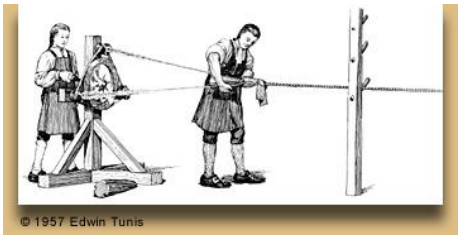


While one man cranks the spinner, the one holding the "top" walks backwards as the rope is twisted. From Edwin Tunis, *The Young United States, 1783 to 1830* (New York: World Publishing Co., 1969). Used by permission of the estate of Edwin Tunis.

Ropewalk

The Newsletter for
Shipwrights of Ohio – February 2024

Next Meeting: March 16, 2024;
***"*CAD, 3D Printing*"* by Lee Kimmins**

Table of Contents

February

The plan for the February hybrid meeting ended when snow was predicted for Friday night & early Saturday, 3 – 5 inches. Out went email & cell phone messages, that the in-person portion of the meeting was canceled so no one would have to venture out on the roads. We ended up with the largest meeting attendance we have had in months.

Using both communications methods alerted me to the fact that our member roster information may be a bit derelict. Look for an email in the next week with your personnel information that I presently have and that I will be asking for updates.

We did cover a number of topics in the general announcements/discussion that pertained to possible future activities. They are listed below.

I do want you all to know that the club will be looking for a new club president for 2025. After 20+ years leading this group, it is time for me to step down. My reason is simple, I turn 87 this year and my wife requires more of my time and help then in the past. It is also time to raise up new leadership. I do still plan to continue to write and edit the newsletter "Ropewalk" and to provide history on the clubs past.

Be aware, due to conflicts with tax preparation at the Westerville Library, our hybrid meetings for March, unless it snows again, will be from Classroom D. The D classroom is off the audio/visual section of the library (enter from the parking lot, turn left into the library, bear right around the checkout counter and continue straight ahead. The classroom is on the far side of the audio/visual library section. You will see a large smart screen TV on the far wall. That is classroom D.

As always, take care of yourself and your families, look to those you know who may need help, are lonely and may be in need of human contact. Till next month.

Your editor.

Shipwrights of Ohio - Announcements

NMGL: National Museum of the Great Lakes

Wednesday, February 21, 2024 7:00 – 8:30 PM, the NMGL will host, a special, members only, lecture. Hosted by Carrie Sowden, NMGL Archaeology and Research Director, She will share the Summer 2023 archaeology work on Lake Erie, Ontario & Huron, connected to both shipwrecks and airplanes.

FIELDWORK TOPIC OVERVIEW:

- June 2023 documentation of Lake Erie shipwrecks with photogrammetry—getting data on nine different wrecks: *Oneida, St. James,*

Tradewind, Niagara, Carlingford, Acme, Passaic, Crystal Wreck, and *Pascal P. Pratt*.

- July 2023 Lake Ontario investigation and documentation of a small scow schooner (including a rare daggerboard), stuck in a bay of Galloo Island and identified as the *Northern Lights*, a local coastal vessel built in 1899 that, in 1916, ran aground on the outer edge of the bay.
- Summer documentation and recovery assistance of a P-39 aircraft flown by Lieutenant Frank Moody, of the famed Tuskegee Airmen, that crashed into shallow waters on April 11, 1944 during a training mission out of Selfridge Air Base over Lake Huron.

If not a member and want to view the lecture, go to https://nmgl.org/membership/

Senior (65+) membership - $32
Regular membership - $34

Then sign up for a ticket to the lecture.

IPMS, BLIZZCON 2024

On Saturday, February 24, 2024, 9 AM – 4 PM, the Eddie Rickenbacker IPMS Columbus Chapter will host their annual model and vendor gathering at the Makoy Center, Hilliard, Ohio. The center is located just north of the town center. If you search the Internet for Makoy Center Hilliard, you will find a map to the Center.

Check it out.

RC Equipment & Partial Kit Available

The Shipwrights of Ohio have been contacted by a resident of Delaware, OH. He has a partial model of a Dumas, 1940 Chris Craft Kit, plus two new, in box, RC Controllers, two motors, full scale blueprint and some additional hardware for sale.

It has been estimated, that new, the whole package would cost between $300 - $500. The seller is asking $100 for everything. Alan Phelps has built this kit and is our contact.

Here is your chance to get into RC boating, Contact Alan at: arphelps44@gmail.com.

Westerville Public Library Display

The club has reserved the display cases in the main hallway at the Westerville Public Library to showcase our ship models, for the month of June. Our last display there was in 2018.

As you review your models, keep in mind the following case dimensions:

Long Case: 72" x 12.75" x 12.75" (length x height x depth x length), qty – 2: Each case will hold two or three models depending upon length. The critical dimension is height, so plan for a 12": - bottom of base to top of model

Tall Case: 57.5" x 19" x 76.5" (length x depth x height: The case contains a three shelf stand that we had made by a past member of the club. The critical dimension is the space between shelves, which is 25"

In addition to displaying our models, we had a discussion about also holding a one-day event, to share ship modeling, introduce entry model kits, and to talk to those who join us about how to get started.

Bob Mains rmains1@columbus.rr.com will be the primary coordinator and will accept all volunteers. If this works out well, we may replicate the event and display at other libraries around Ohio.

We have two primary objectives: Display our completed ship models (No cases); Introduce ship modeling to the general public and grow our club membership.

Road Trip

In the past, the club members have traveled to various locations around the state to view maritime history and activity. Shortly after the Inland Seas Museum moved to Toledo and renamed itself "The National Museum of the Great Lakes" we visited them. We have also traveled to the David Warther Carving Museum in Sugar Creek, OH as well as Kiem Lumber in Charm. The carving museum features hand carved from ivory and displays a history of maritime ships.

We have also visited the "Tall Ships Festival" when they were in Cleveland and Fairport Harbor. We were also in the planning stages to visit Marietta during the "Sternwheel Festival" prior to COVID.

"Moonglow"

Some time back, Alan built an RC model of the "Moonglow". He documented the steps and critical teachings so that we could hold a multiple session introduction to radio control modeling.

COVID put that on a back burner, but maybe it is time to brush off the script and see if there is a market for young modelers and their parents to be introduced to ship modeling.

Alan, could you make a copy, electronically’ of what you have, so that the club officers can review it. Thanks.

Remote Ship Modelers

In our discussion, we seem to all agree that there are ship modelers out there that do not have a club/guild/society available in their geographic area and are modeling alone.

What brings that to mind is, we are 26 strong in a state of 11.78 million. There has to be more ship modelers. It has been suggested, that with Zoom, why not open our meetings to remote ship modelers at a reduced dues and maybe include a second zoom forum during the month for other to check in and get their questions answered.

Let’s think about that.

Gift

At our January meeting, Bill Schwartz gave out, to those who wanted one, a stainless steel, 12-inch tweezer. See photo below. As he left, to return to Avon Lake, he left behind five units.

Professional Quality Tweezers You Won't Find at the Local Hardware Store. These tweezers are the finest quality you'll find anywhere. Most come from manufacturers for the jewelry, dental and watchmaking trades. Giant Long Reach Tweezer Stainless steel. Serrated rounded points. 12 inches long. (As listed at Micro Mark)

If you are interested in having one, let me know at: shipwright@breezelineohio.net. First response, first served.

Presentation

Display Cases by D. Markijohn

We had an excellent presentation and discussion on why and how to protect our ship models that we have, spent years plus, building. It also appears that we had technical problems and the original presentation that Darrell had developed, was no longer available. So…I will share some points from a previous presentation on the same subject.

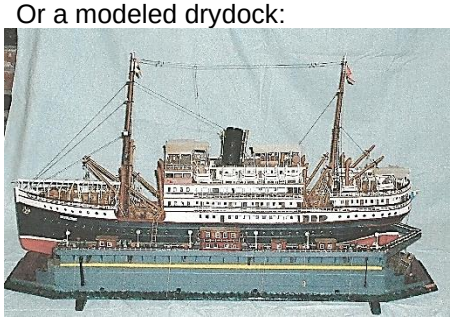
Early in your build, you considered, or should have considered, how you will mount your model. How the model should be displayed is also an early question to be considered.

The first question that needs to be answered is “What do you want the observer to see?”

- Your model mounted on a base so that the observer can see your work?

- Displayed in a simulated dockyard:

- Or a modeled drydock:



- Or your model as if at sea:

- Or something else?

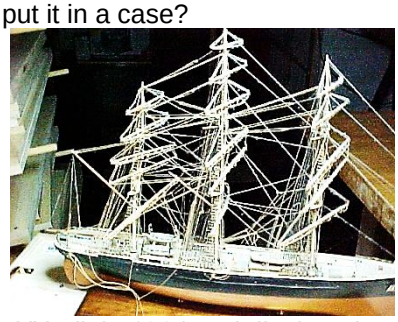
All the photos above, with the exception of the drydock, were taken at the Midwestern Model Ship & Boat Contest at Manitowoc.

You are probably saying the last photo is a picture. You are right, to a point.

The model is of a rowboat, mounted on a simulated river,

In a case with the small boat mounted is a picture on the back pane.

So how do you want to display your model, and why put it in a case?



“Cutty Sark” built in 1964 and displayed on top of a bookcase. 50 years of accumulated “household dust”.

Dropped accidently, broken bowsprit, topmast and rigging.

Mover error in packing.

There are four different types of display cases used in museums:

Conservation grade criteria: Conservation grade cases provide the most protection for items. For a display case to be given this classification, the method of construction and materials should meet the following criteria:

- •Sealed from airflow – the case should have an air exchange rate of less than 0.1 per day
- •Built from chemically stable materials, so avoid wood and wood composites such as Medium Density Fiberboard (MDF).
- •The possibility of relative humidity control to create micro-climates.
- •No internal heat sources such as lighting.

Ventilated cases: Can help prevent corrosion Appropriate circumstances for using a ventilated case:

- •When your item isn’t sensitive to relative humidity fluctuation, pollution or dust, such as objects made from glass, stone, and ceramics.
- •In indoor environments where the conditions are already monitored and controlled, using air conditioning and other methods.

Standard and designer-built cases:

Customized cases: Standard cases come in a range of materials and it’s important to choose the right one for your model.

Materials you can use: Some materials are safe to use in any kind of case. These include:

- •Metal, preferably baked enamel or aluminum
- •Certain wood
- •Glass/Acrylic

Materials you should avoid using in display cases include:

•Many kinds of wood, including oak, teak, and more •Most composites, such as plywood and Medium Density Fiberboard (MDF)
•Adhesives and sealants containing acetic acid or formaldehyde

Wood:

Wood produces harmful vapors such as formic and acetic acids and peroxides, although some types are worse than others. Wood that is freshly cut and unseasoned can cause the most damage.

Metal can be corroded by:

•Oak
•Sweet chestnut
•Western red cedar
•Douglas fir
•Teak

Glass

• Glass can be customized with UV-filters or laminates.
• It is impermeable to gases, and is scratch resistant. • The only problem with glass is its weight, and the possibility that it may cause condensation and mold growth
• Clean glass well. Don't use vinegar-based agents or anything with harmful substances.

Polycarbonate Sheets

Advantages

• Plexiglass and polycarbonate sheets are lighter than glass and sometimes come with built-in UV-absorbing properties, making them useful for light-sensitive items.
• These materials also have good impact resistance, cracking or bending instead of shattering.
• You can cut it on a saw (use thin kerf blade)

Disadvantages

• Can be permeable to gas, easily scratched, and less rigid than other materials.
• It can create static forces during cleaning which can attract loose items within the container.
• Clouds with constant cleaning

To have a clear view of the model and to protect it from dust or being bumped, you have a choice of glass or acrylic.

- Glass: heavy; if broken, shatters and could do damage to the model; optically clear.
- Acrylic: lighter, can be scratched when cleaned.

Large, 31" x 10" x 21", acrylic panels fitted with wooden stiles. To access the model, the right end panel bottom stile can be removed and the panel will slide down to provide access to the model.

The above photo shows a five-panel acrylic case, fitted to slots in a wooden base. To access the model, the acrylic case has to be lifted straight up and over the height of the model.

As the model and case get larger, the thickness of the acrylic panels gets thicker.

Smaller than a "small model case": 1/16" thick
Small model case: 18" x 8" x 19" – 1/8" thick
Medium case: 30" x 12" x 24" – 3/16" thick
Larger case: +3/16" thickness.

Provide the acrylic case supplier the interior dimensions and let them tell you the acrylic thickness required.

Additional guidelines:

The case should be large enough to provide an unobstructed view of the model – add 2" to all sides & top of your model. If using wooden corner post case, use 3" for the spacing.

Venting: prevents corrosion and removes heat. One method for venting, is to drill a small holes through the base so that air may move. An acrylic case, without tight base edges will tend to allow air movement.

Lighting: Enhances the model,
Is low maintenance, but produces heat and could require venting.

Suppliers in central Ohio.

Acrylic Panels:
American Plastic Dist. (614)294-5100; 1812 McKinley Ave. zip: 43222
Wood:
Woodcrafters, Lowes, Keim lumber, Charm, OH.
Built Cases:
Check the Internet for sources.

Suppliers on the Internet:

Clear View Designs: Custom glass display cases for museums, etc. www.mydisplaycase.com
Model Shipways: www.modelexpo-on-line.com

Darrell completed his presentation showing us how he made the display case for his model of the USS Niagara.

Ships on Deck

Swift

Julie Holloway

Julie, regretted using the Sharpie marker method for her *Swift* decking. When applying finish to the deck, the marker bleed. She tore it off and redid the planking on the aft deck using a lead pencil on the edging.

DD847 USS Robert L Wilson

Steven Keller

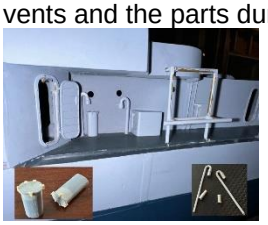
I asked Steve what his relationship was to the *USS Robert L Wilson.* His dad served on the “*Willy Boat*“ at the end of WW II.

Steve is building the multitude of small fixtures normally found on a naval vessel. Here are photos of some that he has finished.

,

Top: shows the new passing scuttles to be placed along the starboard. For comparison is the old part that was attached in the 1990s.

Middle: is a bow shot of the superstructure level 1 showing handrails in place. Construction of rails and fire hose rack is also highlighted.
Bottom: is a starboard view of level 1 and 2 of superstructure showing three newly installed air vents and the parts during construction.



Above: shows a starboard view of the fueling pipe and two fuel tank vents (both with build close-ups), office country air conditioner, ladder, and air vent. The rack in the foreground hold the life raft.

Top: is an overall wider view of starboard with closeups of vents
Middle: is a bow shot before final cleanup.
Bottom: is a port side view showing the fire hose rack and the air vent with a build close-up. Not shown are the fueling pipe and vents in the same position as on the starboard side.

HMS Sphinx

Cliff Mitchell

Cliff is documented progress on the hull of the *Sphinx.*
Top: Gun Ports masted off and painted red
Middle: Rails masked off and the unmasked areas painted blue & red.
Bottom: Rails are cut out of laser precut shapes from the Vanguard kit and glued on the masked areas with diluted PVA adhesive

Top: Closeup of rails
Middle: Rudder components added and installed after painted white
Bottom: Channels installed and painted black

Top: Channel Knees installed on fore, main and mizzen locations

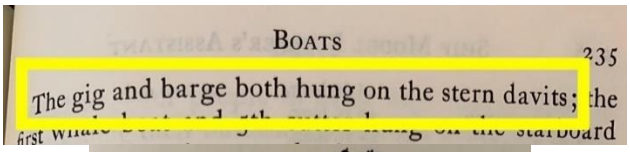
Middle: Working on the Bow: brackets glued to Gammoning knee
Bottom: Gammoning Knee installed

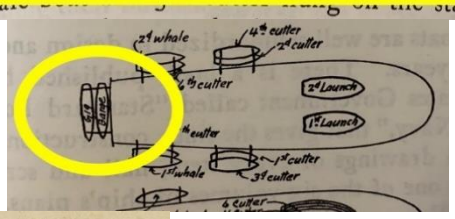
Bottom: Head Rail patterns installed

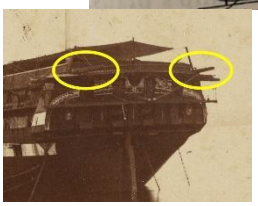
USS Ohio

Rich Stratton

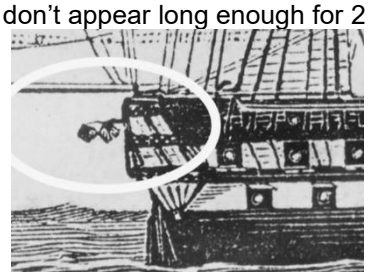
Problem: Boat storage on stern davits. For an American ship of the line, Charles G. Davis documents in his book “The Ship Builder’s assistant” that there were 2 boats hung on the stern davits.



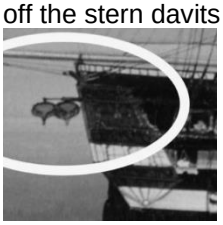




This capability is not presented in a photo of the stern of the USS Ohio. While the davits do seem long, they don’t appear long enough for 2 boats

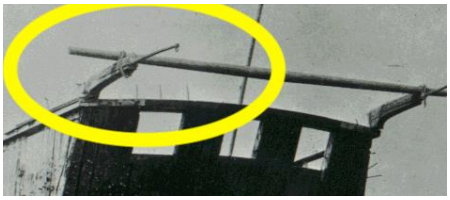


Yet a drawing of the Ohio, does represent 2 boats off the stern davits



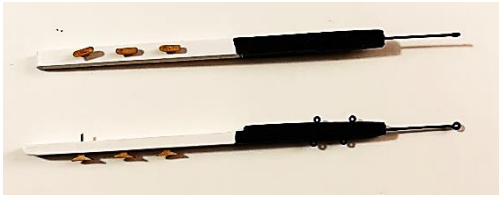
Further research into this showed that iron extensions were used for the outermost boat. In one example is a drawing of the USS Delaware showing the appearance of such an extension.

Also here is the frigate USS Santee or Sabine with iron davit extensions



As well as even the USS Constitution in drydock with the davit extensions still attached

Using the boats (barge and gig) that I previously built as well as the historical photo to help me figure out necessary length I constructed the davits, cut into the stern to pass them through to the top of the poop deck:



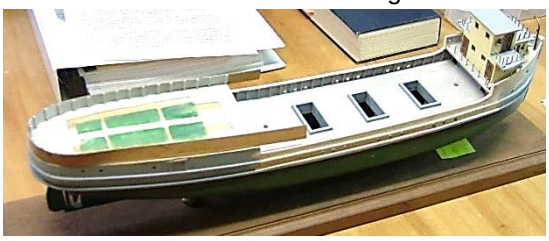
Finished them with eyebolts, cleats, sheaves, and the extensions

Then installed into the ship

Margaret Olwill – 1890

Bill Nyberg

I struggled with moving on, until I recognized that my problem was: my own and if, what I planned to do, did not work, I would have to revert back to a bare stern deck .and start over again.



That got me motivated and …

Roof supports installed

Skylight and stack fitted, but not glued in place

Other Notes: “Stuff”, Tugs & Things

Nautical Terms

trailboard: A decorative board at the bow of a vessel, sometimes bearing the vessel's name.
tramp freighter: A cargo ship engaged in the tramp trade.
tramp steamer: A steamship engaged in the tramp trade.
tramp trade: The shipping trade on the spot market in which the vessels involved do not have a fixed schedule or itinerary or published ports of call. This contrasts with freight liner service, in which vessels make regular, scheduled runs between published ports.
transmitting station: British term for a room located in the interior of a ship containing computers and other specialized equipment needed to calculate the range and bearing of a target from information gathered by the ship's spotters and range finders. These were designated "plotting rooms" or “CIC -combat information centers’ by the United States Navy.
transom: 1. A lateral member fastened inside the sternpost, to which the hull and deck planks are fitted; 2. The aft "wall" of the stern; often the part to which an outboard unit or the drive portion of a sterndrive is attached; 3. A more or less flat surface across the stern of a vessel.
transom stern: A stern which ends in a vertical "wall," or *transom*, a flat area that extends from the waterline or a point above the waterline up to the deck.
trawler: 1. Commercial trawler: a fishing boat that uses a trawl net or dragnet to catch fish; 2. A fisherman who uses a trawl net.

treenail: *Also* ***trenail****,* ***trennel****, or* ***trunnel -*** A wooden peg, pin, or dowel used to fasten pieces of wood together, such as the hull gunwales, thwarts, etc.

trice: To lift up something by means of a rope running through a block set above it, to get it out of the way. Most commonly used in tricing up the tack of a loose-footed gaff sail to reduce sail area and (sometimes) to give better visibility to the helmsman.

trim: 1. The relationship of a ship's hull to the waterline; 2. Adjustments made to sails to maximize their efficiency.

Nautical Terms Wikipedia

Tugs: Great Lakes

Cuckoo, 1907

The wooden towboat was built and owned by Captain R.T. Rodgers at Saugatuck, MI and launched June 28, 1907. Little is known of this tug. Appears she was never enrolled. In May 1913, she was owned out of Sheboygan, WI and in July of that same year, she received a new pilothouse. All that is known of the towboat *Cuckoo* has been found from newspaper clippings.

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

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Curlew, 1867

In 1867, the wooden towboat *Curlew* was built by C.J. Rose and enrolled at Ogdensburg, NY. Her measures were 77.4’ x 20’ x 6’; 63.06 grtHer official number was 5965. She was equipped with a high pressure, non-condensing engine, 18” x 18”, 80 hp, built by Neafie & Levy, Philadelphia. Her boiler was 6; x 12; and generated 97 lbs steam. Her bow was sheated for sailing through ice.

1899, ownership of the towboat *Curlew* was recorded as George Hall Coal Co., Ogdensburg. She was rebuilt in 1901 and her tonnage updated to: 85 grt, 58 net.

In 1906, the tug *Curlew* was sold foreign and rebuilt in 1907 at Port Arthur, Ont. She was enrolled

On December 16, 1907, at Thunder Bay, Ont. and assigned official number C122178.

Ownership of the *Curlew* was changed in 1930, to Great Lakes Dredging & Construction Co., Ltd., Port Arthur.

In November 1936, her enrollment was surrendered and the towboat *Curlew* was endorsed as “Scuttled”.

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

Presentation Schedule:

2024 – Schedule Tentative
~~Jan 20 CAD, 3D Printing~~
~~Feb 17 Display Case~~
Mar 16 CAD, 3D Printing, Advanced
Apr 20 Dioramas
May 18 Adhesives
June 15 UV Resin Molding
July 20 Scratch Building
Aug 17 Air Brushing
Sep 21 Planking
Oct 19 Weathering
Nov 16 Carving
Dec 21 Small Boats

Events & Dates to Note:

2024 Tentative Schedule
~~**Columbus Woodworking Show**~~
~~**Ohio Expo Center**~~
~~**January 19-21, 2024**~~

IPMS Columbus
BLIZZCON 2024
Makoy Center, Hilliard, OH
Saturday, February 24, 2024

Miami Valley Woodcarving Show
Christ United Methodist Church
Middletown, OH
March 3-4, 2024

46th Midwestern Model & Boat Show,
Wisconsin Maritime Museum, Manitowoc, WI
May 17-19, 2024

Columbus Air Show
U.S. Air Force "Thunderbirds"
Columbus Rickenbacker International Airport
June 14-16. 2024

Lakeside Antique & Classic Wooden Boat
Lakeside Hotel, Lakeside, OH
July 14, 2024

Ohio River Sternwheel Festival
Riverfront Park, Marietta, OH
September 6-8, 2024

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Cargo Hold

www.shipwrightsofohio.com/cargo hold/

Here you will find how to order Challenge Coins, as shown above, on left, that have been used historically for Identification within an organization, Recognition of achievements, Appreciation of services and Trading/Collecting. Our Shipwrights of Ohio coin contains both the Club Logo and the Club Coat-of-Arms.

You can also order Logo shirts from "Lands End". They offer an on-line link for direct, personal purchases of many of their products without Shipwrights of Ohio logo.

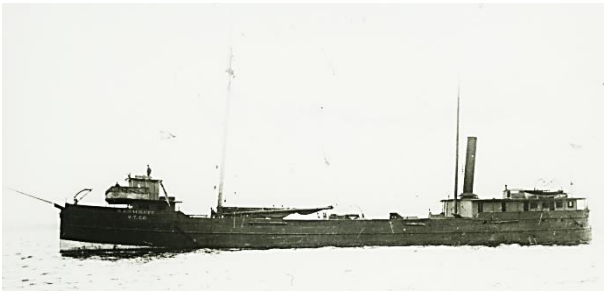
There are currently two logo styles available**:**

- **Full Club logo – with Motto, for digital print use on the backside of T-shirts. 10" or 12" round.**
- **Small Club logo – without Motto for embroidered or digital print on the front of items. 4" round.**

Wooden Steamers on the Great Lakes

Written by William E. Nyberg

1870-b



R.J. Hackett: At Cleveland, Elihu M. Peck built a wooden propeller for the Northwestern Transportation Co, Detroit. Enrolled at Detroit, March 31, 1870, her measures were: 208.10 x 32.42 x 12.60; 748.66 grt. She was equipped with a high-pressure, non-condensing engine, 28" bore x 36" stroke, built by Cuyahoga Iron Works, Cleveland, in 1869. She was also equipped with two firebox boilers (2), 17' x 6' 9", built by Cuyahoga Iron Works. She was assigned official number 21934 and had been built for the bulk freight ore business.

The steamer *R.J. Hackett* was the first ship built on Great Lakes with pilothouse in the bow and engine room in stern, allowing room for more bulk cargo amidships.

Her master for the 1870 season was Captain C. Allen. In 1871, the propeller *R.J. Hackett* brought the first cargo of iron ore to Cleveland, OH, launching that city's role as a major steel producer. In May 1871, the propeller *R.J. Hackett* went aground while on the Saint Clair River near Recors dock. She was released by tugs. The following month, the *R.J. Hackett* went aground, in a fog, at Thunder Bay, Lake Huron. September 1871, the weather was smoky, and a number of vessels were anchored in the St. Clair Rapids, when the *R.J. Hackett* ran into the schooners *Young America* (U27508) and *Queen of the Lakes* (C77626), damaging them both severely. Her master for the 1873-86 seasons was Captain Christopher C. Allen with C.L. Scoville as chief engineer for the 1881 & 82 seasons. During winter layup of 1880-81, the *R.J. Hackett* was converted from a single to a double deck at the Springwell's Dry Dock. The improvements cost $8,000. Her enrollment was updated May 1881 to: 211.16' x 32.42' x 19.16'; 1129 grt, 921 net. In 1883, she was re-engine with a steeple compound, 22", 40" bore x 36" stroke, 390 horsepower, from Cuyahoga Furnace Co., Cleveland. September 1884, downbound, ladened with ore, the *R.J. Hackett,* collided on Lake George, MI. Hull damage was set at $1,500. In September of that year the *R.J. Hackett,* laden with ore, collided at Cleveland. Hull damage set at $1,200. August 1886, after a northwest wind had cleared the smoke and fog off Lake George, MI, the steambarge *R.J. Hackett* with her consort, both light, were found aground inside Churchill Point, twelve miles below Sault Ste. Marie, MI. Both were pulled off by the tug *Mystic.* In 1889, both firebox boilers were replaced by a scotch boiler, 9.5' x 14', 105 pounds steam, built by McGregor & Sons, Detroit.

September 1892, ownership of the *R.J. Hackett* was changed to Vulcan Transportation Co., Detroit. Her master s was Captain Thomas H. Sanders for the 1899-1903 seasons with John L. Simmons in 1897; William McKittrick for the 1898-99 seasons, James H. Foster for the 1900-01 seasons and Robert C. Cumming for the 1902-03 season as chief engineers.

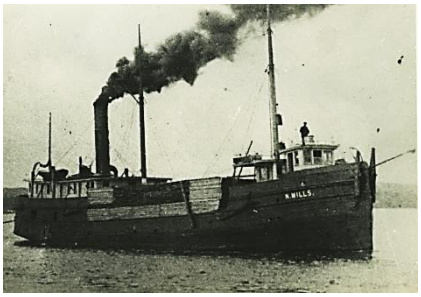
In April 1905, ownership of the *R.J. Hackett* was changed to Henry C. McCallum, Detroit. Captain Henry C. McCallum was her master for the 1905 season. In November 1905, bound up from Cleveland, laden with 1,400 tons coal for Marinette, WI, the *R.J. Hackett* stranded. While trying to work herself loose, she caught fire and burned at Whaleback Shoal, Green Bay, about 10 miles from Cedar River, MI. The *R.J. Hackett* remains later slipped off the reef into deeper water. No lives were lost,

Final enrollment for the propeller *R. J. Hackett* was surrendered at Detroit, November 15, 1905 and endorsed "burned".

Manitoba: G. Morrison, at Chatham, Ont., built a wooden steambarge for the bulk freight trade that would run between Wallaceburg, Ont. and Detroit on Lake St. Clair. Her original owner was A. T. Crowe, Dover (east), Ont. Her initial enrollment was at Chatham, Ont., and her measures were recorded as: 74' x 20.7' x 5.9'; with tonnage recorded as 100 grt. Her engine is unknown and there is no record she was assigned an official number.

In the October of 1878, the steambarge *Manitoba* ran into to the hulk of the barge *Paragon,* which had sank on Bear Creek in July of that year. She broke her wheel and bent her shaft and required to be dry docked at Wallaceburg, Ont. for repairs. In 1881, the steambarge *Manitoba* transported phosphate from Perth, Ont. to Kingston on the Rideau Canal. In November 1883, while employed in the wood trade, the steambarge *Manitoba*, lying on the Thames River, caught fire and burned to the water's edge.

Final disposition is "unknown".



Nelson Mills: Philander Lester, Vicksburg (Marysville), MI, in 1870, built a wooden barge for use in the bulk freight lumber trade. Owned by a group of investors including: Nelson Mills, ½ share, Marysville, MI.; B. Mills, ¼ share; and Henry McMorran, ¼ share, both from Port Huron. Initial enrollment was issued at Port Huron, September 15, 1870 and she was assigned official number 18755. Her measures were recorded as: 164.33' x 29.75' x 11.50'; 391.49 grt, 305.91 net. Later that year , the barge *Nelson Mills* was converted to a steambarge at Vicksburg, MI with the installation of a steeple compound engine, 20", 36" bore x 30" stroke, 400 horse power, built by Cuyahoga Iron Works, Cleveland.

In May 1871, ownership of the steambarge *Nelson Mills* was transferred to: N. & B. Mills, ½ share; Henry McMorran, ¼ share, both from Port Huron; and Charles Neal, ¼ share from Detroit.

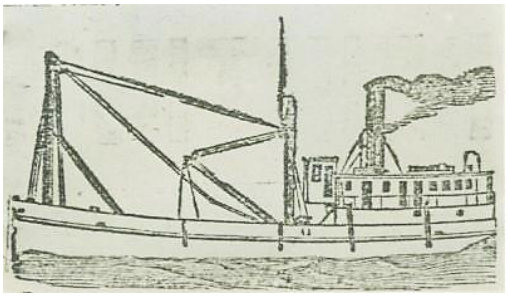
In April 1873, ownership of the steambarge *Nelson Mills* was transferred to Mills Transportation Co., Vicksburg, MI. in 1880, the steambarge *Nelson Mills* received major repairs and a new firebox boiler, 8.5' x 16', 85 pounds steam, built by Desotelle & Hutton, Detroit, in 1880. Her master for the 1888 to 1891 seasons was Captain John Symes with James A. Southgate as chief engineer for the 1888 to 1893 seasons. In 1881, the steambarge *Nelson Mills* towed three barges in the Bay City, MI to Cleveland lumber trade.

In April 1888, ownership of the steambarge *Nelson Mills* transferred to N. Mills & Co., Cleveland.

The following month, her ownership record was changed to: Nelson Mills, 81/120, Marysville, MI; et al. September 1890, during a storm on Lake Michigan, the steambarge *Nelson Mills* lost her tow and the deck load of lumber near the north end to Beaver Island. July 1892, down bound from S. Manistique for Cleveland, on Lake Michigan, the steambarge *Nelson Mills,* laden with 435,000 feet of lumber, struck a reef off Naubinway, MI, and sank with her stern under water. Her crew abandoned in the ships yawl. No lives lost. Later that month, the steambarge was raised by the wrecker *Favorite* (U120371).

In May 1901, ownership of the steambarge *Nelson Mills* was transferred to the Port Huron Navigation Co. Port Huron, N. Mills, president. Her master for the 1899 to 1906 seasons was Captain Daniel Warwick with Ephraim J. Moore as chief engineer for the 1903 – 06 seasons. In September 1906, bound up from Cleveland, to Algoma Mills, ONT, laden with a cargo of coal, the steambarge *Nelson Mills,* sank in collision with propeller *Milwaukee* (U93265), one-half mile below McGregor's Point, St. Clair River. Two lives lost.

The wreck of the steambarge *Nelson Mills* was later dynamited to clear the channel.



Monitor: E. G. Merrick, Detroit built a wooden steambarge for Charles Stange, Detroit, to be used in the bulk freight, lumber & stone trade. Enrolled at Detroit, May 1870, her measures were: 92.7' x 22.7' x 5.4'; 105.4 grt. She was issued official number 90163. She was powered by a high-pressure engine, 14" bore x 16" stroke, built by S. F. Hodge Works, Detroit, in 1870. She was equipped with a tubular boiler, 5' x 12', 90 pounds steam. In November 1871, the steambarge *Monitor,* laden with stone, struck a rock, was holed and sank at Put-in-Bay, OH, Lake Erie. Later raised and repaired.

In April 1872, ownership of the steambarge *Monitor* was changed to George Hannahs, George N & James M. Hale, South Haven, MI. During winter layup of 1872/73, she received major repairs at Swan Creek, off the Maumee River, Toledo.

In July 1874, her ownership was changed to Darius Cole, Detroit. He had her rebuilt and her measures were recorded in June 1875 as: 92.5' x 23' x 7.6', 128.19 grt, 96.51 net.

In July 1877, ownership of the steambarge *Monitor* was changed to Hannah Cole, Detroit, & Emma Conklin, Greenbush, MI. Her master for the 1878 season was Captain Gill, Traverse, MI..

In April 1879, ownership of the *Monitor* was changed to Louis Sharboneau; R. J. Kant; L. J. Hail; all from Mt Clemens, MI.

In September 1879, ownership of the steambarge *Monitor* was changed to Norman Keller & Alonzo W. Dwelle, Kelly's Island, OH.

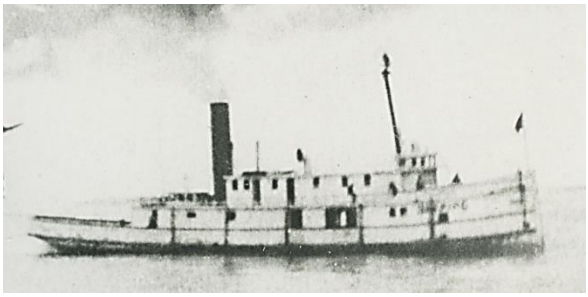
In May 1883, ownership of the steambarge *Monitor* was changed to Francis M. Porter & James R. Griffith, Waukegan, IL. Her master for the 1883 season was Captain James Harvey.

February 1884, ownership of the *Monitor* was transferred to the Chicago Sand & Gravel Co.: Francis Porter, agent. She received a new high pressure engine, 14' bore x 16" stroke built by Riverside Iron Works, Detroit. Her master for the 1888 season was Captain John G. Anderson. In October 1889, she went aground on Corsica Shoal, Lake Huron. Released.

July 1890, her ownership was changed to Charles Mears, Chicago. In August of that year, bound Pierport, MI for Milwaukee, the steambarge *Monitor,* laden with slabs & tan barks, foundered during a NW gale, ten miles SE of Milwaukee. No lives lost.

Picton: The Rathbun & Co., Mill Point, Ont. with William Yeoman, master carpenter, built a wooden sidewheel steamer for James S. McQuaig et al., Picton, Ont. Built for the passenger, package freight trade between Bellville, Ont., and Montreal, Que. at a cost of $45,000, she was enrolled at Picton, Ont., August 05, 1870. Her measures were recorded as: 158.0' x 26.8' x 8.00'; 801-unit tons. Her master for the 1871 season was Captain Johnson with Mr. McManus as chief engineer. In June 1871, the steamer *Picton* went ashore at Camp Meeting Point, Lake Ontario while attempting to release the steamer *Rochester* who had gone ashore at the same place.

In April 1872, ownership of the sidewheel steamer *Picton* was transferred to the Bay of Quinte and St. Lawrence Navigation Co., Picton, Ont. In May of 1872, she grounded in Belleville harbor on her passage down the Bay of Quinte. Released. In 1873, master of the steamer *Picton* was Captain Smith. In October 1875, while steaming in heavy fog, the steamer *Picton* ran onto Rose's Bar, North Channel behind Amherst Island, Lake Ontario. Released. Her master for the 1876 season was Captain Morden. The steamer ran on a route between Toronto and Port Dalhousie. The steamer *Picton* readmeasured in 1877: 490.53 net tons. She also had her upper deck cabins rebuilt. Loading cargo at Port Dalhousie, Ont., in August 1878, with the bow of the steamer *Picton* under the port quarters of the sidewheel steamer *Southern Belle* (1861*, Rothesay Castle*). The *Southern Belle,* leaving on an excursion and heavily loaded with passengers, was being drawn away from the wharf by a tug, when the *Picton* cast off her lines, put on steam and ran her stem into the starboard side of the *Belle,* braking in her wheelhouse and did other damage. For inflicting damage to the *Southern Belle,* the courts accessed the *Picton* $485. Master of the steamer *Picton* for the 1879 season was Captain Collier. In October 1880, bound down from Trenton for Montreal, the steamer *Picton,* laden with apples, ran hard aground on Nigger Island, three miles below Trenton, Bay of Quinte. Released. Her master for the 1881/82 season was Captain C. McCuaig with Captain E. H. Dunn also master in 1882. September 1882, bound up for Georgian Bay to replace the lost propeller *Asia* (1873)*,* the sidewheel steamer *Picton,* during a storm on Lake Erie, was driven ashore three miles east of the Rondeau Point Lighthouse due to poor visibility and a malfunctioning compass. Most of the cargo, 25 tons of general merchandise, was saved. No lives lost.



William H. Pringle: Thomas T. Arnold, South Saginaw, MI, built a wooden towboat for A. & D.W. Rust & Co. Marine City, MI, to be used for freight towing of grain, lumber, ore and merchandise. Initial enrollment at Port Huron, March 21, 1871, her measures were recorded as: 119.58' x 21.75' x 8.66'; 213.62 grt. She was powered by a steeple compound engine, 22", 40" bore x 27" stroke, 425 horsepower, built by J. Murphy, Detroit, in 1857. Her official number was 80176.

In 1875, ownership of the tug *William H. Pringle* was changed to G.H. Parker et al., Detroit. In May 1877, upbound, with a tow of schooners, the tug *William H. Pringle* caught fire and burned four miles below St. Clair, MI, on the St. Clair River. Her upper works and engine were destroyed.

In November 1877, ownership of the *William H. Pringle* was changed to Morley & Hill, Marine City, MI. Her master for the 1878-82 seasons was Captain Washington B. Harrow with James C. Hay as chief engineer in 1873. During winter layup of 1879/80, the tug *William H. Pringle* was rebuilt as a barge and her enrollment rig and

tonnage changed to barge at Port Huron: 144.54 grt.

In 1882, her ownership of the tug *William H. Pringle* was changed to W. B. Harrow et al, Algonac, MI. He had her rebuilt at Detroit, where she received machinery from the car ferry *Michigan* (U91847); upright compound engine; 22”, 40” bore x 27" stroke, 300 horsepower, built by Bartley & Gilbert, Montreal, PQ in 1859. Her enrolled measures in May 1874 were: 120’ x 19’ x 7.6’; 256.28 grt, 174.28 net.

In 1886, the tug *William H. Pringle* was sold Canadian to International Wrecking & Transportation Co, Windsor, , Later in 1886, her ownership of the *International* was changed to Detroit Tug & Wrecking Co. In 1887, she was renamed *Onaping,* C88623. In October 1889, the *Onaping* was struck by the steamer *North Wind* (US130419) at Amherstburg, Ont. Repaired.

In 1895, ownership of the tug *Onaping* was changed to John & Thomas Charlton, Lynedock, Ont.

In 1916, ownership of the tug *Onaping* was changed to Midland Transportation Co., Midland, Ont. She was renamed *Lucknow,* C88623, in 1916. Her masters were: Captain Alex B. Cuff 1917 with H. J. Schmitt for the 1917-18 seasons as chief engineer; Captain John Rutherford for the 1918-20 seasons with J. Gilbert as chief engineer, 1919-22; and Captain Charles Lynn, 1921-25 with Robert H. Isbester, 1923-24, and John Belmore in 1925 as chief engineers. In 1926, her master was Captain Clifford R. Bradley with Alfred Ferguson as chief engineer

Ownership of the tug *Lucknow* was changed to Burke Towing & Salvaging Co. Midland, Ont. in 1930.

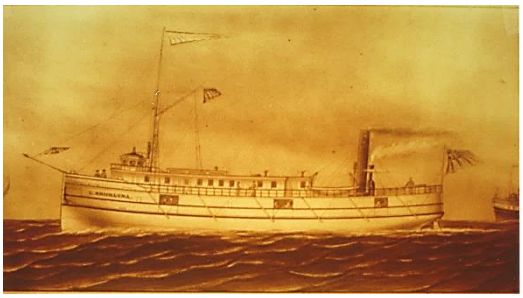
The tug *Lucknow* was dismantled in 1935 and burned at Midland, ONT, Lake Huron.

William Seymour: Henry Marlton, Goderich, Ont. built a wooden propeller for W. Seymour & Co., Goderich, Ont. to be used in the package freight trade on northern Lake Huron and Georgian Bay ports. Enrolled at Goderich, Ont. in 1870, her measures were: 87.0’ x 18.33’ x 7.5’; 46-unit tons. She was equipped with a high-pressure, upright engine, 17.5" bore x 19" stroke. Her master in 1870 was Captain Duncan Rowan. In July 1875, the *William Seymour* was holed by a rock at the entrance to French River, Ont., Georgian Bay. She was dry-docked at Detroit for repairs. Her master for the 1876 season was Captain Robert D. Foote.

In 1877, ownership of the propeller *William Seymour* was changed to Thomas Scott, Owen Sound. She ran Collingwood to Sault Ste. Marie. In October 1877, the *William Seymour* foundered during a storm at Lonely Island, east of South Baymouth, Georgian Bay.

July 1878, ownership of the remains of the propeller *William Seymour* were sold to Anchor Line Insurance Co.

The enrollment for the propeller *William Seymour* was closed December 18, 18790.



Lewis Shickluna: Lewis Shickluna, St. Catharines, Ont, built a wooden propeller for the North Shore Transportation Co., Montreal, to be used in the passenger, package freight trade, running between Montreal, Port Stanley and Chicago.

Launched April 16, 1870, her initial enrollment was issued at Toronto, Ont. in 1870. Her measures were: 135’ x 43.2’ x 11.7’; 625.81 grt, 393.24 net. She was powered by a high-pressure engine, 26" bore x 32" stroke; 21.52 horsepower, built by George N, Ollie, St. Catharines, Ont. in 1870. She was assigned official number C100752. Her master in 1870 was Captain Pollock. In October 1870, bound from Milwaukee, for Montreal, the propeller *Lewis Shickluna,* laden with 16,000 bushels wheat, caught fire at Port Colbourne while getting ready to enter the Welland Canal. She burned to the water's edge. Loss of cargo was set at $40,000.

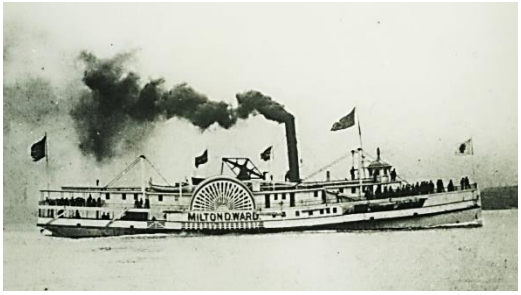
Before the end of 1870, ownership of the propeller *Lewis Shickluna* was changed to Lewis Shickluna. The vessel was raised and rebuilt at St. Catharines. Her enrollment was updated in 1871 to: 135’ x 25.7’ x 11.7’; 444.81 grt, 302.47 net.

In 1873, ownership of the propeller *Lewis Shickluna* was changed to Sylvester & Co., Port Stanley, Ont. Her master for the 1873-89 seasons was Captain Joseph Jackson. In August 1873, bound down for Montreal, laden with salt, the propeller *Lewis Shickluna* went aground on Weaver's Point, ten miles from Dickinson's Landing, St. Lawrence River. In October of that same year, she went aground in Jones' Narrows, about three miles above Brockville, Ont., St. Lawrence River. In August 1874, the *Lewis Shickluna* collided with the schooner *Typo* (U24981) at Chicago. Loss set at $100.

In 1877, ownership of the propeller *Lewis Shickluna* was changed to William Malloch, Toronto. In 1880, the *Lewis Shickluna,* with the propellers *Acadia* (C77697) and *Niagara* (C73951)

were placed on a regular line between Duluth, MN and Montreal, P.Q.

Ownership of the *Lewis Shickluna* was changed to the Sylvester Brothers, St. Catharines, Ont. in 1882. In May 1883, bound from the Serpent River at Algoma Mills, Ont., Lake Huron, in a severe northeast gale, the *Lewis Shickluna* struck a rock in the channel and sank in 13 feet of water. Raised. Her master for the 1889-90 season was Captain Henry Osgood Jackson. In May 1892, bound up the St. Clair River, the *Lewis Shickluna* and the tug *Martin Swain* (U91308) collided with both vessels receiving damage. Repaired. In October 1896, the *Lewis Shickluna,* with her consort *St. Louis* (C75636), both laden with grain, went ashore during a storm, nine miles north of East Tawas, MI, Lake Huron. Master of the *Lewis Shickluna* was Captain Clifford for the 1897 season. In May 1897, bound down light, from Port Colbourne for Cleveland, the *Lewis Shickluna,* collided with the bulk freighter *Tecumseh* (C80774) when abreast of Long Point, Ont., Lake Erie and sank. No lives lost.



Milton D. Ward: Philander Lester, Marine City, MI, built a wooden sidewheel steamer for the River & Lake Shore Steamboat Company, Eber Brock Ward. Initial enrollment at Detroit in May 1870, listed her measures as: 175.0' x 28.5' x 7.8': 538.31 grt. She was equipped with a vertical beam engine, 42" bore x 120" stroke, 500 horsepower. Originally installed in the steamers *Fashion* (1847), *Canadian* (C-1853), and *Dove* (1868). She was built for the passenger, package freight trade between Port Huron and Detroit. She was assigned official number 90162. Her master in 1871 was Captain Lathrop. On leaving Detroit, in July 1871, the steamer *Milton D. Ward*, collided with the ferry *Hope* on the Detroit River. The *Ward* gave two sounds on her whistle twice, but the *Hope* did not respond. Both vessels were slightly damaged.

In May 1873, ownership of the steamer *Milton D. Ward* was changed to John Pridgeon, et.al., then to J.M. Nichol, Detroit.

In 1875, ownership of the steamer *Milton D. Ward* was changed to Lake Shore Steam Boat Company, Detroit.

The steamer *Milton D. Ward* was rebuilt and lengthened by J.M. Jones Dry Dock, Detroit. She also received a new keelson and guards. Her enrollment measures were updated to: 182.42' x 28.42' x 7.66'; 544.10 grt, 421.08 net.

In February 1882, ownership of the steamer *Milton D. Ward* was changed to the White Star Line, Detroit.

Bound up in June 1882, the steamer *Milton D. Ward* collided with the tug *A.W. Colton,* bound down, on the St. Clair River. Both vessels were damaged. Repaired.

March 1886, ownership of the steamer *Milton D. Ward* was changed to S. B. Grummond, Detroit, at a sheriff's sale for $6,060. September 1886, down bound with about a hundred passengers, the steamer *Milton D. Ward* collided with the steambarge *Norma*, up bound with a cargo of stone, off Grosse Point, MI, Lake St. Clair. Both vessels were damaged. In April 1888, the steamer *Milton D. Ward* received a new square pilothouse, renovated staterooms, and her hurricane deck extended. In September 1892, laid up by the Detroit Water Works, the steamer *Milton D. Ward, was* chartered by the Detroit Board of Health for two years as a hospital during cholera epidemic. It was never used. In August 1894, again laid up, the steamer *Milton D. Ward* caught fire and her interior was gutted. It was believed that the fire was set by arsonists. The vessel was never repaired.

Final enrollment for the steamer *Milton D. Ward* was surrendered at Detroit, November 16, 1898 and endorsed "abandoned." What remained of the *Milton D. Ward* was towed from the waterworks dock to the foot of 4th street, Detroit, on April 20, 1899 and ultimately used as a land fill.

Water Lily: J. William Ainslie, Brewers Mills, Ont., built a wooden steambarge for Fraser & George, Kingston, Ont. to be used in the bulk freight and tug trade, from ports on the Rideau Canal to Cape Vincent, NY on the St. Lawrence River. Her initial enrollment at Kingston in October 1870, listed her measures as: 92' x 22' x 5.6'; 97.93-unit tons. She received her official number C94923. She was powered by a high-pressure engine, 10 1/2" bore x 12" stroke, 17 horsepower, built by Davidson & Doran, Kingston, Ont. in 1870. Master of the steambarge *Water Lily* in 1870 was Captain Daniel Browne.

In September 1870, ownership of the steambarge *Water Lily* was changed to Mr.

Davidson for $3,900. In November 1875, the steambarge *Water Lily* was cut by ice and sank in the Rideau Canal. Raised and repaired. In September 1876, the *Water Lily* broke her shaft at Brewer's Mills, Ont. and was towed to Kingston for repairs.

In 1877, her ownership was changed to J. B. Robinson, Thorold, Ont. In July 1879, the steambarge *Water Lily* was struck and sank by the sidewheel steamer *Magnet* (C-1847). Her masters for the 1881 season were Captain Connors and Captain McIntyre. In November 1882, the steambarge *Water Lily* struck the sunken schooner *American,* lying off the K. & M. Forwarding Co. wharf at Kingston. She was released by the tug *Active* (C100186). In June 1885, the steambarge *Water Lily* sank at Ottawa. She was raised and repaired.

In 1886, ownership of the steambarge *Water Lily* was changed to Hebron Harris, Kemptville, Ont. In May of that year, bound from Ottawa laden with railroad ties, the steambarge *Water Lily* broke her shaft. In June 1887, the steambarge *Water Lily* and her consort went on the rocks at the head of the Lachine Rapids, La Salle, Que., St. Lawrence River, when the pilot mistaking a light took the wrong course. The consort barge was a total loss. The steambarge was raised and repaired. In September 1887, the steambarge *Water Lily* sank in the Rideau Canal, in 15 feet of water, below Battersea.

In 1888, ownership of the steambarge *Water Lily* was changed to Captain Waters. Masters of the steambarge *Water Lily* were Captain Waters, 1888-90 season and Captain M. Hefferman, 1892 season. In 1891, the steambarge was rebuilt at Picton, Ont.; 100’ x 18’, 95 grt. Her master for 1894 was Captain William Ostrander with Joseph Parker as chief engineer.

In 1897, ownership of the steambarge *Water Lily* was changed to A. W. Hepburn, Picton, Ont. Her master for the 1897 – 1899 seasons was Captain M. Hicks with George Gerow as chief engineer. In May 1897, bound down the Rideau Canal for Salaberry-de-Valleyfield, Que., on the Saint Lawrence River. the steambarge *Water Lily,* laden with 8,000 bushels of grain, struck and went down in Coteau Lake. In October 1898, the steambarge lost her wheel in the Cornwall Canal near Farran's Point. In May 1901, she broke her shaft and had a new one made at Kingston Foundry. June 1903, bound from Oswego to Wolfe Island, the steambarge *Water Lily,* laden with coal, went ashore nine miles east of Oswego, NY.

In 1906, ownership of the steambarge *Water Lily* was changed to Ontario & Quebec Navigation Co. Her masters were Captain W. Dalmage in 1906, Captain William Duman in 1907 and Captain Nelson Palmateer from 1909 to 12 with engineers Peter Davis 1906 & 07, J. F. Cole in 1909, Frank Robins in 1910 and Russell Davis in 1912.

In 1915, ownership of the steambarge *Water Lily* was changed to Canada Steamship Lines. Her masters were Captain Dan McVickers in 1915 and Captain John Hudgins in 1918 with Russell Davis, 1914-15, as chief engineer. In November 1915, the steambarge *Water Lily* ran aground near Cornwall, St. Lawrence River. In 1920, the steambarge was rebuilt at Picton, Ont.; 97’ x 19’; 138 grt.

Ownership of the steambarge *Water Lily* was changed to J. Donnelly, Kingston, Ont. in 1921. The steambarge was reported broken up in 1921, but not removed from the Canadian List of Shipping until 1938.

Alex Watson: Alex McDonnell, Wallaceburg, Ont., built for Watson & Weston, Dresden, Ont. a wooden propeller, built for the passenger, package freight trade between Detroit and Wallaceburg, Ont. on Lake St. Clair. Her first enrollment was issued at Wallaceburg, Ont., January 1871. Her measures, as recorded, were: 90’3: x 24’ 5” x 6’ 2”; 109 grt, 64 net. Her master for the 1870 to 71 seasons was Captain Weston. In June 1871, bound between Detroit and Wallaceburg, the propeller *Alex Watson,* laden with cord wood, caught fire from an overheated boiler while abreast of Baby's Point, Lambton, Ont. The vessel drifted to Walpole Island where she burned and sank. No lives lost.

Wyoming: Thomas Dunford, Detroit, built a wooden steambarge for Preston Brady, Detroit, & A. E. Goodrich, Chicago. Enrolled at Detroit in June 1870, her measures were; 119.0’ x 28.42’ x 5.58’; 154.65 grt. Her official number was 80135. She was built for the bulk freight trade. Her master for the 1870 season was Captain Peter J. Kenny. In June 1871, the steambarge *Wyoming* struck a pile and sank at East Saginaw, MI. She was raised and repaired. In October of that same year, during smoky weather, the steambarge ran ashore on the west shore, near Forrester, MI, Lake Huron. Released.

In November 1871, ownership of the steambarge *Wyoming* was changed to George E. Brockway, et al, Port Huron.

In April 1872, ownership of the steambarge *Wyoming* was changed to Louis N. Minnie & Thomas Dunford, Port Huron. The steambarge *Wyoming* was cut down to a “barge” and enrollment measures changed on July 29, 1873, at Port Huron to: 1 deck, 2 masts. 119’ x 28.5’ x 5.7'; 169.72 grt. In August 1874, the *Wyoming* went aground at Sandusky, OH. In October 1879, the barge *Wyoming* became waterlogged and sank while lying in Black River, Michigan.

Ownership of the barge *Wyoming* was changed in 1881, to Martha M. Barkell, Bay City, MI. In August of that year, the *Wyoming* was rebuilt as “harbor lighter” with one deck and no masts. In July 1882, the harbor lighter *Wyoming* was rebuilt as a “barge. Enrollment rig and measures were changed at Port Huron to: barge, 1 deck, 1 mast, 147’ x 28.3’ x 8.6'; 289.78 grt, 275.03 net. Laden with lumber from Bay City, MI, the barge *Wyoming* went aground in May of 1883, on the Canadian shore of Lake Huron during a heavy northeast gale. September 1887, down bound, the barge *Wyoming* became waterlogged while under tow by the propeller *Oswegatchie* (U19189) on Lake Huron. She was pumped out and repaired. Master of the barge *Wyoming* during the 1888 98 seasons was Captain Joseph R. Inches. In July 1888, the rig for the barge *Wyoming* was changed to “schooner”, with two masts, at Port Huron.

Ownership of the schooner *Wyoming* was changed in November 1890, to Henry N. Loud, Au Sable, MI. The schooner *Wyoming* was rebuilt by Joseph Ryan, Au Sable, MI as a screw propeller. Her engine came from the tug *Kittie Smoke* (U14254). In June 1891, enrollment rig and measures at Port Huron, were changed to: “propeller” with 1 deck, 3 masts, a round stern and measures: 153.58’ x 28.0’ x 8.42', 350.6 grt, 291.8 net.

In April 1892, ownership of the propeller *Wyoming* was changed to Huron Transportation Co., Buffalo. In May 1892, the propeller *Wyoming* went aground on a reef off Port Hope. MI, Lake Huron. Released. In 1899, the propeller *Wyoming* received a direct-acting, non-condensing engine, 18” bore x 18" stroke, 60-horse power and a marine boiler, 7.5’ x 12’, 90 pounds steam. In April 1890, ownership of the propeller *Wyoming* was changed to Shannon & Garey, Saginaw, MI. Her masters were: Captain Charles E. Garey, 1900-01, 1903-04; and Captain William H. Ellery 1902, with chief engineers: Edward Stevens, 1901; Charles Morgan, 1902; Miles Gaffney, 1903; and Sherman, 1904.

In November 1904, the propeller *Wyoming*, laden with lumber, caught fire during a storm and burned. She foundered in deep water, off Point Au Barques, MI, eight miles east of Burnt Cabin Point, MI, Lake Huron. No lives lost.

Final enrollment for the *Wyoming* was surrendered at Port Huron, November 17, 1904.

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.

Freshet: a great rise or overflowing of a stream caused by heavy rains or melted snow.

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 x 3/5)) x Beam x 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$^{7}/_{94}$ 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 forecastle 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, which 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.)