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While one man cranks the spinner, the one holding the "top" walks backwards as the rope is twisted. From Edwin Tunis, *The Young United States, 1783 to 1830* (New York: World Publishing Co., 1969). Used by permission of the estate of Edwin Tunis.

Ropewalk

The Newsletter for
Shipwrights of Ohio - November 2021

Next Meeting: December 16, 2021
"Laser engraving & 3D" by John Boeck & Steven Keller

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November

We have much to be thankful for this holiday season, especially when we look back on almost two years of this pandemic. By my count this is week 88 and so far, we have all made it without major COVID infections. With the health issues that some of you deal with as well as those who are exposed to patients with COVID, we give thanks for the protection provided through prayer.

I repeat my advice and urge all of you to take care of yourself and your families. Look to those you know who may need help or are lonely and need human contact, especially the elderly.

Remember to use this time to spend with family and do get back in your shop building. You will notice there is a definite lack of photos on what you are accomplishing.

Your editor

NRG Photo Competition

This year the Nautical Research Guild ran an International Ship Modeling competition using photos. There were three model categories: Apprentice, Journeyman, and Master with three metals (Bronze, Silver & Gold) awarded in each category. There were 48 models submitted from 33 builders.

Congratulations to Darrell Markijohn for earning a Bronze in the Apprentice category for his model of the U.S.S. Niagara. Nice job, Darrell.





Business

Club Financial Report

Fixed yearly expenses 2021

\$ 30	NRG Charter
\$110	Zoom
\$185	Web cost
<u>\$ 35</u>	Web Domain & protection
\$360	Total Yearly Known Expenses

Income 2021

\$580	Dues
\$750	"Great Harry" Restoration
\$2271	HNB Bank balance

Membership Dues.

It is that time of year again - membership dues for 2021 are due by January 2022.

Our club constitution states: "The annual dues for Regular members shall be \$20.00, payable by January. Annual dues for Associate members shall be \$10.00 payable by January."

We will continue to send out the newsletter through March 2022 for those not paid by January. If the 2022 dues are not paid by then you will be dropped from the members list.

Since we are not meeting in person, make your checks out to "**Shipwrights of Ohio**" and send to:

Lee Kimmins
Shipwrights of Central Ohio
5298 Timberlake Circle
Orient, OH 43146-9249

Web Site

Have you visited our web site:

www.shipwrightsofohio.com lately? If you are not featured in the "Members Showcase", the page where the models built or restored by our members, past and present are displayed? Take digital pictures of your models and send them to John Boeck at: boxlink@aol.com, he will include them under your name. Include the name of the ship you modeled.

While out there, explore what else, John has posted as information for you to use and to help you in your build process.

Just as a reminder: our web master has installed a button on our web site home page (at www.shipwrightsofohio.com) that allows you to click on it and come directly into our monthly club zoom meetings.

Presentation Schedule - 2021

The following are the presentations scheduled for the remainder of 2021:

Dec. 18 - Laser Engraving & 3D – John Boeck & Steven Keller

Presentation Planning - 2022

The following are the planned topics and presenters, so far, for 2022. Topics needing presenter are highlighted in red:

(January through April meetings will be Zoom)

Jan: Building a model using plans from a book with no instructions (B. Nyberg)

Feb: **Planing a Deck**

Mar: Building a deck house from scratch (B. Nyberg)

Apr: Cannon Rigging and accessories (S. Keller)

(At this time the plan is the May through the rest of the year will be Hybrid – in-person & zoom)

May: **General discussion: Jigs, Fixtures & tools plus materials and parts sources.**

Jun: Flags: How to make (M. Dowler)

Jul: History: "Marietta – early 19th C ship Building in Ohio". (B. Nyberg)

Aug: Road Trip – Marietta (A. Phelps)

Sep: **Finishing: natural and paint (plus using an air brush?)**

Oct: **Rigging: Mast & Yard Making**

Nov: **Standing Rigging**

Dec: **Running Rigging**

We still need presenters; Here is your chance to share your experience with the other modelers. For some of the subjects, I have prior copies of presentations that you can use as a

foundation, such as: Rigging, Planking a deck, painting and finishing.

If there is a topic you are interested in, doing the research and leading a discussion, not only shares your knowledge with others but you can also learn from them. Our objective is for all of us to grow as ship modelers. Let's hear from you. Respond back by email to shipwright@wowway.com.

Presentation:

This month's presentation "Maine to Mystic" was a visual journey taken by Bob Mains last summer, from cruising off the coast of Maine on a schooner, river tour of the Bath Iron Works and the Maine Maritime Museum. Bob then took us down the coast to the home of the *USS Constitution* for a tour of the ship. He wrapped up the presentation with a visit to Mystic Seaport where the whaling ship *Charles W. Morgan* was being prepared for entry into dry dock.

Great tour Bob, His presentation was recorded and should be available on our web site.

Ships on Deck:

The following is an update on what your fellow craftsman have been working on. As you can see, it appears that Stan and I are the only ones sharing our progress.

I encourage each of you to share photos of your works in process, what you have completed in the past, and what you plan to work on in the future. Send it to your editor in jpeg format with a short write up.

Red Jacket

Stan Ross



Stan reports he has only six more yards to go.

Margaret Olwill

Bill Nyberg

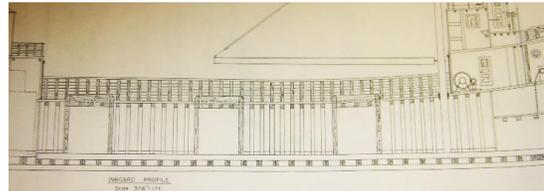
November 22, 2021

With the help from Roger Pellitt, in Duluth, I found a second picture of the *Margaret Olwill*. It is a painting by Vincent D. Nickerson.- Artist, 1844 – 1910.



The oil of canvas, was sold at auction in July 2017 for \$1200. The mast & sail shown on the cargo deck are questionable. I have not seen that on any other Great Lakes steam barge.

Work proceeds on building the crossbeams over the cargo hold. Using the plans for the *Sidney O. Neff* as a reference, the cargo hold crossbeams are supported on the keel with posts. Steambarges carried cargo in their hold as well as on deck. The day the *Margaret Olwill* sank, she had 300 tons of crushed limestone in her hold and 600 tons on her deck..



The crossbeams not only will support the deck they will provide deck curvature for drainage.



Shown above are the cross beams loosely fitted and showing the space for the cargo holds.



Starting to install the crossbeams and post support.

Other Notes: "Stuff", Tugs & Things

NRG Virtual Workshop

"Using the Table Saw Safely"

The safe use of smaller table saws, like the Byrnes saw, will be the subject of the presentation. Though smaller than full-sized table saws, model-sized saws can still take a finger off or severely injure the modeler if they are used in an unsafe manner.

Kurt Van Dahm will show how to perform rip cuts, cross cuts, lap joints, miters and other common operations in a safe and efficient manner. Many modelers say they are totally intimidated by the dangers of the table saw and that they are hesitant to use the saw they purchased. After this program, these modelers should be less hesitant to use their saw. And those modelers who routinely use their saws will appreciate the tips on proper saw set-up.

At a minimum this presentation will provide a helpful review of safety tips and might even prevent an injury due to complacency.

Plan to attend the next NRG Virtual Workshop on Saturday, December 11, 2021, at 10:00 AM CST (11 am EST) entitled "Using the Table Saw Safely". Presented by NRG Director Kurt Van Dahm. This is an updated version of Kurt's talk which was presented at the 2018 NRG Conference in Las Vegas. As usual this event is free to NRG members while others can attend for the bargain price of \$5.00.

Details

- **Date:** Saturday, December 11, 2021 at 10:00am Central
- **Location:** Online, attend using your computer or tablet.
- **Registration:** Advance registration required.
- **Cost:** Free for current NRG members, \$5 for non-members

Register at: <https://thenrg.org/event-457585>

NMGL Announcement:

Braving the Waves

The National Museum of the Great Lakes (NMGL) has announced, as part of the "Fall Lecture Series" another hybrid lecture events:

The desolate shoreline of Lake Superior, between Whitefish Point and Pictured Rocks has, in modern times, come to be known as Shipwreck Coast. Approximately 200 wrecks have occurred along its sandy beaches. By the late 1840s, the first lighthouse was built at Whitefish Point. While this first stone tower certainly helped to guide ship traffic, its November 22, 2021

lighthouse keepers were not usually in a position to rescue a sinking ship's passengers or crew. By the mid-1870s, the first United States Life-Saving Stations were being constructed in this area, with the mission to watch for, and assist mariners in distress.

Join us in welcoming our presenter, Great Lakes Shipwreck Museum, Executive Director Bruce Lynn, and discover the stories of the "Storm Warriors", or Surfmens, as they came to be known, to shed light on a little-known chapter of Great Lakes maritime history.

Details:

- **Date:** Wednesday, December 1, 2021 7:00 pm – 8:30 pm (EST)
- **Location:** Hybrid: on-line Virtual or In-Person at the National Museum of the Great Lakes 1701 Front Street, Toledo, OH 43605 United States
Phone: 419-214-5000
Website: <https://nmgl.org/event/fall-lecture-braving-the-waves/>
- **Registration:** Advance registration required.
- **Cost:** Lecture is free, but registration is required. Donations are always happily accepted.

Nautical Terms

texas: A structure or section of a steamboat that includes the pilothouse and the crew's quarters, located on the hurricane deck.

texas deck: (*hurricane deck*) - The deck of a steamboat on which its texas is located.

Thimble: A round or heart-shaped grooved ring of iron inserted into an eye-splice.

Third mate: or third officer - A licensed member of the deck department of a merchant ship, typically fourth, or on some ocean liners fifth, in command; a watchkeeping officer, customarily also the ship's safety officer, responsible for the ship's firefighting equipment, lifeboats, and other emergency systems. Other duties of the third mate vary depending on the type of ship, its crewing, and other factors.

Thole: A vertical wooden peg or pin inserted through the gunwale to form a fulcrum for oars when rowing. Used in place of a rowlock.

Throat: The forward top corner of a square fore-and-aft sail. The end of the gaff, next to the mast.

three sheets to the wind: On a three-masted ship, having the sheets of the three lower courses loose will result in the ship meandering aimlessly downwind. Also used to describe a sailor who has drunk strong spirits beyond his capacity.

Thunderboat: Alternative term for a hydroplane.

Thwart: *Pronounced /Awart/* - A bench seat across the width of an open boat.

Tier: Vessels moored alongside each other offshore.

Tiller: A lever used for steering, attached to the top of the rudder stock. Used mainly on smaller vessels, such as dinghies and rowing boats.

tilt boat: A square sail ferry operating out of Gravesend. Not less than 15 tons, carrying no more than 37 passengers, it had 5 oarsmen afore the mast.

timber drogher: Another name for a disposable ship.

timber ship: Another name for a disposable ship.

timoneer: A name given, on particular occasions, to the steersman of a ship. From the French *timonnier*.

tin can: United States Navy slang for a destroyer; often shortened to *can*.

Tinclid: A lightly armored steam-powered river gunboat used by the United States Navy during the American Civil War (1861–1865). Also called a *light draft*. A tinclid had thin iron armor, or in some cases thick wooden bulwarks rather than armor, sufficient to protect her machinery spaces and pilothouse against rifle fire but not against artillery fire. A tinclid contrasted with an ironclid, which had armor thick enough for protection against artillery fire.

Tingle: A thin temporary patch.

Glossary of Nautical Terms Wikipedia

Nautical Research Journal

If you are not already an NRG member, go to info@thenauticalresearchguild.org. Yearly subscription is available in three forms: Print copy, On-Line copy (E-Journal) and a combined both Print & On-line.

Print Journal - \$55

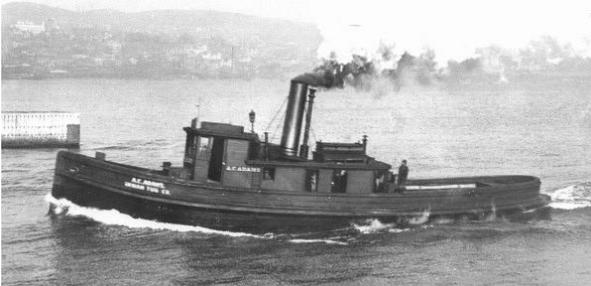
E-Journal - \$40

Combined - \$65

In each journal, there is always something to expand your knowledge of ships, ship modeling and maritime history.

Tugs

A.C. Adams



Built of wood at Buffalo in 1881 by Union Dry Dock Co. with M.M. Drake, master carpenter, for James Ash et al. Dimensions were: 62' x 16' x 9', 41.76 grt. Powered by a HPNC engine, single cylinder, 18" x 20" with a firebox boiler 6'6" x 13', 100 lbs. pressure. She cost new: \$12,000. Initially used in Hand's tug line at Buffalo. In 1890, she was owned

by Smith-Fee tug Line, Duluth. 1899, owned by the Great Lakes Towing Co., Duluth. 1912 became a floating machine shop at Duluth. She was abandoned in 1923 at Duluth.

BGSU University Libraries; Historical Collections of the Great Lakes & Alpena County George N. Fletcher Public Library; C. Patrick Labadie Collection.

James Adams



Built of wood at Buffalo in 1882 by George H. Notter, for John Hockler. Dimensions were: 65' x 15.25' x 8.25', 40 grt. Powered by a HPNC engine, single cylinder, 17" x 20" with a firebox boiler 6'6" x 11.4', 140 lbs. pressure. In 1893, she was damaged by a fire at the Grand Trunk dock, Sarnia, Ont. while employed with a dredge on Lake Huron. 1903, she was owned by Canadian parties. She was dismantled in 1912 at Port Arthur, Ont.

BGSU University Libraries; Historical Collections of the Great Lakes & Alpena County George N. Fletcher Public Library; C. Patrick Labadie Collection.

Presentation Schedule:

2021

Jan 16 — History of Ship Modeling
Feb 20 — Carving Ship Decorations
Mar 20 — Photographing Models
Apr 17 — Setting up a Hahn Frame Jig
May 15 — Sail Making
Jun 19 — Video: "Ship That Changed the World"
Jul 17 — Evolution of the Wooden Ship
Aug 21 — Marine Engineering — Steam Power
Sep 18 — Super Detailing
Oct 16 — Illuminating Models
Nov 20 — Tour: Maine to Mystic
Dec 18 — Laser engraving & 3D

2022

Jan 15 — Building with plans from a book
Feb 19 — Planking a deck
Mar 19 — Deck house from scratch
Apr 16 — cannons and Accessories
May 21 — Jigs & Fixtures - discussion
Jun 18 — Flags
Jul 16 — History: Marietta, ship building
Aug 20 — Road trip
Sep 17 — Finishing: natural & paint
Oct 15 — Rigging: Mast & yards
Nov 19 — Rigging: Standing
Dec 17 — Rigging: Running

Events & Dates to Note:

2022 Tentative Schedule

IPMS Columbus

47th Anniversary BLIZZCON

Arts Impact Middle School
680 Jack Gibbs Blvd. Columbus 43215

Saturday, February 19, 2022

Miami Valley Woodcarving Show

Christ United Methodist Church
700 Marshall Rd., Middletown, Ohio 45044

March 5 & 6, 2022

45th Midwestern Model & Boat Show,

Wisconsin Maritime Museum, Manitowoc, WI

May 19-22, 2022

Lakeside Antique & Classic Wooden Boat

Lakeside Hotel, Lakeside, OH

July 17, 2021

NRG Conference

Oct. 2022

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Wooden Steamers on the Great Lakes

Written by William E. Nyberg

1856-C

Alanson S. Page: On June 14, 1856, the *Alanson S. Page* was enrolled at Oswego, NY as a towboat. Built by George R. Rogers of Oswego for the Thomas Dobbie & Co. and Captain William H. Manwaring of Oswego, and Clark & Pond of Fulton. She was built of wood and measured 94' 3" x 19' 2" x 9', with a tonnage (old style) of 144 56/95. She was powered by an engine rated at 160 horsepower, built by the Raney, Triffey & Co., Philadelphia, PA. Her boiler was built at Smith & King of Oswego. The *A.S. Page* was built for towing on Lake Ontario and the Bay of Quinte and for towing rafts of logs. Her master for the 1856 season was Captain Manwaring.

In July 1856, the tug *Alanson S. Page*, while backing up on the Oswego River, struck the stern of the brigantine *A. F. Smith* (US-1856), knocking a hole in her stern, splintering her side and railings, causing her to sink stern first close to shore. Property loss set at \$650. The *A. S. Page* was not injured. November 1857, the tug *H. O. Perry* (US-1856) collided with the tug *Alanson S. Page* in Oswego Harbor. Both vessels required repairs to damage received. May 4, 1859, the wrecking tug *A. S. Page* towed in the Canadian schooner *S. Buttles* damaged in a storm off Rochester, NY. April 14, 1860, the tug *Page* towed in the brig *Mariner* who had gone ashore 5 miles below Long Point while bound from Ogdensburg.

Ownership of the *Alanson S. Page* was changed to North-Western Insurance Co. in June 1860. Her master for the 1861 season was Captain John Munson. North-Western Insurance Co. used the *Page* as a wrecking tug. December 10, 1860, the *Alanson S. Page* succeeded in getting off the barque *Quebec* that had gone ashore on Nine Mile Point, Lake Ontario. April 1861, the propeller *Kentucky*, driven ashore near Oak Orchard, NY was released with slight damage by the tugs *Alanson S. Page* and *E. P. Dorr*. Among the vessels driven ashore during the great gale of 1860 was the barque *Tornado* laden with a cargo of corn from Chicago to Kingston. She had beached at South Bay at the head of Wolfe Island and had remained there through the winter months. The *Alanson S. Page*, with Captain Munson in command, left Friday, April 12, 1861 and successfully delivered the barque to Kingston, Ont.

March 31, 1864, the tug *Alanson S. Page* was chartered by the Union Army for an unknown period. She was listed as purchased May 11, 1865 at Washington D.C.

November 6, 1865, the *Alanson S. Page* was renamed *Hope* and assigned official number 11550.

Her final disposition is unknown.



Pittsburgh: Luther Moses, Cleveland, built a wooden propeller for Holt & Ensign, Buffalo, to be used for the passenger, package freight trade. Her measures were: 186.02' x 27.57' x 12.31' and had a tonnage (old style) of 606 11/95. She was powered by a high-pressure non-condensing engine with a 28" bore and 26" stroke, built by L. Parmelee & Co. The *Pittsburgh* ran between Buffalo, Chicago and Milwaukee. Her master for the 1856 season was Captain James M. Averill with Captain Beckwith as master for the 1857 season. In May of 1857, the *Pittsburgh* and the schooner *Marshfield* (US-1854) collided in the St. Clair River. In November 1858, while off Lexington, MI on Lake Huron, she broke her inside shaft and required a tow to Detroit for repairs. Her property loss was set at \$800. October 1860, the propeller *Pittsburgh*, while entering Port Stanley, Ont. on Lake Erie, struck ground and began to leak. Her cargo was transferred to the steamer *Acme*, while she was drydocked for repairs. Her hull damage was set at \$1,000. In April 1861, she lost her anchor and chains in the Straits of Mackinac. November 1863, bound up, the *Pittsburgh* went aground near the Gibraltar Channel, Gibraltar, MI, Detroit River.

In September 1865, ownership of the *Pittsburgh* was changed to the Western Transportation Co., Tonawanda, NY. She was readmeasured: 184.7 x 27.6 x 11.1; 688.97 grt and issued the official number 19617.

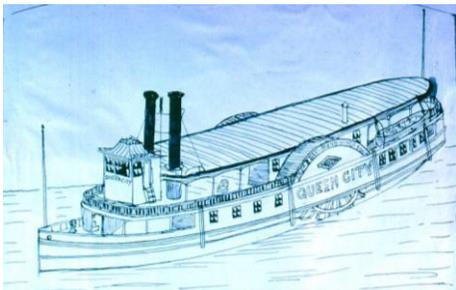
In August 1868, her ownership was changed to Benjamin B. Jones et al, Buffalo, NY. In October of that year, down bound from Chicago, the *Pittsburgh*

ran hard aground on the St. Clair Flats. She required lightering to get off. Continuing on to Erie, PA, she again went hard aground at the entrance to Erie harbor and had to be lightered to get off.

Her ownership was changed to John Gordon et al, Detroit, MI in March 1869. On March 16, 1869 she was enrolled at Detroit, MI. While steaming on Lake Erie in November of that year, the *Pittsburgh* sustained damages during a gale.

In June 1872, ownership of the *Pittsburgh* was changed to William Crosthwaite, East Saginaw, MI. Her master for the 1872 & 73 seasons was Captain Joseph Cirqui. In June of 1873, while coming up the Niagara River, the *Pittsburgh* struck a rock below the ferry at Black Rock and received considerable damage, including breaking her rudder. She required to be dry docked for repairs. October of 1875, she went ashore on the lower end of Fighting Island, Detroit River. In 1879, after 23 years of service, her machinery removed and she was laid up at Buffalo, NY where she sank.

Ownership of the *Pittsburgh* hull was changed to Captain Charles Hamilton who had her raised and converted to a schooner barge for the bulk freight trade. She was renamed *Cyclone* and enrolled at Buffalo, NY, July 28, 1881 and issued official number 34114. September 07, 1885, laden with iron ore, the schooner barge *Cyclone* went ashore during a storm, at Alabaster, MI, Lake Huron. Grounded, the breakers washed over her and pounded the hull to pieces. No lives were lost.



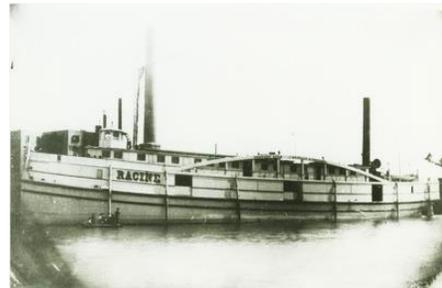
Queen City: William Knapp & John Fitzgerald purchased the wooden sidewheel steamer, built at the Pringle Yard, Oshkosh, WI and had her enrolled June 20, 1856 at the port of Michilimackinac. Her measures were listed as: 118' x 21' x 6' with a tonnage (old style) 127 10/95. She was built for the passenger, package freight trade on Lake Winnebago and the Fox River. August 12, 1856, the Daily news of Kingston, ONT recorded that the steamer Queen City arrived at Collingwood, ONT from Chicago with 135 passengers. The Daily British Whig reported on October 13, 1856, that the *Queen*

City was part of the line that ran between Chicago and Collingwood. The line consisted of the steamers *Keystone State*, *Planet*, *Louisiana* and *Queen City*. The *Queen City* arrived at Collingwood with 30 passengers and 21,000 barrels of freight.

Ownership of the steamer *Queen City* was changed to Alonzo Leach & Abell Neff, Oshkosh, WI, June 1857. The following month ownership of the steamer *Queen City* was changed to H. Eugene Eastman et al, Green Bay, WI. In August of that same year, her ownership was changed to John B. Jacobs, Marinette, WI. In March 1860, the steamer *Queen City* was damaged during a gale on Lake Michigan. In October 1865 the steamer *Queen City* was readmeasured at Milwaukee, WI and her tonnage recorded as: 110.66 grt. She was issued the official number 20519.

Her ownership was changed to Green Bay & Menominee Navigation Co., Green Bay, WI in April 1867. Two year later the steamer *Queen City* was abandoned on the Menominee River near Marinette, WI.

Ownership of the abandoned steamer *Queen City* was changed in 1874 to Captain Alfred Taylor & Isaac Stephenson. They salvaged the steamer and rebuilt her as a towboat. In the winter 1874 layup, the steamer *Queen City* was rebuilt as a passenger steamer and ran on the east shore of Green Bay in connection with the Chicago & Northwestern Railway. In November of 1875, bound for Escanaba to lay up for the winter, the *Queen City* caught fire and burned to a total loss near Ford River, WI on Lake Michigan.



Racine: In 1856, at Cleveland, OH, Luther Moses built a wooden propeller for the passenger, package freight trade of the People's Line. She was powered by an oscillating engine with a 30" bore and 36" stroke, built by the Buffalo Steam Engine Co. Her boiler measured 8' x 21' and her wheel was of the Philadelphia Pattern of 10 feet diameter. Her initial enrollment was issued at Cleveland, OH, September 29, 1856 and her measures were: 193.5' x 30.3' x 12.4' with a tonnage (old style) of 715 12/95. Her original owners were Luther Moses, et al, Cleveland,

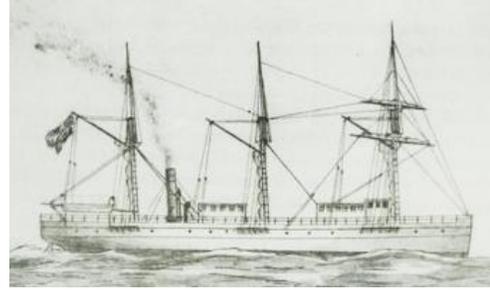
OH. Her master for the 1856 – 61 seasons was Captain Julius W. Brett with Robert Slade as chief engineer in 1856. In September 1856, the propeller *Racine* collided with the scow *Nebraska* (US 18113) in Cleveland harbor during a gale. The *Nebraska* had her jib boom knocked off. In June 1860, the *Racine* lost a man overboard in Milwaukee harbor. November of the same year the *Racine* collided with the schooner *Racine* off Waukegan, IL. Damage was set at \$500. December of 1862, the *Racine*, laden with flour, attempting to make Grand Haven, MI during a storm on Lake Michigan, went aground on the bar. She was released.

In 1863, ownership of the *Racine* was changed to Charles Ensign, et al, Buffalo, NY. In June of that year, bound down, the *Racine* went hard aground on Mammy Juda Island in the Detroit River. November of the same year, bound up for Chicago, IL, the *Racine*, laden with general merchandise, went ashore at Forty Mile Point, MI on Lake Huron. She was released and towed to Milwaukee for repairs.

In 1864, her ownership was changed to the Western Transportation Company. In August of that year, down bound, laden with passengers and a cargo of flour, the *Racine* caught fire near her boiler which quickly spread, burning the ship to a total loss before sinking in shallow water near Rondeau, Ont. on Lake Erie. Eight lives lost. Her hull was raised and rebuilt as a bark in 1866 by F. N. Jones, Tonawanda, NY and received an enrollment number of US21708 with measures: 197.7 x 30.4 x 11.8; 534 grt.

In July 1867, her ownership was changed to William Hawkins, et al, Buffalo, NY. July of 1871, the bark *Racine* capsized off Beaver Island, Lake Michigan. Recovered. During the winter layup of 1873-74, she was rebuilt as a schooner-barge to be used for bulk freight trade.

She continued as a schooner-barge in the bulk freight trade through 1907. Her ownership changed to John Powell, et al, Bay City, MI in May 1874; to Alvin Neal et al, Port Huron, MI in 1893; to John F. Wedow, et al, Cleveland, OH in 1900; to Alexander Hitchcock, Port Clinton Transportation Co., Port Clinton, OH in 1901; to L.P. Smith & J. A. Smith Company, Cleveland, OH in 1904 where her bulk cargo was limestone. With the passing of L.P. Smith in 1906, his brother took full control of the schooner barge *Racine*. In 1907 ownership of the schooner barge *Racine* was changed to Oscar Jorsch, Duluth, MN for the Great Lakes Dredge & Dock Company, New Jersey. The final enrollment for the schooner barge *Racine* was surrendered at Duluth, MN, March 12, 1907 and endorsed "abandoned".



Salvor: Van Slyke Notter & Co. of Buffalo, built for the Aetna Insurance Co. of Hartford, CT a wooden towboat for the wrecking trade. Enrolled at Chicago November 21, 1856, her measures were: 161.0' x 25.4' x 11.7' and her tonnage (old style) of 357 2/95. She was powered by an oscillating engine with a cylinder 30" bore x 36" stroke, rated at 85 horsepower. Her master for the 1856-57 seasons was Captain Harding. In September 1857, the *Salvor* broke her machinery on Lake Michigan and required a tow to Milwaukee for repairs. Her property loss was set at \$500. Her master for the 1858 season was Captain Kehoe.

Ownership of the wrecking tug *Salvor* was changed to James McKay, Tampa, FL in April 1860. With her master, Captain S. M. Hall, she steamed down the St. Lawrence River and south.

In October 1861, her ownership was changed to John McLeun and she was placed under British colors. Her name was changed to *M. S. Perry*.

In October 1861, the *M. S. Perry*, was captured near Tortugas Islands trying to run the blockade. She was renamed back to *Salvor* and operated as part of the freight and cattle line between Washington D. C. and the Union Army. Between February and September 1862, she was chartered to support General McClellan Peninsular Campaign against Richmond, VA.

Ownership of the *Salvor* was changed to Thomas Clyde, Philadelphia, PA in May 1862 and she was listed as a chartered transport and combatant vessels for the Union Army: November 22, 1862 to January 30, 1863.

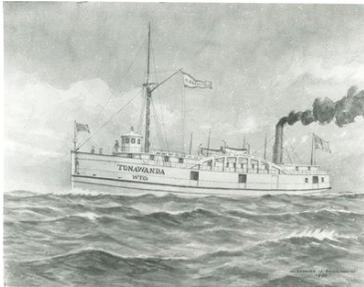
Ownership of the *Salvor* was changed to New York & Washington Steam Ship Co., New York City, NY in May 1863 and she is listed as a chartered transport and combatant vessels for the Union Army during the following periods: September 7 – 17, 1863; October 21 – November 7, 1863; and April 6 to May 1, 1864. She is also mentioned in reports as used to transport horses for the expedition against Fort Fisher in January 1865.

In April 1866, her ownership was changed to Metropolitan Steam Ship Co., New York City, NY. The *Salvor* was rebuilt and lengthened to 183 feet in

1867 and assigned official number 22805 sometime in that time frame.

In July 1870, ownership of the propeller *Salvor* was changed to Charles Ashcroft, Philadelphia, PA.

Her final enrollment was surrendered at Philadelphia, PA March 9, 1877, and endorsed "abandoned".



Tonawanda: June 13, 1856, Buffalo, the wooden Propeller *Tonawanda* was enrolled by her builder Benjamin B. Jones of the same city. Her original owner was the Western Transportation Co., headquartered in Buffalo. Her recorded measures were: 202' 3" x 32' 3" x 13' 3" and her tonnage (old style) was 882 65/95. She was powered by a high-pressure engine, with a cylinder 36" bore x 42" stroke, built by Shepard Iron Works, Buffalo, New York. Her boilers were built by the Buffalo Steam Engine Works. The vessel was built for the package freight trade between Buffalo and Chicago. Her master for the 1856 – 59 seasons was Captain J. T. Palmer with Mr. Southwick as chief engineer in 1857.

In July of 1856 the *Tonawanda* went ashore in dense fog near Mackinaw, MI while on Lake Michigan. Later released. In November of that same year, she went aground on the St. Clair Flats. July of 1857, down bound on Lake Huron, the *Tonawanda* caught fire in her engine room, when off Presque Isle. The fire was extinguished due to the firefighting equipment aboard. Her hull damage was set at \$5,000. No lives lost. In September 1859, up bound on Lake Huron, the *Tonawanda* went ashore on Bois Blanc Island and required lightering to be released. In July of 1860, she collided with the schooner *Garret Smith* on Saginaw Bay.

Master of the propeller *Tonawanda* for the 1862-64 seasons was Captain Langley. In October 1862, she struck a rock in the Erie Basin and had to return to her wharf at Buffalo for repairs. Both her hull and cargo were damaged with the hull damage set at \$3,000. In September 1864, her boiler exploded while on the Chicago River causing damage to the propeller. One life lost. She was laid up at Chicago

but not repaired. After almost 2 years the *Tonawanda* was towed to Buffalo, NY for repairs in October 1866. There she received an upper deck cabin, and her tonnage changed to: 935.62 grt and she was issued official number 24110. Later that month she collided with a tug at Milwaukee. Two years later, in the same month, the *Tonawanda* collided with Canadian schooner *Forest Queen* during a snowstorm off Long Point, Ont. on Lake Erie. Both vessels were damaged. In May of 1869, she collided with the propeller *Equinox* (U7232) off Point Pelee, Ont. on Lake Erie and required to be drydocked for repairs.

October 1870, on Lake Erie, during a severe northwest storm, the *Tonawanda* became disabled above Point Abino. The captain's daughter and 10 crew abandoned the vessel in the yawl and made it to the Canadian shore. Taken in tow by the tugs *J.C. Harrison* & *F.L. Danforth* for Buffalo, she was overwhelmed by wind and wave and foundered in 50 feet of water off Windmill Point, Ont. No lives were lost. There were two salvage attempts made, November 1870 & July 26, 1871, but were suspended.

Final enrollment for the propeller *Tonawanda* was surrendered at Buffalo, NY, September 30, 1874.

July 19, 1875, her boilers and engine were salvaged.

May 28, 1990, the wreck was discovered by Scuba divers in 50 feet of water off Windmill Point.

Transit: The Hayes Brothers of Toronto, built a wooden, sidewheel steamer for the passenger ferry trade with measures of 115' x 17' x 5' and had a tonnage (old style) of 109. Her owner abandoned the vessel immediately after launch and she sank in 1858.

Ownership of the steamer *Transit* was changed to C. Hood of Toronto in 1868. He had the hull raised and reconditioned at Oakville, (south of Toronto) where she received new cabin work and fitted with an engine at Toronto during the winter 1868 - 69. She became a double-end ferry "sharp at both ends" and was used as a ferry between Toronto and Hamilton from 1869 to 1878. Her masters were Captain John D. Larson and Captain Donaldson. Caught in a gale, July 1876, the steamer *Transit* had her hurricane deck carried away while at Hamilton, Ont.

Her ownership was changed to J. Edgar of Hamilton, Ont. in 1877. For the 1879 season, the steamer *Transit* made hourly trips crossing the St. Lawrence River between Prescott, Ont. and Ogdensburg, NY. In May 1880, while docked at Bellville, Ont. on the Bay of Quinte, the steamer

Transit caught fire and burned to a total loss. Her hull was scuttled and it is believed the fire was caused by arson.

Ownership of the scuttled steamer *Transit* was changed later in 1880 to J. Leigh, Orono, Ont. He had the hull raised and towed to Kingston. Final disposition of the sidewheel steamer *Transit* - Unknown.

Transit: at Detroit, in 1856, Henry Jenkins built a wooden sidewheel steamer for the Great Western Railroad Company, to be used as a car (rail) ferry. Her measures were 140' x 34.2' x 9' with a tonnage (old style) of 357. Not much is been found about her. She was issued official number 33472, probably in 1865. On January 16, 1865, she was holed by ice on the Detroit River outside Detroit, MI. After the end of the Civil War, rail lines were completed across the bottom of the lakes and the need for rail car ferries diminished. The steamer ferry *Transit* was dismantled in 1867.



Uncle Ben: Bidwell & Banta, Buffalo, built a wooden propeller for towing work in and around Buffalo, NY. She was enrolled October 14, 1856 with measures: 95.0' x 20.4' x 9.0' with a tonnage (old style) of 155 34/95. Ownership of the tug was listed as Jacob W. Banta, Benjamin & Vincent Bidwell, and Sidney Shepard, all of Buffalo. Master of the tug *Uncle Ben* for the 1856 season was Captain Jacob W. Banta.

Ownership of the tug *Uncle Ben* was changed March 26, 1857 to Harvey M. & Leander W. Mixer of Buffalo. Captain Leander W. Mixer was her master. July 1858, the *Uncle Ben* collided with the Detroit – Windsor ferry, *Windsor*, on the Detroit River. Bound for Port Huron, during a severe gale on Lake Huron, the *Uncle Ben* went ashore near Bayfield, MI in November 1857. She was not released until the spring of 1858.

Her ownership was changed to D. R. Morse, Henry E. Penine and Morris Hazard all from Buffalo, NY in July 1859. Her master was Captain Fred Miller.

Her ownership was changed to New York City parties later in 1859. She was chartered by the Office of the Quartermaster Department April 6, 1861. While carrying supplies to Fort Sumter in 1861, violent storms forced her into Wilmington, NC where she was seized by Confederate troops.

Her Confederate owner had her dismantled at Wilmington, DE and her engine was removed and put into iron-clad *North Carolina* in 1862. Her hull was re-rigged as a schooner and she was renamed *Retribution*. The schooner *Retribution* was armed in 1862 and served in the Virgin Islands, where she captured several American schooners.

The schooner *Retribution* was condemned at Nassau & sold at auction June 22, 1863. She was reconditioned & renamed *Etta*, sailing in the cargo trade until seized by the Union at Newark, NJ in September 1863. She was armed with one gun and served as a transport for the Union "Office of the Quartermaster Department" through July 1865. The schooner *Etta* was lost off Cape Hatteras in the Atlantic Ocean in 1865.

Union Express: Joseph A. Jenkins, Detroit, built a wooden sidewheel steamer to be used as a ferry on Lake St. Clair between Detroit and Wallaceburg, Ont. Enrolled at Detroit, May 10, 1858, her measures recorded were: 100' x 31' x 7'7" and her tonnage (old style) 205 29/95 and her owner was George B. Russell, Detroit. In October 1859, the sidewheel steamer *Union Express* went ashore at Belle River, Lake St. Clair. Released.

In October 1861, ownership of the *Union Express* was changed to H. Simoneau. May 1865, the steamer *Union Express* was readmeasured and enrollment tonnage at Detroit, MI changed to 275.79 grt, she was assigned official number, US25028.

In 1866, her ownership was changed to H. Penny, Detroit. In 1869 the *Union Express* was converted to a barge and the following year she was sold Canadian.

Final disposition "unknown".

Wabash Valley: Bidwell & Banta, Buffalo, built a wooden propeller in 1856, using the hull remains of the *International* (US-1853) that had burned to her waterline while at her dock in Buffalo. The new vessel was enrolled at Buffalo in 1856, listing her measures as: 166' x 32' 9" x 11' 9" with a tonnage (old style) of 592.97 and her owners as "Bidwell, Banta & Company, Buffalo, NY and will operate in the passenger, package freight trade.

The propellers *Adriatic*, *Globe*, *Montgomery*, *Ontonagon*, *Ogontz* and *Wabash Valley* were advertised to run during the season of 1857 by the Northwestern Transportation Line, between Buffalo, Milwaukee and Chicago. In July of 1857, the *Wabash Valley* broke her shaft, 10 miles below Point aux Barque, MI on Lake Huron. Repaired.

In September of 1857, ownership of the *Wabash Valley* was changed to Joshua Whittington, et.al, Mackinac, MI and her enrollment transferred there. She continued to sail with the Northwest Transportation Co. on a route Buffalo, NY, Milwaukee, WI, Chicago, IL. November 1857, the steamer *Cleveland* (US-1852) collided with the propeller *Wabash Valley* at Green Bay, WI. Property loss \$800. The following year, Sunday, July 18, about 11 PM, as the tug *Experiment* was coming up the Detroit River, about 12 miles below the city, with the schooner *Phalarope* in tow, a propeller came in collision with her. The propeller struck her just forward of the wheel, on the starboard side, completely demolishing the wheel-house and destroying the wheel. Her damages amounted to \$1,000. After clearing from the tug, the propeller passed between her and the schooner, tearing away her jib-boom and headgear; The propeller herself was considerably injured, but she did not stop. The Detroit Tribune found the *Wabash Valley* lying at that port disabled and is the propeller which collided with the tug *Experiment*, in the river about ten days earlier. Later that month, the *Wabash Valley* broke her shaft, ten miles below Point aux Barques, Lake Huron. She anchored until towed by the U.S. Topographical Service steamer *Surveyor* and taken to Forestville, WI.

In November 1858 the *Wabash Valley* enrollment lists the ownership transfer to W. C. E. Thomas, et.al, Mackinac, MI.

In October 1859, ownership of the *Wabash Valley* was changed to John D. Shepard, Buffalo, NY.

In July 1860, ownership of the *Wabash Valley* was changed to A. W. Goodrich, Chicago, IL and she ran between Chicago and Green Bay, WI. Master of the *Wabash Valley* for the 1860 season was Captain S. W. Morgan. September of that year, bound up from Sarnia, Ont for Chicago, IL, the *Wabash Valley* was struck by the propeller *Mineral Rock* (U16622) and run onto a reef 20 miles south of Thunder Bay Island, Lake Huron. She was released and towed to Detroit, MI for a complete overhaul, including engine, boiler and machinery. Her hull was plated with sheet iron for winter use. In November 23, 1860, the *Wabash Valley*, chartered by the Detroit & Milwaukee Railway Line, left Grand Haven, MI with freight and passengers to ports on western Lake

Michigan. The next day, the *Wabash Valley*, laden with passengers, general freight and flour, caught from behind by a gale, mistook the Muskegon light for the Grand haven light and was driven on a reef where was pounded by the storm and broke in two. All passengers, crew and some cargo were rescued.

B. L. Webb: G. B. Russell Shipyard, Detroit, with Joseph A. Jenkins as master carpenter, built a wooden propeller for the Detroit & Lake Superior Iron Manufacturing Co., to be used in the bulk freight "iron ore" trade. Enrolled at Detroit, October 24, 1856, her measures were: 183' 1" x 36' 5" x 15' 8" and a tonnage (old style) of 843 43/95. She was powered by a high-pressure engine with two cylinders, each 24" bore x 36" stroke, built by Detroit Locomotive Works, Detroit in 1856. Her master for the remainder of the 1856 season was Captain C. W. Dixon.

On her first trip to Lake Superior, in November 1856, the propeller *B. L. Webb*, laden with general merchandise, pork, flour and provisions, broke her machinery at Waiska (Whiskey) Bay, MI, Lake Superior. The mate took a small boat and four men and rowed to the Sault for the iron to repair the engine. On the return trip to Waiska Bay, the mate died from exposure. After the repairs were completed and the boilers had been fired, the *B. L. Webb* caught fire from a spark in hay that was plied on the forward deck. The flames quickly spread through the upper works and she burned down to her guards. She was abandoned and sank. No lives lost.

The *B. L. Webb* was raised in June 1857 and her hull towed to Russell Shipyard in Detroit to be rebuilt by Joseph Jenkins. Launched in September 1859, she was owned by Dr. George B. Russell and renamed the *Marquette*. The first enrollment for the propeller *Marquette* was issued at Detroit, MI, October 24, 1859, with her measures as: 182' 6" x 35' x 14' 6"; Tonnage (old style) - 862 64/95 tons, and she was assigned official number US 16317. Her master for the 1859 season was Captain George S. Ryder with George Mack as engineer. In June 1860, a correction to enrollment measures was made: 182' 6" x 34' x 13'; Tonnage (old style) 762 92/95 tons.

In August 1860, ownership of the *Marquette* was changed to New York Central Railroad. November 1863, the *Marquette* collided with and sank the propeller *Vermont* (US-1851) east of Long Point, Ontario, Lake Erie. June 1865, she was readmeasured and her enrollment updated: 183' 7" x 35' 9" x 11' 7"; 930 grt, 2 – decks, owned by Buffalo & Detroit Transportation Co., Buffalo, NY. October 1865, the *Marquette* was holed and sank near Bar

Point Shoal, entrance to the Detroit River, Lake Erie. During the 1869-79 winter layup the *Marquette* was dismantled and converted to a barge.

Ownership of the barge *Marquette* was changed to Thomas Coatsworth, Buffalo, NY. May 1870 she was enrolled as unrigged barge: 183.7 x 35.9 x 11.7; 521.34 grt.

April 1871, ownership of the barge *Marquette* was changed to John Kelderhouse, Buffalo, NY. She was converted to a floating elevator. In September 1883, as a floating elevator, the barge *Marquette* broke from her moorings and collided with the schooner *H. G. Cleveland* (US11762) and the propeller *St. Paul* in Erie Basin, Erie, PA, Lake Erie.

Final enrollment documents for the barge *Marquette* were surrendered, June 30, 1889.

Wellington: Henry Rooney, Garden Island, Ont., built a wooden sidewheel steamer, sloop rigged, for Calvin & Breck, Garden Island, Ont. to be used in the lake and river package freight trade. Enrolled at Kingston, Ont, August 11, 1856, her measures were: 171.4' x 25.4' x 10.5' and her unit tonnage 400.32. She was powered by a vertical beam engine, built by Ward & Co., Montreal, Que. in 1833 and original installed in the Canadian steamer *Britannia*. Down bound from the Bay of Quinte, in August 1856, the steamer *Wellington*, with a tow of log rafts, lost about 400 logs a few miles out of Oswego, NY.

March 1857, the management of the steamer *Wellington* was changed to Hooker, Pridham and Company, Kingston, Ont. Her master for the 1857 season was Captain McGray. The management company for the steamer *Wellington* went through a series of name changes as investors changed: May 1860 - Henderson, Holcomb and Company, Kingston, Ont; 1861 - Holcomb, Cowan & Company, Kingston, Ont; 1862 - Holcomb, Cowan & Co. During this time, the steamer was part of a freight line running between Hamilton and Montreal.

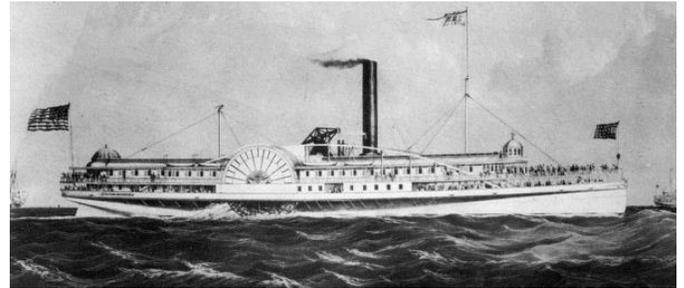
In 1866, the steamer *Wellington* laid cable from Kingston to Cape Vincent. September 1866, she broke her machinery on Lake Ontario and was repaired. Between 1867 and 69, the steamer *Wellington* was used for wrecking on Lake Ontario. In 1869 she was back towing lumber rafts and towed to Quebec at least thirteen rafts of timber. 1870-74 she was used for wrecking. Her masters were Captain Ozec Lantier in 1872 followed by Captain George Miller.

In April 1875, the steamer *Wellington* broke her moorings and went aground on Spectacle Island.

She was released and towed to Garden Island and abandoned where she sank.

In 1881, abandoned and sunk between Garden and Goose Island, the steamer *Wellington*, was pumped out and placed on the marine railway to be rebuilt for use in towing on the Great Lakes.

Her final disposition is unknown.



Western Metropolis: Bidwell & Banta, Buffalo, with Vincent Bidwell, master carpenter, built for the Northern Indiana Railroad Company a wooden sidewheel steamer to be used in the passenger, package freight trade between Buffalo and Toledo on Lake Erie. Enrolled at Detroit, October 1, 1856, her measures were: 321' 10" x 39' 10" x 14' 2" with a tonnage (old style) of 1861 19/95. She was powered by a vertical beam, low pressure engine with cylinder measurements of 75" bore x 144" stroke. The engine was originally installed in the *Northern Indiana* (US-1852) and built by Merrick & Towne, Philadelphia, PA. Her boiler measured: 10.5' x 28'. She had a marble fountain in her main saloon, 12 large cabins and 55 staterooms. Her master for the 1856 season was Captain A. D. Perkins.

Master of the steamer *Western Metropolis* for the 1857 season was Captain Isaac Tichenor Pheatt. June 1857, arriving from Toledo at her wharf in Buffalo Harbor and discharging her passengers and cargo, the steamer *Western Metropolis* caught fire in her cargo hold. Her engineers, while cleaning out the boilers, placed hot ash in the fire hold, which is located in the cargo hold, where a quantity of wood lay causing the fire. The fire was put out by the Buffalo fire department by flooding the hold. October 1857, caught in a gale on Lake Erie, the steamer *Western Metropolis* received property damages at \$6,000. Due to the financial panic of 1857, the steamer *Western Metropolis* was laid up through 1858 due to the curtailment of passenger and package freight traffic on the lake. In November 1858, the *Western Metropolis* was towed to Clark's Dry Dock in Detroit for repairs before the start of the 1859 season.

June 1959, ownership of the steamer *Western Metropolis* was transferred to the Michigan Southern and Northern Railroad Company. Her master for the 1959 season was Captain W. T. Pease. June 1860, while entering Cleveland harbor and approaching her pier, she was rammed in her stern by the Canadian schooner *Son and Heir*. Her stern cabin was damaged. By 1862, the railroad connection around the Lake Erie's southern shore, between Buffalo and Toledo, had been completed, reducing the business need for steamers like the steamer *Western Metropolis* and she was no longer profitable.



1862, her ownership was changed to A.J. Frink & Captain J. Morey for a sum of \$5,000. The steamer *Western Metropolis* was dismantled and her machinery removed. She was converted to a bark (see photo above) by F. N. Jones, Munroe, MI and had the capacity for 60,000 bushels of wheat. She was valued at \$35,000. Her enrollment was shifted to Buffalo in 1863 and her measurements recorded as: 273' x 39.58' x 12.92'; 1341.45 grt. Her master for the 1863 season was Captain C. P. Morey. May 1863, she cleared Chicago down bound with a record cargo of 73,000 bushels oats and 1,000 barrels pork. In August 1863, bound up, Buffalo to Chicago, the bark *Western Metropolis*, laden with salt, was hit by a squall after leaving Buffalo and lost her topmast. After repairs, she returned to her original run and was hit by a severe northwestern squall on Lake Michigan and lost her fore and main mast overboard, 10 miles east of Bailey's Harbor, WI. She was repaired with damage set: hull \$10,000, cargo \$500. October 1864, the bark *Western Metropolis*, was hit by a severe storm on Lake Michigan and stranded off Calumet, IL where she was pounded to pieces.



Windsor: J. S. Jenkins, master carpenter, built for his employer, George B. Russell of Detroit, a wooden sidewheel steamer for the ferry service between Detroit and Windsor, Ont. The steamer *Windsor* was enrolled at Detroit, December 4, 1856 and her measures were recorded as: 104' x 30' x 10' 1" with a tonnage (old style) of 223 7/95.

In 1857, the steamer ferry *Windsor* laid telegraph cable across the Detroit River via Belle Isle connecting the United States and Canada for the first time.

In 1858, ownership of the steamer ferry *Windsor* was changed to the Detroit & Milwaukee Railway Company; C. C. Trowbridge, secretary. The ferry *Windsor* and the tug *Uncle Ben* collided on the Detroit River in July 1858. September 1859, the ferry *Windsor* and the towboat *John Martin* (US12793) collided opposite Western Wharf on the Detroit River. Her master for the 1860 season was Captain Clinton.

Ownership of the steam ferry *Windsor* was changed, in July 1863, to the Lake Michigan Transit Company, Milwaukee, WI.

November 1865, ownership of the steam ferry *Windsor* was changed to Lake Transit Company. She was readmeasured and her enrollment measures updated to: 111.8' x 30' x 9.9', 235.52 grt., and received her official number 62523. April 1866, the depot owned by the Michigan Southern & Detroit & Milwaukee Railway Company was consumed by fire with its contents including: a passenger train and the sidewheel steam ferry *Windsor* who was lying at the dock unloading freight. Ten lives were lost on the steamer and eighteen employees of the railroad were missing.

In 1871, ownership of the remains of the *Windsor* was changed to J. Dean, J. W. Margrise & John Miller, Detroit. The remains of the *Windsor* were recovered and her hull was rebuilt as a schooner barge by J. Dean. April 1871, she was enrolled as schooner barge *Windsor*, with: 1 mast, 115' x 30.5' x 9.2', 237.84 grt, 225.95 net and a capacity for 300,000 feet lumber.

June 18, 1873 her ownership was changed to L. W. Nuttal et al, Manistee, MI.

In 1875, her ownership was changed to Gifford & Company, Manistee, MI.

In August 1876, her ownership was changed to Thomas S. Ruddock et al, Chicago, and when enrolled her rig was changed to 2 masts.

April 1881, the ownership of the schooner barge *Windsor* was changed to Dewitt C. Palmer et al, Chicago, IL. May of 1883, the barge *Windsor* and the schooner *Lookout* (US14675) collided at Manitowoc, WI.

Sometime in the mid to late 1880's, her ownership of the schooner barge *Windsor* was changed to Charles H. Ruddock et al, Chicago. November 1891, the schooner barge *Windsor* and the schooner *Apprentice Boy* collided while making the harbor at Manitowoc, WI. The *Windsor* was damaged badly and sank. Later raised & repaired. In October 1893, while bound up, Snow Island to Chicago, the schooner barge *Windsor*, laden with telegraph poles and cedar posts, sprang a leak and was run a shore near Cona Island, Green Bay. In the process, she struck a rocky reef and capsized. The vessel was declared a total loss. One live was lost.

Some Notes:

Black River, Ohio: Drains Medina County, emptying into Lake Erie at Lorain, OH.

Cargo-carrying capacity in cubic feet, another method of volumetric measurement. The capacity in cubic feet is then divided by 100 cubic feet of capacity per gross ton, resulting in a tonnage expressed in tons.

Mail Steamer: Chartered by the Canadian government to carry the mail between ports.

Navigation: The reader may wonder what, with so few vessels on the lakes, why steamers could not avoid each other. Two main reasons, the visibility during storms and the vessels did not carry any lights so you came upon a vessel you could not determine if the vessel was approaching or departing from you.

Old Style Tonnage: The formula is: $Tonnage = ((length - (beam \times 3/5)) \times Beam \times Beam/2)/94$

where: *Length* is the length, in feet, from the stem to the sternpost; *Beam* is the maximum beam, in feet.

The Builder's Old Measurement formula remained in effect until the advent of steam propulsion. Steamships required a different method of estimating tonnage, because the ratio of length to beam was larger and a significant volume of internal space was used for boilers and machinery.

In 1849, the Moorsom System was created in Great Britain. The Moorsom system calculates the tonnage or cargo capacity of sailing ships as a basis for assessing harbour and other vessel fees.

Up to 1848, most freight was shipped, on steamers or propellers, as package freight. This meant that coal, grain, apples, and produce had been placed in a container or sack and carried aboard on the back of a laborer. Bulk freight in the form of lumber would have been loaded on barges and schooners and towed by a steam driven ship. In 1848, Joseph Arnold built at Port Huron, MI, a the steambarge *Petrel* (found in the third section) for the bulk freight trade answering a need to move bulk coal to the northern communities and iron ore, lumber, and grain south to the growing cities in the East.

By 1848, some ships built in that year, continued to operate beyond the "War of Rebellion" and may be listed with two different tonnage ratings. Most ships built on the Great Lakes were rated as Tonnage (Old Style). This dates back to the 1600's and comes to the U.S. from our cousins.

Tonnage (Old Style): The British took the length measurement from the outside of the stem to the outside of the sternpost; the Americans measured from inside the posts. The British measured breadth from outside the planks, whereas the American measured the breadth from inside the planks. Lastly, the British divided by 94, whereas the Americans divided by 95. The upshot was that American calculations gave a lower number than the British. For instance, when the British measured the captured *USS President* (a three-masted heavy frigate), their calculations gave her a burthen of $1533\frac{7}{94}$ tons, whereas the American calculations gave the burthen as 1444 tons. The British measure yields values about 6% greater than the American. The US system was in use from 1789 until 1864, when a modified version of the Moorsom System was adopted (see below).

Unit Ton - The unit of measure often used in specifying the size of a ship. There are three completely unrelated definitions for the word. One of them refers to weight, while the others refer to volume.

Measurement Ton (M/T) or Ship Ton Calculated as 40 cubic feet of cargo space. Example, a vessel having capacity of 10,000 M/T has a bale cubic of 400,000 cubic ft.

Register Ton - A measurement of cargo carrying capacity in cubic feet. One register ton is equivalent to 100 cubic feet of cargo space.

Weight Ton (W/T) - Calculated as a long ton (2,240 pounds)

In 1849, a Royal Commission was formed in England with the secretary of the commission as George Moorsom, and the resulting tonnage admeasurement system was called the "Moorsom System". The idea of this system is that the fees charged to vessels should be directly proportional to their potential earning capacity, i.e., the space occupied by passengers or cargo. A vessel is measured at a series of sections throughout its length, the transverse area determined at each section, and the areas integrated to determine the volume. The total internal volume was then divided by 100 to determine the vessel's "tonnage", since at that time, 100 cubic feet was determined to be the appropriate factor so that vessels would maintain approximately equal tonnages under the new and old regulations. There were two tonnages determined under the Moorsom System: "gross" and "net" tonnage. Gross tonnage reflected the entire measured volume of the vessel less certain "exempted" spaces, initially spaces used only for the crew or for navigation of the vessel, and spaces in the superstructure not used for cargo. Net tonnage was equal to gross tonnage less a deduction for the machinery space, reflecting the earning capability of the vessel.

A measurement of the cargo-carrying capacity of merchant vessels depends not on weight, but on the volume available for carrying cargo. The basic units of measure are the *Register Ton*, equivalent to 100 cubic feet, and the *Measurement Ton*, equivalent to 40 cubic feet. The calculation of tonnage is complicated by many technical factors.

The current system of measurement for ships includes:

Gross Tons (GRT) - The entire internal cubic capacity of the ship expressed in tons of 100 cubic feet to the ton, except certain spaces which are exempted such as: peak and other tanks for water ballast, open forecandle bridge and poop, access of hatchways, certain light and air spaces, domes of skylights, condenser, anchor gear, steering gear, wheel house, galley and cabin for passengers.

Net Tons (NT) - Obtained from the gross tonnage by deducting crew and navigating spaces and allowances for propulsion machinery.

P.Q.: Province of Quebec

Packet Freight: almost every imaginable item of merchandise – bags of onions, grain, etc., processed foods, bags of coal, stoves, furniture, that can be packed and moved by manpower from dock to hold and reverse.

Patriot War: A conflict along the Canada – U.S. border where bands of raiders attacked the British colony of Upper Canada more than a dozen times between December 1837 and December 1838. This so-called war was not a conflict between nations; it was a war of ideas fought by like-minded people against British forces

Ship Inventory: Will include the names of wooden steamers that will not be identified in the manuscript. The research project that the information was gathered for included all wooden steamers built on the Great Lakes or St. Lawrence River and operated on the Great Lakes with a gross tonnage at or over 100 tons.

Up-bound: Going against the current – St. Lawrence River to Lake Superior. (Lake Michigan – steaming north)

Down-bound: Going with the current – Lake Superior to the Saint Lawrence River. (Lake Michigan – steaming south)

(Original Source: "Wooden Steamers on the Great Lakes" – Great Lakes Historical Society; Bowling Green State University – Historical Collection; Thunder Bay National Marine Sanctuary Collection; Maritime History of the Great Lakes; and the scanned newspaper collection of the Marine Museum of the Great Lakes, Kingston, Ont. and 746 additional documented sources.)