881b *Inter Ocean*. May 14.  
1881c *Inter Ocean*. May 19.  
1881d *Inter Ocean*. May 23.  
1881e *Inter Ocean*. June 10.  
1881f *Inter Ocean*. June 20.  
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1881m *Inter Ocean*. September 14.  
1881n *Inter Ocean*. September 17.  
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1881p *Inter Ocean*. November 1.  
1881q *Inter Ocean*. November 4.  
1881r *Inter Ocean*. November 12.  
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1882a *Inter Ocean*. May 2.  
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