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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), 82. Used by permission of the estate of Edwin Tunis



November

We have much to be thankful for this holiday season, especially with the healing progress for our members in their battle with health issues. It is a continued answer to prayer.

I repeat my monthly 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.

Remember to use this time spend with family and to get back in your shop building.

Your editor.

Ropewalk

The Newsletter for
Shipwrights of Central Ohio

November 2020

Next Meeting: December 19, 2020

"Topic to be announced"

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November Meeting

And yet, another Zoom meeting! This time we went nationally, with our zoom master working from California and our guest speaker, presenting from Chicago and the 11 who signed in to the Zoom meeting on Saturday morning from Dayton, Akron/Canton, Lancaster and Columbus. It was an excellent turnout and no I still have not figured out how to provide chocolate chip cookies in Zoom meetings. I guess I will have to eat them myself!

Again, thanks to Bob (our Zoom Master) for taking on the responsibilities for scheduling, notification and hosting. Stay safe, Bob.

Business

Zoom

If you have trouble signing in, contact Bob, *Please*. He can help you to connect. He can be reached at (rmains1@columbus.rr.com).

Membership Dues.

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

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 2021. If the 2021 dues are not paid by then you will be dropped from the members list.

Make your checks out to "Shipwrights of Central Ohio" and send to:

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

2021 Presentations

Thank you to all who responded with your selections for the 2021 presentation schedule. Here is the list of topics, with the topic most indicated on top:

- Carving ship decorations
- Hand metal working
- Illuminating a model
- History of Ship Modeling
- The Evolution of the Wooden Ship
- The Principles of Rigging
- Sails: making and mounting sails
- Super Detailing - Materials
- How to set up a "Hahn Frame Jig"
- Photographing models
- POF: CAD drawings to component parts to frames.
- Steam engines.

I have copies of some of the presentations on these subjects as given in the past. Review the list and volunteer to lead a discussion. I will be contacting you to help carry to load.

"Great Harry" Update

Darrell reports that the masts and standing rigging is almost complete and he will be passing his work back to John Boeck in December.

Presentation:

AIRBRUSHING – Basic to Intermediate

Our guest speaker was Kurt Van Dahm, President of the "Nautical Research Guild" and the "Nautical Research and Model Ship Society of Chicago". Kurt is also leads the "Midwestern Model Ships and Boats Contest & Display" held at Manitowoc, WI.

Kurt gave a thorough coverage of "Air Brushing – Basic to Intermediate". He covered the types of Air Brush's, how they worked, the anatomy of a Baxter airbrush. He also covered the air source required, the spray area and booth needed plus paints that work with an air brush. He then went into how to clean the air brush, and most important how to use it.

Sources for supplies are:

- USA Air Brush Supply – Badger air brushes and paint – <http://usaairbrushsupply.com>
- Badger Airbrush Co. Thrift store – <http://www.badgerairbrush.com/thriftstore.asp>
- Coast Airbrush – <https://coastairbrush.com/>

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I have an electronic copy of Kurt's PowerPoint presentation. It is available to our club members and should not be distributed outside the club. Send an email to shipwrights@wowway.com asking for a copy.

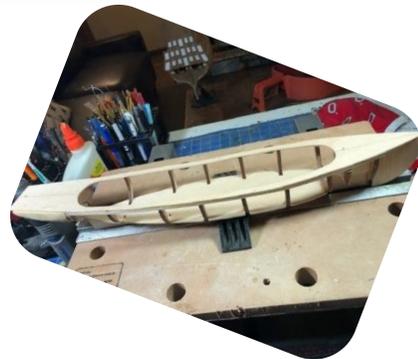
Ships on Deck:

Here is what your fellow craftsman have been doing during our confinement.

Victorian Steam Launch

John Boeck

Started on a steam launch. This will be a slight kit mod of the Victorian steam launch, "Louise". He will be adding cupola windows atop the cabin. It will be named "Lady Sarah" after his daughter and presented at Xmas.



Paddleboat

John Boeck

Still haven't finished the paddleboat. Setting up the gearing and modifying the supports caused some delays.



This craft will be named Puddle Jumper. He asked if he should leave the "bayou worn" look or spruce up the paint job? The response was to go with the 'worn' look.

Now, it still needs a roof, new gears and additional trim. John added portholes for light in galley and the head.... got to use mica for the glazing! He still has to build the raised access ports on the roof for servicing the gasoline, oil and water. Notice the steering wheel location...how does one

slow down and steer with the engine control ON the engine?

Wright Flyer

Jack Bowers



After completing, that is, deciding to be done with, my *Cutty Sark*, I took a brief break from ship modeling, and built this Model Airways model of the Wright Flyer, the one the brothers first got to fly at Kitty Hawk.



U.S.S. Constitution

Jack Bowers



Jack has just opened the box of the Model Shipways kit of the *Constitution*. It appears somewhat daunting, but as always, I intend to (with help) do the model better than the kit. At this point I've dry-fitted the bulkheads to the 'center keel assembly.'

His 1st advice requested: I intend to cut the rabbet before I glue the keel to the center assembly. But should I fair the bulkhead edges before I glue them in place, or glue first and then fair? The advise from those who build POB is the glue the frames in place and then fair.

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Mary Powell

Lee Kimmins



Mary Powell walking beam engine



J. M. White

Lee Kimmins



Pending next build if I ever finish the *Mary Powell* will be the *J. M. White*. The *J. M. White* was the largest and the most expensive riverboat ever built. I am just thinking on how to build it. The size is 320' x 80' which compared to my *Robert E Lee* which was 286' x 40'. She was built by E. J. Howard & Co. at Howard Shipyard & Dock, Co., at Jeffersonville, Ind. in 1878.



I would need a large quantity of 3D printed parts or I may enlarge from 1/98 to 1/96 scale (ho scale) to

take advantage of scale parts like doors and windows.

U.S.S. Perry

Stan Ross



Bluejacket Ship Crafters: The brig *U.S.S. Perry* was the "fastest ship in the Navy" when she was launched in 1843 from the Norfolk Navy Yard. She served off of Paraguay, blockaded ports during the Mexican-American war, suppressed slave trade, and served in the civil war.

This highly accurate kit has a carved basswood hull, photo-etched details, laser-cut parts, and more. Full plans and a 40-page instruction manual are, of course, included.

As of **November 16**. I have managed to lose one cast part. The search was thorough, but the only result is the office is cleaner than it has been for some time, but the part will have to be replaced.

Armed Virginia Sloop 1768

Bill Nyberg



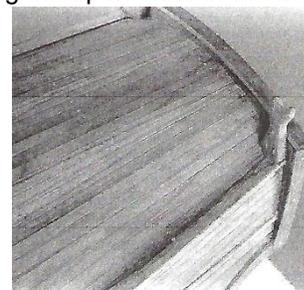
Aligning scupper strake



Planking starboard side:



Planking the transom. Questioned, if the side strakes overlapped the transom planks or reverse. Checked Clayton Feldman's "Modeling An Armed Virginia Sloop of 1768" and he shows the transom planks overlapping the side planks with a fashion piece covering the open ends of the transom planks.



Odds and Ends

Nautical Terms

battle stations: Also, general quarters or action stations.

1. An announcement made aboard a naval warship to signal the crew to prepare for battle, imminent damage, or any other emergency (such as a fire).

2. Specific positions in a naval warship to which one or more crew members are assigned when battle stations are called.

beaching: Deliberately running a vessel **aground** so as to load or unload it (as with **landing craft**), or sometimes to prevent a damaged vessel from sinking or to facilitate repairs below the **waterline**.

beacon: A lighted or unlighted fixed **aid to navigation** attached directly to the Earth's surface. Examples include lighthouses and day beacons.

beakhead: 1. The ram on the prow of a fighting **galley** of ancient and medieval times. 2. The protruding part of the foremost section of a sailing ship of the 16th to the 18th centuries, usually ornate, which was used as a working platform by sailors handling the sails of the **bowsprit**. It also housed the crew's heads (toilets).

beam: The width of a vessel at its widest point, or a point alongside the ship at the midpoint of its length.

beam ends: The sides of a ship. To describe a ship as "on her beam ends" may mean the vessel is literally on her side and possibly about to capsize; more often, the phrase means the vessel is listing 45 degrees or more.

beam reach: Sailing with the wind coming across the vessel's **beam**. This is normally the fastest **point of sail** for a **fore-and-aft-rigged** vessel.

beam sea: A sea in which waves are moving perpendicular to a vessel's course.^[15]

beam wind: A wind blowing perpendicular to a vessel's course.

Bear: A large, squared-off stone used with sand for scraping wooden decks clean.

bear down: Also **bear away**. To turn or steer a vessel away from the wind, often with reference to a transit.^[2]

bear up: To turn or steer a vessel into the wind.^[2]

bearing: The horizontal direction of a line of sight between two objects on the surface of the Earth.

beat to quarters: Prepare for battle (in reference to beating a drum to signal the need for battle preparation).

beating or beat to: Sailing as close as possible towards the wind (perhaps only about 60°) in a zig-zag course so as to attain an upwind direction into which it is otherwise impossible to sail directly. See also **tacking**.

Beaufort scale: A scale describing wind speed, devised by **Admiral Sir Francis Beaufort** in 1808, in which winds are graded by the effects of their force on the surface of the sea or on a vessel (originally, the amount of sail that a fully rigged frigate could carry).

Becalm: To cut off the wind from a sailing vessel, either by the proximity of land or by another vessel.

Becalmed: Unable to move due to a lack of wind, said of a sailing vessel; resigned merely to drift with the current rather than to move by controlled management of sails.

Glossary of Nautical terms Wikipedia

Other Notes: "Stuff" - Tugs & Things

Nautical Research Journal

A little blatant advertisement. If you are not already an NRG member, go to info@thenauticalresearchguild.org. Yearly

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subscription is available in three forms: Print copy, On-Line copy (E-Journal) and a combined both Print & On-line.

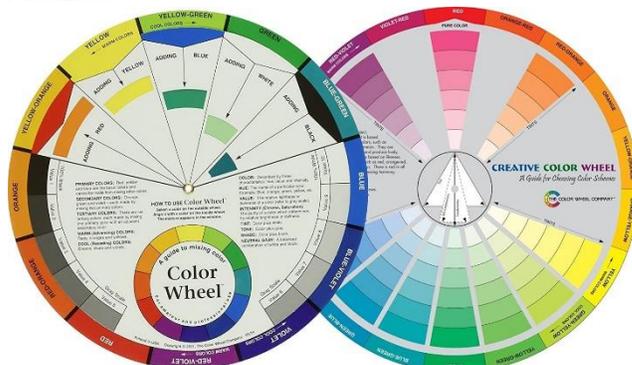
Print Journal - \$50

E-Journal - \$40

Combined - \$65

Tips – Color Wheel

During the Airbrush presentation, our Loran Black called our attention to a Color Chart. I Googled Color Wheel and found that they are available from Amazon.



They are priced between \$5.45 to \$20. You can also pick one up at Blick Art & Craft on Sawmill Parkway. They have them priced between \$3.35 to \$40.

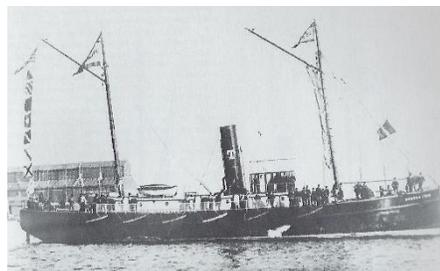
Thanks Loren.

Books

I ordered a book and pamphlet from Seawatch books through their web site. Did not receive a conformation so called (no answer) and sent an e-mail (no response) the items were shipped from a location other than Oregon.

Tugs

Underwriter



Built in 1863, by Neafie & Levy Ship and Engine Building Company of Philadelphia, PA (hull # 344) as the *Charles Pearson* for the Boston Towboat Co. of Boston, MA. The *Underwriter* was 120.8' x 26.1' x 14.8' and a tonnage of 392. She was powered by a 600 HP steam engine which turned a screw

propeller. She was an early salvage tug, owned by the Boston Marine Underwriters Association.

In 1903, the tug was rebuilt, and in 1918 she was acquired by the U.S. Navy, where she was designated as the *SP-1390 (USS Underwriter)*.

In 1920, she was redesignated as the *YT-44 (USS Underwriter)*. Later that year she was recommissioned as the *USS Adirondack*.

August 6th, 1922, the tug was decommissioned and struck from the Naval Register. She was acquired by B. Mitchell, New Orleans. She was later acquired by the New York, New Haven and Hartford Railroad Co. of New Haven, CT. She was renamed the *Underwriter*. In 1925 she was acquired by McAllister Brothers Towing Co. of New York. In 1926 she went to Tice Towing Line, New York. She was abandoned in 1929.

(Original Source: "On the Hawser" by Steven Lang and Peter H. Spectre, 1980 and the Towboat Information web site)

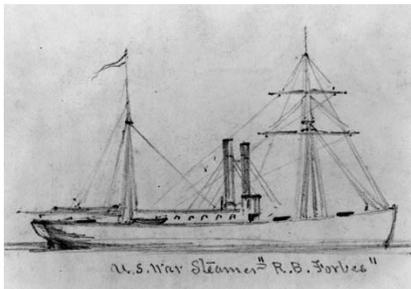
towed to New York by the steamer *Atlantic*, arriving on 20 December.

Decommissioned for repairs, she was recommissioned on 8 February 1862 and ordered to join the Mortar Flotilla below New Orleans, LA.

Caught in a gale off Cape Henry on 25 February, *R. B. Forbes* was driven ashore and wrecked a few miles south of Currituck Inlet, NC. The steamer *USS Young America* was dispatched to the scene and brought off the steamer's crew and all salvageable equipment. The *Forbes* was then burnt to prevent capture by Confederate forces.

Original Source: "On the Hawser" by Steven Lang and Peter H. Spectre, 1980; Fitz Henry Lane Historical Archive

R.B. Forbes



The predecessor to the *Underwriter*, the *R.B. Forbes* was the first oceangoing tugboat in America, first thoroughly successful iron steamship, first to have twin-screws in an era of sidewheel steamers and she was fitted out with watertight bulkheads.

One of the earliest tow boats built in the United States for coastwise towing, the *R.B. Forbes* was built in Boston by Otis Tufts for the Boston Board of Marine Underwriters. She measured 320 tons and measured: 121' x 25.5' x 12.3'. Her top speed was 12 knots. Her two Ericson screw propellers were driven by a pair of condensing engines, each with a bore of 36 inches and a 32-inch stroke.

She was mainly used to tow newly-built sailing ships from New England shipyards to New York, where their owners would complete the fitting-out process.

She was sold to the U.S. Navy in 1861. the steamer operated in the Chesapeake Bay area until ordered to join the South Atlantic Blockading Squadron in late October. Sailing on the 29th, she participated in the capture of Fort Walker and Fort Beauregard at Port Royal, SC, on 7 November, then remained in the area until December. Following damage to her port shaft and propeller, she was

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Presentation Schedule:

2020

~~Jan 18 — Research~~
~~Feb 15 — Scratch Building~~
~~Mar 21 — Canceled~~
~~Apr 18 — Zoom Training~~
~~May 16 — Bending Wood — Zoom~~
~~Jun 20 — Small Boat Making — Zoom~~
~~Jul 18 — Fairing a Hull/Cooper Plating — Zoom~~
~~Aug 15 — Rope Walk~~
~~Sep 19 — Soldering~~
~~Oct 17 — Byrnes Sander Demo~~
~~Nov 21 — Kurt Van Dahm — Air Brush Painting~~
Dec 19 — Open

Events & Dates to Note:

2021

IPMS Columbus
47th Anniversary BLIZZCON
Arts Impact Middle School
680 Jack Gibbs Blvd. Columbus 43215
Saturday, February 20, 2021

Miami Valley Woodcarving Show

Christ United Methodist Church
700 Marshall Rd., Middletown, Ohio 45044
March 6 & 7, 2021

66th "Weak Signals" R/C Model Show

Seagate Convention Ctr.
401 Jefferson Ave. Toledo, OH
April 03-04, 2021

31st North American Model Engineering Expo.

Yack Arena
Wyandotte, MI
April 23-24, 2021

44th Midwestern Model & Boat Show,

Wisconsin Maritime Museum, Manitowoc, WI
May 14 – 16, 2021

Constant Scale R/C Run – Carmel, Ind.

Indianapolis Admirals reflecting pond
Carmel, IN
May 15 & 16, 2021

Lakeside Antique & Classic Wooden Boat

Lakeside Hotel, Lakeside, OH
July 18, 2021

NRG Conference

Channel Islands Maritime Museum
Oxnard, CA
Oct. 21-23, 2021

November 21, 2020

Toledo Antique & Classic Boat Show

Promenade Dock, Maumee River, Toledo, OH
Aug 21-22, 2021

Editor: Bill Nyberg

President and editor

Shipwrights of Central Ohio

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THE NAUTICAL RESEARCH GUILD
"ADVANCING SHIP MODELING THROUGH RESEARCH"

Annual membership includes our world-renowned quarterly magazine, Nautical Research Journal, which features photographs and articles on ship model building, naval architecture, merchant and naval ship construction, maritime trade, nautical and maritime history, nautical archaeology and maritime art.

Other benefits include discounts on annual conferences, ship modeling seminars, NRG products and juried model competitions which are offered exclusively to Guild members. We hope you will consider joining our ongoing celebration of model ships and maritime history.



For more information contact us at: www.thenrg.org or call 585 968 8111

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Wooden Steamers

1852 – Part 1

Banshee: George Nelson Ault, Portsmouth, Ont., built in 1852, for Maxwell, Faigham & McRay, Kingston, Ont. a wooden, propeller with measures: 119.4' x 18.0' x 8.3' and a tonnage (old style) of 166. She was built for the package freight trade and to run between Montreal and the Upper Lakes. She was powered by an engine built by Kingston Foundry, Kingston, Ont.

Her ownership was changed to M. W. Browne, Hamilton, Ont. in 1854. Her master for the 1854 season was Captain John Trowell.

In 1855, her ownership was changed to Nixon & Swales (Independent Line of Freight Steamers). Her master for the 1855 to 57 seasons was Captain John Malcolmson. In 1857, Nixon & Swales chartered the propeller *Banshee* to Browne & Malcolmson. Her master for the 1859 season was Captain McCrea. September 1859, the propeller *Banshee* was wrecked on Whiskey Island (U.S. 1000 Islands), St. Lawrence River, when her helmsman fell asleep. The vessel was seriously damaged. She was repaired and her first official enrollment for the *Banshee* was at Montreal, Que., October 1860, and her measures were recorded as: 119.4' x 18.0' x 8.3'; 106 1840/3500 tons. In 1860 she was renamed *Hero*.

In 1861, ownership of the propeller *Banshee* was changed to C. Roe, St. Thomas, Ont. and Captain Howard, Quebec City, P.Q. They renamed the vessel back to *Banshee*. Bound from Port Stanley, Ont., Lake Erie, for Montreal, Que., laden with 6000 bushels of wheat, 250 barrels of flour, 300 kegs of butter and seventeen passengers and crew, the *Banshee* broke her machinery during a gale on Lake Ontario and sank August 1861 near Timber Island, one mile off Point Traverse, Ont. One life was lost.

Final enrollment for the propeller *Banshee* was surrendered January 03, 1878 and endorsed as "Lost – 1861".

Bay State: The Central Vermont Railway, D. C. Bancroft, president, contracted with Bidwell & Banta, Buffalo, NY. to build a wooden propeller, that when enrolled at Oswego, NY, October 7, 1852, had measures of: 137.3' x 25.6' x 11.3' and a tonnage (old style) of 372.04. She was equipped with high pressure engine and was intended for the passenger, package freight trade. Her master for the 1852/53 season was Captain Lewis Litz.

Ownership of the *Bay State* was transferred to Watertown & Rome Railroad Co., E.C. Bancroft agent, and her enrollment transferred to Cape Vincent, NY, July 1, 1854. Master of the *Bay State* for the 1854 season was Captain Abner Reed.

Ownership of the *Bay State* was changed to Northern Transportation Co., George A. Eddy, part owner and enrolled at Ogdensburg, NY, October 13, 1855. Her master for the 1855 – 61 seasons was Captain John Brown. In May 1860, the *Bay State*, bound down from Chicago for Buffalo, NY, laden with a cargo of corn, went aground in fog, near Fox Point, Lake Michigan. She was not seriously damaged. Her master for the 1862 season was Captain William Marshall. November 1862, the propeller *Bay State*, bound for Lake Erie ports from Oswego, NY, laden with general merchandise valued between \$20-30,000, foundered off shore Little Sodus Bay, NY, Lake Ontario, during a gale. All seven passengers, three cabin and four steerage, plus her crew of sixteen were lost.

Boston: J. Munn, Quebec, built for A. Burns, Quebec, a wooden sidewheel steamer, when enrolled at Quebec, in 1852, her recorded measures were: 170' x 23' x 11' and unit tons of 334. She was equipped with a low pressure, vertical beam engine, 46" bore x 90" stroke, built by Ward, Montreal, P.Q. The steamer *Boston* was built for the passenger, package freight trade. She first operated on behalf of the Ogdensburg & Boston Railroad and usually ran on Lake Ontario. June 10, 1852, the steamer *Boston*, while off Whitby, Ont., Lake Ontario, her engine started to race and quickly destroyed itself and broke her walking beam engine. Towed to St. Catharines, Ont., her engine was replaced with a walking beam, low pressure engine, 38" bore x 120" stroke, built by Novelty Iron Works, St. Catharines, Ont.

Early in 1853, ownership of the steamer *Boston* was changed to W. D. Dickson, Prescott, Ont. The steamer *Boston* and the steamer *Ocean Wave* (C -1852) were owned out of Ogdensburg, NY, but were registered Canadian and sailed under the British Flag. Masters of the steamer *Boston* were Captain A. Sinclair for the 1854-55 season and Captain Gibson for the 1856 season. The steamer *Boston* was listed for sale, May 1855: 169' x 23'; 235 tons with a capacity for 1,759 barrels and 40 to 50 passengers. No offers were made. August 1856, while bound down to Montreal, the steamer *Boston*, laden with flour, collided with the Canadian propeller *Protection* (C - 1851) off Gananoque, Ont., St. Lawrence River. The propeller sank in twenty feet of water.

An offer was made and accepted, and ownership of the steamer *Boston* was changed to

Brown & Malcolmsen, Hamilton, Ont. early in 1857. Her master for the 1857-58 seasons was Captain Farrell.

In 1859, her ownership changed to J. Meagher, Kingston, Ont. July of that year, the steamer *Boston* ran aground near Mitilda, Ont. on the St. Lawrence River, while running Gallops Rapids. The vessel was salvaged but was laid up until September 1861 due to a dispute over ownership.

Her ownership was changed in 1860 to J. S. Coleman, Dundas, Ont. and again in October 1861 to the Chaffey Bros., Brockville, Ont. March 1862, the steamer *Boston*, with the sidewheel steamer *Wellington* (C – 1856), steambarge *George Moffatt* (C – 1853) and the propeller *Brantford* (C-1843) were formed into a freight line that ran between Hamilton, Ont and Montreal, Que.

June 1863, ownership of the steamer *Boston* was changed to a party of Americans for \$20,000 who attended to fit her for ocean service. Her master for the 1863 season was Captain Parsley. She was registered British and the steamer *Boston* cleared Halifax, N.S. for Nassau, August 1863, with a cargo of shingles and scantlings. It was believed she also carried drugs and medicines if not powder. The vessel had been painted lead color.

Captain B. F. Sands, U. S. Navy, commanding the *U.S.S. Fort Jackson* in the blockade of Wilmington, N.C. reported to the Secretary of the Navy, Hon. Gideon Welles, the capture of the English blockade runner, sidewheel steamer *Boston*, homeport Bermuda, when she broke down in endeavoring to escape from Naval ships blockading the entrance to Wilmington. She carried on-board 24 barrels copper, 465 sacks of salt and 108 boxes of soap. July 1864, the steamer *Boston* was sent to Boston, MA for adjudication. The steamer *Boston* was believed sold for salvage at Buffalo, NY after the war. Her final disposition is unknown.

Bucephalus: F. J. Pervis, Master Carpenter, Perrysburg, OH, built a wooden propeller for the partnership of Erasmus D. Peck, Perrysburg, OH; John Hollister & Captain Squire Alexander, Buffalo, NY. Her measures were: 169.0' x 28.0' x 11.0' and a tonnage (old style) 493.4. Her engine was built by the Buffalo Steam Engine. The vessel, *Bucephalus*, was named for the war horse of Alexander the Great. She was built for the passenger, package freight trade and ran between Buffalo and Chicago with stops at intermediate ports along the route. Her master for the 1852-54 season was Captain Squire Alexander with A. H. Brown as engineer in 1854. June 1852, while entering the harbor at Buffalo, the *Bucephalus* struck and damaged the steamer
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American (US-1847) and damaged and sank and sank a canal boat. Property loss was set at \$300.

Ownership shares belonging to Erasmus D. Peck for the propeller *Bucephalus* were transferred to Lucius H. Pratt, John Hollister & Captain Squire Alexander in July 1852. In April 1853, the shares owned by John Hollister were transferred to Robert Hollister. In November of 1853, the shares owned by Lucius H. Pratt were transferred to Samuel F. Pratt. In April 1854, the shares owned by Robert Hollister and Lucius H. Pratt were transferred to George W. Holt and Rufus C. Palmer.

Down bound in June 1854, laden with corn and flour, the *Bucephalus*, struck a rock and filled at Lexington Pier, MI, Lake Huron. She sank in 10 feet of water about 20 miles above Detroit, MI. The vessel was raised and repaired. In August of that year, the *Bucephalus* went ashore on Point Au Pelee Reef, Ont., Lake Erie. To be released she required lightering. November of that year, down bound from Chicago for Buffalo, the propeller *Bucephalus*, laden with corn, barreled flour and a deck load of merchandise, lost her rudder during a gale on Lake Huron and was rendered helpless. The vessel was overwhelmed by heavy seas and she filled and sank north of Pte Aux Barques, Saginaw Bay. Her crew of 21 and the 3 passengers took to the lifeboats. One lifeboat capsized and the ten crew members aboard were lost.

Canada: Built for the towboat trade by J. Beaudry, St. Antoine De Tilly, Que. for Charles King, St. Antoine De Tilly, Que. the *Canada* was a wooden sidewheel steamer with measures off: 108' x 18' x 8' and a tonnage (old style) of 59. She was powered by a vertical beam, low-pressure engine with a 32' bore and 72" stroke. The engine was built by J. Murray. While lying at a dock on the Canadian side of the St. Clair River in October 1855, the tug *Canada* caught fire, and burned to her water's edge. The fire was presumed to have originate from her boilers.

Ownership of the remains of the tug *Canada* were sold at auction to Edmonds & McReynolds for \$1,125 in November of that year. She was rebuilt at Detroit, MI and registered as a United States vessel in 1856.

In March 1858, her ownership was changed to George King and Joseph Gerard and she was registered at the Port of Detroit with measures: 111.5' x 16.75' x 8.0' and a tonnage of 143.2 tons. Her master for the 1858 season was Captain George W. King. She would be used to tow sailing vessels and barges on the river. In July of that year, the tug *Canada* damaged her machinery while steaming in

the Detroit River. She sustained a property loss of \$600. On October of that year, while lying at a dock, in Saginaw, MI, on the Saginaw River, with a light head of steam up, the tug *Canada* collapsed a flue, scalding to death the wheelsman, watchman and a fireman. The wheelsman was the fifteen-year old son of the owner Joseph Gerard. The boiler and machinery had originally been installed in 1852 and had been retained from the original boat when rebuilt.

In 1859, her ownership was changed to John Pridgeon, Detroit, MI. He had the steamer *Canada* rebuilt and furnished as a passenger boat. March 1860, she started carrying passengers between Detroit and Bay City, MI on Saginaw Bay. Her master for the 1860 season was Captain Warren H. Benson.

In 1861, her ownership was changed to Captain Daniel Miesel, Detroit, MI. Her ownership was changed to S. McKay, Bay City, MI. McKay retained Captain Daniel Miesel as master for the 1862-65 seasons. In June of 62, the steamer *Canada* broke her machinery on Lake Erie. The following month the *Canada* collided with the tug *Winslow* (built by Quayle & Martin in 1862) in the St. Clair River. Both vessels had tows. The *Canada* was considerably damaged while the *Winslow* sustained little damage. Major repairs were made to the steamer *Canada* and her enrollment tonnage was listed as 165 tons. Upbound on Lake Erie in early December 1865, the steamer *Canada*, while approaching the Detroit River with a schooner and barge in tow, went aground on Bar Point at the entrance to the Detroit River and was pounded to pieces in heavy seas.

Cataract: Francis Nelson Jones, Buffalo, NY built for Niles & Wheeler (Hiram Niles & John R. Wheeler), Buffalo, NY a wooden propeller with measures: 150.0' x 25.0' x 11.1' and a tonnage (old style) of 393.8. She was powered by an engine built by Bell & McLish of Buffalo. She was first enrolled at Buffalo, NY, April 27, 1852 and she was to be used in the package freight trade between Toledo, OH and Tonawanda, NY on the Niagara River. Her master for the 1852 season was Captain T. Palmer. July of that year, bound down, the propeller *Cataract* broke her crank, cylinder, cylinder head and cross head while off Ashtabula, OH, Lake Erie and was towed into Buffalo, NY for repairs.

Ownership of the *Cataract* was changed to American Transportation Co., Buffalo NY; Rufus C. Palmer, President, in May 1855. Her master for that year was Captain J. G. Hind. June of that year, while down bound from Milwaukee, WI, laden with a cargo of 3,000 bbl.'s flour, 1,000 bushels rye and other articles, went aground on South Fox Island, Lake

Michigan. The propeller was assisted by the propeller *Forrest Queen*, and was pumped out. The *Cataract* made her way to Chicago where she was dry-docked for repairs. 1,500 barrels of flour, consigned to Messrs. Milne & Kinne and the American Transportation Company, were damaged. Entering Sandusky Bay in October of that year, the propeller *Cataract* struck bottom and stove her hull. With pumps running, she docked and was repaired at Buffalo. Her property loss was set at \$500. May of the following year, the propeller *Cataract*, bound from Toledo to Buffalo, laden with a cargo of flour and provisions, collided with the brig *Oxford* off Long Point, Ont. on Lake Erie. The brig had been bound from Ogdensburg to Toledo and sank in deep water with a cargo of 300 tons of iron ore. Five lives lost were lost on the *Oxford* including the Captain Lee, his wife, the mate and two seamen.

In April 1860, ownership of the propeller *Cataract* was changed to William Williams, 1/3 share; Andrew J. Rich, 1/3 share; and Henry Martin, 1/3 share, all from Buffalo, NY. Her master for the 1860 season was Captain William Williams. In May of 1860, her ownership was changed again to Joseph Van Vleck, 1/2 share and Noyes & Roby (John S. Noyes & James Roby), 1/2 share, all from Buffalo, NY. Her master for the 1860 season was Captain William Campbell. Master for the 1860 season, was Captain Frank Perew and in August of the year he purchased Joseph Van Vleck's shares of the propeller. The *Cataract* was placed on the Buffalo to Sandusky route in connection with the New York and Erie Railroad. During winter layup, the *Cataract* was overhauled at Quayle & Martin's yard, Cleveland, OH where she received new upper works and had her hull thoroughly caulked. Master of the propeller *Cataract* for the 1861 season was Captain McNally.

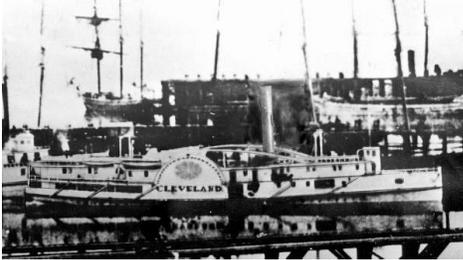
In June 1861, bound from Cleveland, OH to Dunkirk, NY, the propeller *Cataract*, carrying a full cargo of rolling freight, caught fire off Erie, PA. The burning vessel was towed into Misery Bay off Presque Isle in *Erie, Pennsylvania*, by the tug *Brooks* where she burned to the water's edge and was scuttled in twelve feet of water. Four lives were lost when a lifeboat tipped over.

City of Oswego: Early In 1852, F.N. & B.B. Jones of Buffalo, built for Dwight C. Bancroft, Oswego, NY a wooden propeller with measures: 143.0 x 24.8' x 11.2' and a tonnage (old style) of 357. She was original enrolled at Oswego, NY, June 15, 1852 and listed with an engine stroke, built by Barton & Truman, Buffalo, NY that had a 22' bore and a 40" stroke, she was also equipped with a return flue boiler. Built for the passenger, package freight trade. The propeller *City of Oswego* was to be one of twelve

propellers, forming the Crawford & Co's "Northern Railroad Line," running from Ogdensburg to Chicago, touching at Cleveland and Detroit. Her master was Captain William Williams.

July 1852, the propeller *City of Oswego* was struck by the sidewheel steamer *America* (1847) and sank in 40 feet of water, about 15 miles off Cleveland, OH. Financial loss of the vessel was set at \$22,000 and her cargo loss at \$15,000. Fourteen lives were lost in her sinking.

Historical Collections of the Great Lakes
Bowling Green State University



Cleveland: John L. Wolverton of Newport (Marine City), MI, built in 1852 a wooden sidewheel steamer for a group of investors consisting of: Eber B. Ward, Solomon Gardiner and O.C. Thompson from Detroit; Samuel Ward and David Gallagher of Newport, MI; and Mrs. G.F. Lewis of Cleveland, OH. When first enrolled at Detroit, MI, the steamer *Cleveland* had measures of 196.6' x 27.7' x 11.0' and a tonnage (old style) of 574.3. She was equipped with a vertical beam, low pressure, 40" bore x 132" stroke engine built by DeGraff & Kendrick, Detroit, MI in 1852. She had been built for the passenger, package freight trade between Cleveland, OH and Detroit, MI. on Lake Erie. Her master for the 1852 season was Captain Charles C. Stannard with Charles Whitman as chief engineer

Ownership of the steamer *Cleveland* was changed to Clement Steamboat Co., Milwaukee, WI, Levi H. Kellogg, Vice President in June 1856. Her master for that season was Captain Thomas H. Clark.

June 1858, shares were sold so that her ownership was shared by Clement Steam Boat Co, 45/53 shares; John Hutchings, 4/53 shares, Detroit, MI; and Stewart McDonald, 4/53 shares, Cleveland, OH. Her master for the 1858 and 1859 seasons was Captain William Dougall. November 1858, while leaving Grand Haven, MI. harbor, the steamer *Cleveland* collided with the schooner *Fred Hill* (US-1854) on Lake Michigan. Her property loss was set at \$650. Both vessels sustained damaged and were repaired. August 1859, bound across Lake Michigan for Grand Haven, MI, the steamer *Cleveland* collided with the schooner *Toledo* (US24234) nearly cutting

her in half. The crew of the schooner was rescued by the steamer *Cleveland*.

March 1861, the steamer *Cleveland* was rebuilt at Clark's Dry-dock & Shipyard, Detroit, MI. Her master for the 1862 season was Captain S. Andrews. The steamer was placed upon a run between Chicago on lake Michigan to ports on Lake Superior. In October 1862, the steamer *Cleveland*, with a cargo of cattle, flour, provision, etc., ran hard aground on a reef about one-mile from the lighthouse on Manitow Island, Lake Superior (a small island off the northeastern tip of the Keweenaw Peninsula in the U.S. state of Michigan). Her entire cargo as well as fuel was jettisoned to release her. The steamers hull damage was estimated at \$4,700 and the cargo loss estimated at \$2,000.

May 1863, bound up from Chicago, IL for Lake Superior ports, laden with merchandise and miner supplies, the steamer *Cleveland* struck a rock, stove a hole in her bottom and sank in Eagle Harbor, MI, Lake Superior. She was raised, repaired and returned to service.

June 1864, up bound with general merchandise on her regular route between Cleveland, OH and Lake Superior, the steamer *Cleveland* stranded during a gale at the mouth of Two-Heart River, MI., Lake Superior. She was released and towed back to Cleveland, OH and rebuilt as a barge with her enrolment updated July 23, 1866.

The barge *Cleveland* final disposition is unknown.

Eclipse: George H. Notter of Buffalo, NY built a wooden, propeller driven, towboat for Edward R. Blackwell, Buffalo, NY. She was enrolled at Buffalo, September 1852 with recorded measures of: 93.8' x 18.2' x 8.6' and a tonnage (old style) of 136 12/95. She was equipped with a 92-horsepower engine and a boiler built by Degruff & Kendrick, Detroit, MI. She was built for the towing trade and ran between Buffalo and Detroit.

Ownership of the tug *Eclipse* was transferred in April 1853 to Captain Sam M. Johnson, Chicago, IL and Edward R. Blackwell, Buffalo, NY. Her master for the 1853 season was Captain John Lyman. June 1853, while the tug *Eclipse* was winding up the Chicago River above the Madison Street Bridge, her boiler exploded due to a defect in the boiler and sank in the river in two parts. One life was lost. The bow and stern of the tug were raised and she was rebuilt at the shipyard of Dolittle & Miller. Relunched Oct 26, 1853.

For the 1854 season, her master of the tug was Captain Brown. September of that year, the tug

Eclipse went ashore at Michigan City, IN, during a gale. She was released.

May 1855, ownership of the tug *Eclipse* was changed to Edward Shepard, Detroit, MI. In May of 1856 the tugs ownership shares were held by Edward Shepard, and G. Tellers, Detroit, MI. October of that year, the *Eclipse* broke her machinery on St. Clair Flats, Lake St. Clair.

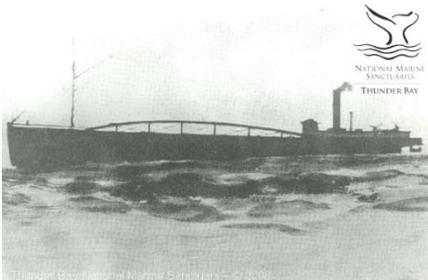
Ownership of the tug *Eclipse* was changed to John McAllister, Detroit, MI in April 1857 and again in June 1858 to

Louis P. Trempe, Sault St. Marie. The tug was rebuilt and enlarged in August 1860 and in 1865, when readmeasured her tonnage was recorded as 92 grt. She was issued an official number of 7495 at that time.

July 1865, her ownership was changed to Louis M. Trempe, Detroit, MI. In October of that year, the *Eclipse* sprang a leak and sank in the harbor at Cleveland, OH.

July 1868, ownership of the tug *Eclipse* was changed to S. B. Grummond, Detroit, MI, and in March 1870 her ownership was changed to Eliza Ellen Dibble, Detroit, MI and the following year to J. B. Scott of Detroit. The tugs master for the 1871 season was Captain King. May 1871, while on Lake St. Clair, the tugs machinery was disabled. She was repaired at Detroit. August 1871, with the schooner *Richards* in tow, the *Eclipse* went hard aground at the head of the River St. Clair. Released. September of that year, while bound up with a steam pump for the schooner *Miranda* who was ashore on Port Austin reef, the *Eclipse* was damaged in a collision with the tug *H. A. Ballentine* (U11203) near Port Huron, MI, River St. Clair. Her stern was knocked off causing bad leaks. Repaired. The following month, while lying at the dock at Lakeport, MI, the *Eclipse* caught fire and burned to the water's edge. The hull was salvaged and converted to a steambarge.

October 29, 1874, the steambarge *Eclipse*, in tow of the tug *Yosemite*, went ashore 6 miles east of Black River, OH during a gale. The hull was stripped and abandoned.



Edith: Francis Nelson Jones of Buffalo, built for Asa E. Hart et al, of Black Rock, NY a wooden propeller.

When enrolled at Buffalo, November 16, 1852, her measures recorded were: 180.8' x 26.5' x 12.0' with a tonnage (old style) of 549 29/95. She was powered by an engine built by the Fulton iron Works and would run in the passenger, package freight trade between Buffalo, Detroit and Milwaukee. She had a capacity for 300,000 feet of lumber.

March 1854, ownership of the propeller *Edith* was changed to John S. Pease & Hiram Niles, Buffalo, NY. In November of that year, the propeller *Edith* collided with the schooner *Charley Hibbard* (U4361) off Long Point, Ont., Lake Erie. The schooner had all her head gear, bowsprit, cutwater, etc. carried away.

May 1855, her ownership was changed to the American Transportation Co, Buffalo, NY and ran Milwaukee – Sheboygan, WI. While bound up from Buffalo for Chicago in June 1855, laden with general merchandise, the *Edith*, broke her shaft on Lake Erie and returned to the port of Buffalo, NY for repairs. Her loss was set at \$1,000. In November of that year, while bound down laden with wheat, the propeller *Edith* had to jettisoned 1,000 bags of wheat during a gale on Lake Erie to prevent losing the vessel. The property loss was set at \$4,500. In October of 1856, she collided with the schooner *Cuba* (U4576) on Lake Huron causing the schooner to lose her bowsprit and headgear.

July 1860, ownership of the propeller *Edith* was changed to William Williams et al, Buffalo, NY and seven days later her ownership was again changed to William H. Abel, Buffalo, NY. In October 1862, while bound up, the propeller *Edith* broke her shaft at the Manitou Islands, Lake Michigan. Repaired.

Her ownership was changed to John N. Gardner & Benjamin Lamoree, Buffalo, NY in April 1863. In May 1864 Benjamin Lamoree took full ownership of the vessel. He in turn sold her to the vessel to Daniel Titus of Brooklyn, NY in October 1864. In March 1865, the propeller *Edith* was owned by Stevenson Hume, Buffalo, NY and then by Senator Benjamin F. Smith, Albany, NY and may have been renamed *E. B. Hale* during this brief period of time. It is not believed that she left the lakes during this time.

The propeller *Edith* ran aground on St. Clair Flats in May 1866. During that month, her ownership was changed to B. F. Smith, Alabaster, MI and she was rebuilt at Detroit, MI. She was readmeasured and her enrollment measures changed to: 182' x 29.6' x 11.15'; 766.96 grt, 416.79 net. The vessel was assigned the official number of 7334.

She went aground on the head of Belle Island, Detroit River in October 1866. April 1869, the propeller *Edith*

ran aground on St. Clair Flats, Lake St. Clair and three months later, she broke her wheel at Marquette, MI, Lake Superior.

Ownership of the propeller *Edith* was changed to Captain Douglas W. Dana, Algonac, MI, October 1870. During the winter layup, the propeller *Edith* was converted to a steambarge so she could freight lumber and tow barges.

Her master and owner of the steambarge *Edith* was Captain Douglas Dana for 1871 to 72. In July 1871, the steambarge *Edith* collided with the barge *William Treat* (U26170) at Bay City, MI, Green Bay. In 1872, the steambarge *Edith* ran between Toledo, OH and Saginaw, MI with a typical cargo of 270,000 feet lumber and 30,000 pieces of lath.

October 1872, James, Douglas, and William Chandler, Wenona, MI took ownership and had her rebuilt with her enrollment tonnage recorded as 416.79 grt. May 1873, the steambarge was converted to a barge with her machinery going into the bulk freighter *Chauncy Hurlburt* (U125238).

June 1879, ownership of the barge *Edith* was changed to Abram Smith, Algonac, MI. Her final enrollment was surrendered at Port Huron, MI, July 31, 1879 and endorsed "abandoned".

Forest City: May 17, 1852, the wooden sidewheel steamer *Forest City* was enrolled at Detroit, MI. Built by Patrick Bates of Trenton, MI for Davis & Ward Co. (Ira Davis & Eber & Samuel Ward) of Detroit, she had measures recorded of: 199.0' x 26.8' x 9.3' with a tonnage (old style) of 479 93/95. She was equipped with a low pressure, vertical beam engine with a 44" bore and 120" stroke and was intended for the bulk freight trade. Her master for the 1852 season was Captain N. L. Pierce.

Bound down from Cleveland to Dunkirk, NY in June 1852, while about ten miles out from her destination, the starboard boiler flue collapsed due to a deficiency of the iron in her flue, killing three firemen manning her boilers. The vessel was towed back to Cleveland for repairs. In April 1853, the steamer *Forest City* went aground one mile west of Huron, OH, Lake Erie. She was towed off by the steamer *Southerner* (US-1847).

Ownership share of the steamer *Forest City* was transferred to John Owen, Eber B. & Samuel Ward in March 1853. During the 1853/54 winter layup, the *Forest City* had been rebuilt and was renamed *Bay City*. Her master for the 1854 season was Captain J. M. Lundy. April 1856, the steamer *Bay City* collided with, and sank, the steamer *Northerner* (US-1851) off Fort Gratiot lighthouse, Lake Huron. One person was reported missing. April

1857, the steamer *Bay City* collided with the steam tug *Uncle Ben* (US-1856). Damage loss was placed at \$150. On April fifth 1858, the steamer *Bay City* caught fire and burned at Port Stanley, Ont, Lake Erie.

The remains of the steamer *Bay City* were bought, on April 12th by Arthur Edwards, Trenton, MI who removed her cabins and converted her to a towboat.

In 1860, Ward & Lundsby took charge of the towboat *Bay City*. In September 1861, ownership changed again to John Edwards & George Harrington, Trenton, Mi. Master of the sidewheel towboat *Bay City* was Captain Edwards for the 1861-62 seasons.

May 1862, during a storm on Lake Erie, the *Bay City* sprang a leak and sank off shore near Port Burwell, Ont. The hull washed to shallow water in one piece and her crew was rescued. The engine and boiler were removed from the *Bay City* during the summer of 1862 and her remains abandoned.

Forest Queen: November 4, 1852, the wooden propeller *Forest Queen* was enrolled at Cleveland, OH. Built by Moses & Quayle, Ohio City (Cleveland), OH, she had measures of: 162.0' x 25.7' x 11.8' and a tonnage (old style) of 469.0. The *Forest Queen* was owned by Heber Squer, H.A. Riley and Alonzo B. Sprague of Cleveland, OH and Dunkirk, NY. She was built for the package freight trade and would run in connection with the New York & Erie Railroad from Dunkirk to Cleveland, Sandusky and Toledo. Caught in a gale on Saginaw Bay in November 1852, the propeller *Forest Queen*, bound up for Chicago, lost her deck load. The property loss was set at \$6,000. In April 1853, the *Forest Queen* went ashore near Huron, OH on Lake Erie. Released.

Her ownership of the *Forest Queen* was transferred to Alonzo B. Sprague, Cleveland, OH in July 25, 1853. The following year, in May, her ownership was changed to Nelson W. Napier et al, Chicago, IL. Her master for the 1854 & 55 seasons was Captain Nelson W. Napier.

In March 1855, her shares were sold to Albert Neely, George R. Eckley et al, Chicago, IL. In May of 1855, the propeller was incorporated into the American Transportation Co., Buffalo, NY. November 1857, while riding out a very heavy gale on Lake Erie, the *Forest Queen* lost her rudder off Port Stanley, Ont.

July 1860, the ownership of the propeller *Forest Queen* was changed to John W. Sargent, Cleveland, OH. In November of that year, bound down on lake Michigan, the propeller *Forest Queen*, laden with a cargo of flour and grain, went ashore and wrecked at

Bailey's Harbor, WI. The vessel was not recovered and restored until April 1861. Her master for the 1862 season was Captain Neil Carney. September of that year, the propeller sprang a leak during a storm and stranded on the beach near Euclid, OH.

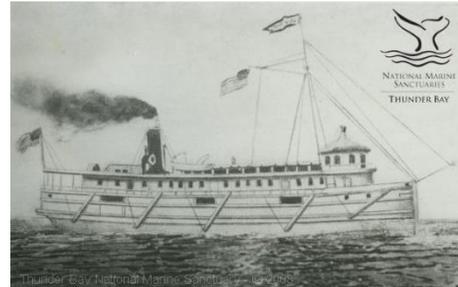
Ownership of the propeller *Forest Queen* was changed to Thomas Coatsworth, Buffalo, NY October 1863. The *Forest Queen* was readmeasured September 1865, assigned official number 9159 and her enrollment updated to: 161' x 25.4' x 9.9'; with a tonnage of 540.33 grt. November 1867, the *Forest Queen* was caught in a gale on Lake Erie and jettisoned 350 barrels of cargo while seeking shelter at Port Dover, Ont.

Her ownership was changed again in May 1868 to S. W. Morgan, Manitowoc, WI and John Gordon, Detroit, MI. December of that year, the *Forest Queen*, attempting to make a late passage from Cleveland to Detroit, was cut by ice on Lake Erie and sank in 15 to 16 feet of water near Point au Pelee, Ont. No lives lost.

Golden Gate: Bidwell & Banta, Buffalo, NY, built for the Fox & Bruce Co.; Watson A. Fox & Elijah K. Bruce of Buffalo, NY a wooden sidewheel steamer to be used in the passenger, package freight trade. She was enrolled at Buffalo, May 25, 1852 with measures of: 222.4' x 29.6' x 12.2' and tonnage (old style) of 770 48/95. She was equipped with a Crosshead engine, 30" bore x 108" stroke, built by Cuyahoga Steam Engine Works, Ohio City, OH and originally installed in the sidewheel steamer *G. P. Griffith* (US-1848). Her master in 1852 was Captain B. F. Davison. The steamer *Golden Gate*, returning to Buffalo from a sea trial on Lake Erie in June 1852, became unmanageable in the Buffalo creek, due to the wind coming off the lake and ran into the propeller *Northern Indiana* (U-1852). Upbound on Lake Michigan late in June of 52, the *Golden Gate* broke her crank and required a tow to Chicago by the passenger steamer *Baltic* (U-1847).

October 1853, her ownership was changed to Elisha C. Litchfield, Cazenovia, NY. October 1854, the steamer *Golden Gate* ran on a rock, in heavy fog, off the east end of Kelly's Island, OH, Lake Erie. Repaired. November 1855, the *Golden Gate* broke her arches and lost part of her deck load of hogs in a gale on Lake Erie. The property loss was set at \$1,500. Master of the steamer *Golden Gate* for the 1856 season was Captain Travis. In November 1856, bound down from Toledo for Buffalo on Lake Erie, with passengers and general freight aboard, the *Golden Gate* parted her steering chains while trying to make shelter at Erie, PA. Without steerage, she fell

into the troughs of the waves and broke in two. One life lost.



Granite State: September 1, 1852, Philo Chamberlain & J. W. Crawford, Cleveland, OH enrolled a wooden propeller built by Moses & Quayle, Ohio City (Cleveland), OH for the passenger, package freight trade. Her recorded measures were: 137.3' x 24.8' x 11' with a tonnage (old style) of 351 73/95. She was equipped with a high-pressure engine, 24" bore x 36" stroke, built at the Cuyahoga Iron Works by Edmond Reese. In December 1853, the *Granite State*, laden with 100 barrels of salt, while attempting to make the Cuyahoga River during a storm, struck a pier and stove a hole in her side. She lost both anchors in an attempt to hold her position, but was driven 5 to 600 yards west of the pier before being driven ashore and sinking. She was raised and repaired.

October 1855, ownership of the *Granite State* was changed to Northern Transportation Co., George A. Eddy, Director. Her master for the 1861 season was Captain Davis. In June 1861, while down bound, the *Granite State* broke her shaft near Mackinaw, MI and was towed to Cleveland, OH for repairs. In July 1862 she collided with the schooner *Australia* in the Welland Canal. In 1863, the *Granite State* ran in the Lake Michigan Line.

The *Granite State* was readmeasured May 20, 1864: 136.2' x 24' x 10', with tonnage at 428.82 gross tons (grt). She was issued official number 10815. In March 1866, she was rebuilt by the Campbell & Owens Yard, Buffalo, NY. May 1868, bound up from Ogdensburg, NY, the propeller *Granite State*, laden with 50 tons of freight, ran ashore in the fog while attempting to enter the port of Oswego, NY on Lake Ontario. She was released without damage. In July 1869, the *Granite State* collided with the bark *Thermutis* (U24581) in the Welland Canal. In November of that year while bound up for Detroit, MI from Ogdensburg, NY, the propeller *Granite State* went ashore on Starve Island, OH, Lake Erie. Masters of the *Granite State* in 1872 was Captain E. White and in 1873 Captain W. E. Williams. Under Captain Williams command in June 1873, the

Granite State, bound up, broke four gates of Lock No. 2, Welland Canal. The ship navigation was interrupted for three or four days due to the break. (06/17/1873)

March 1876, her ownership was changed to Philo Chamberlain, Cleveland, OH and on March 23, she was changed to Northern Transit Co., Rockport, OH. In 1877 she ran Chicago and Milwaukee to Lake Ontario ports. In 1880 she was chartered by a traveling circus on Lake Michigan.

Her ownership was changed to William A. Russell, Chicago, IL in August 1881. Her passenger accommodations were removed and she ran between Chicago to northern Canadian lumber ports. September of that year, while bound from the Sault for Chicago, the propeller *Granite State*, with three rafts of telegraph poles in tow and cedar ties on deck, ran on a reef off Black River, Sheboygan, WI, Lake Michigan, during a storm. She jettisoned her deck load of cedar ties and worked her way over the reef, letting go both anchors. During the storm she lost both anchors but was able to prevent going ashore until the gale subsided. The rafts of lumber were driven ashore. She extracted herself from behind the reef and proceeded to the Straits for fuel. October 3rd, she put into Clay Banks, WI, Lake Michigan due to a leak sustained at Black River and was run ashore where she stranded on a reef near the Clay Banks pier in heavy weather. The ship went to pieces in a few days.

Ownership of the wrecked propeller *Granite State* was changed to James Tufts, Clay Banks, WI in October 1881 who would try to save the machinery. The engine was recovered by September 1882.

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.)